



DISIS-2016-001-2

Definitive Interconnection System Impact Study Report

Group 3, 6, & 8 Restudy

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Generator Interconnections Dept.

REVISION HISTORY

DATE OR VERSION NUMBER	AUTHOR	CHANGE DESCRIPTION	COMMENTS
1/31/2017	SPP	Initial report issued.	Stability analysis has not been completed yet for groups 2, 6, 8, 9, & 16
2/8/2017	SPP	Report re-issued.	Added stand-alone results for all groups except 9, 15, and 16; stability results for groups 6 and 8. Final stand-alone and stability results are expected to be posted by Feb. 28, 2017.
2/28/2017	SPP	Report re-issued.	Reposted to include final revision 0 results
12/8/2017	SPP	DISIS-2016-001-1 Report revision 0 issued.	DISIS-2016-001-1 Report revision 0 results due to higher queued and equally queued withdrawals. Excludes stability results for group 9 expected to be posted by Dec. 22, 2017.
12/15/2017	SPP	DISIS-2016-001-1 Report revision 1 issued.	DISIS-2016-001-1 Report revision 1 results due cost allocation updates for Group 8. Group 6 stability final report revision to remove reference to 765kV.
12/22/2017	SPP	DISIS-2016-001-1 Report revision 2 issued.	DISIS-2016-001-1 Report revision 2 results for Group 9 stability, Group 8 LOIS correction, and Group 9 cost allocations based on latest TO information.
07/29/2018	SPP	DISIS-2016-001-2 Report revision 0 issued.	DISIS-2016-001-2 Report revision 0 results for groups 3, 6, and 8 power flow due to withdrawal of higher queued and equally queued requests.

DATE OR VERSION NUMBER	AUTHOR	CHANGE DESCRIPTION	COMMENTS
11/13/2017	SPP	DISIS-2016-001-2 Report revision 1 issued.	DISIS-2016-001-2 Report revision 1 to correct cost allocation for Group 6

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1 INTRODUCTION

Pursuant to the Southwest Power Pool (SPP) Open Access Transmission Tariff (OATT), SPP has conducted this Definitive Interconnection System Impact Study (DISIS) for generation interconnection requests received during the DISIS Queue Cluster Window which closed on March 31, 2016. The customers will be referred to in this study as the DISIS Interconnection Customers. This DISIS analyzes the impact of interconnecting new generation totaling 7717.52 MW to the SPP Transmission System. The interconnecting SPP Transmission Owners include:

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

The generation interconnection requests included in this System Impact Study are listed in [Appendix A](#) by queue number, amount, requested interconnection service type, area, requested interconnection point, proposed interconnection point, and the requested in-service date¹. This cluster study represents the “Stand-Alone” analysis for remaining Interconnection Requests in the DISIS-2016-001 analysis.

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

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

2 MODEL DEVELOPMENT (STUDY ASSUMPTIONS)

2.1 INTERCONNECTION REQUESTS INCLUDED IN THE CLUSTER

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

2.2 AFFECTED SYSTEM INTERCONNECTION REQUEST

Affected System Interconnection Requests included in this study are listed in [Appendix A](#) with the “ASGI” prefix. Affected System Interconnection Requests were only studied in “cluster” scenarios.

2.3 PREVIOUSLY QUEUED INTERCONNECTION REQUESTS

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

2.4 DEVELOPMENT OF BASE CASES

2.4.1 POWER FLOW

The power flow models used for this study are based on the 2016-series Integrated Transmission Planning models used for the 2017 ITP-Near Term analysis. These models include:

- Year 1 2017 winter peak (17WP)
- Year 2 2018 spring (18G)
- Year 2 2018 summer peak (18SP)
- Year 5 2021 light load (21L)
- Year 5 2021 summer (21SP)
- Year 5 2021 winter peak (21WP)
- Year 10 2026 summer peak (26SP)

2.4.2 DYNAMIC STABILITY

A dynamic stability restudy was determined to be unnecessary for the withdrawals made.

2.4.3 SHORT CIRCUIT

A short circuit analysis restudy was determined to be unnecessary for the withdrawals made.

2.4.4 BASE CASE UPGRADES

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

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

SPP Notification to Construct (NTC) ID	UID	Project Owner	Upgrade Name	Estimated Date of Upgrade Completion (EOC)
200223		OGE	Tatonga - Woodward District EHV 345 kV Ckt 2	3/1/2018
200223		OGE	Matthewson - Tatonga 345 kV Ckt 2	3/1/2018
200240		OGE	Chisholm - Gracemont 345 kV Ckt 1 (OGE)	3/1/2018
200255		AEP	Chisholm - Gracemont 345kV Ckt 1 (AEP)	3/1/2018
200255		AEP	Chisholm 345/230 kV Substation	3/1/2018
200255		AEP	Chisholm 230 kV	3/1/2018
200360		SPS	IMC #1 Tap - Livingston Ridge 115 kV Ckt 1 Rebuild	11/16/2018
200360		SPS	Intrepid West - Potash Junction 115 kV Ckt 1 Rebuild	11/16/2018
200360		SPS	IMC #1 Tap - Intrepid West 115 kV Ckt 1 Rebuild	11/16/2018
200360		SPS	Cardinal - Targa 115 kV Ckt 1 Rebuild	5/31/2018
200360	51250	SPS	National Enrichment Plant - Targa 115 kV Ckt 1	12/15/2018
200391	51528	OGE	DeGrasse 345 kV Substation	6/1/2019
200391	51529	OGE	DeGrasse 345/138 kV Transformer	6/1/2019
200391	51530	OGE	DeGrasse - Knob Hill 138 kV New Line	6/1/2019
200391	51569	OGE	DeGrasse 138 kV Substation (OGE)	6/1/2019
200220		NPPD	Cherry Co. (Thedford) - Gentleman 345 kV Ckt 1	10/1/2019
200220		NPPD	Cherry Co. (Thedford) Substation 345 kV	10/1/2019
200220		NPPD	Cherry Co. (Thedford) - Holt Co. 345 kV Ckt 1	10/1/2019
200220		NPPD	Holt Co. Substation 345 kV	10/1/2019
200253	50441	NPPD	Neligh 345/115 kV Substation	4/1/2018
200309		SPS	Hobbs 345/230 kV Ckt 1 Transformer	6/1/2018
200309		SPS	Hobbs - Yoakum 345 kV Ckt 1	6/1/2020
200395		SPS	Tuco - Yoakum 345 kV Ckt 1	6/1/2020
200395		SPS	Yoakum 345/230 kV Ckt 1 Transformer	6/1/2020
200256	50722	SPS	Chaves - Price 115 kV Ckt 1 Rebuild	1/30/2018
200256	50723	SPS	CV Pines - Price 115 kV Ckt 1 Rebuild	1/30/2018
200256	50724	SPS	Capitan - CV Pines 115 kV Ckt 1 Rebuild	1/30/2018

SPP Notification to Construct (NTC) ID	UID	Project Owner	Upgrade Name	Estimated Date of Upgrade Completion (EOC)
200282		SPS	China Draw - Yeso Hills 115 kV Ckt 1	6/1/2018
200282		SPS	Dollarhide - Toboso Flats 115 kV Ckt 1	6/1/2018
200309		SPS	Hobbs - Kiowa 345 kV Ckt 1	6/1/2018
200309		SPS	Kiowa 345 kV Substation	6/1/2018
200309		SPS	Kiowa - North Loving 345 kV Ckt 1	6/1/2018
200309		SPS	North Loving 345 kV Terminal Upgrades	6/1/2018
200309		SPS	China Draw - North Loving 345 kV Ckt 1	6/1/2018
200309		SPS	China Draw 345 kV Ckt 1 Terminal Upgrades	6/1/2018
200309		SPS	China Draw 345/115 kV Ckt 1 Transformer	6/1/2018
200309		SPS	North Loving 345/115 kV Ckt 1 Transformer	6/1/2018
200309		SPS	Kiowa 345/115 kV Ckt 1 Transformer	6/1/2018
200395	50924	SPS	Livingston Ridge 115 kV Substation Conversion	11/30/2017
200411		SPS	Livingston Ridge - Sage Brush 115 kV Ckt 1	6/1/2018
200309	50925	SPS	Sage Brush 115 kV Substation	12/16/2016
200309	50928	SPS	Largarto - Sage Brush 115 kV Ckt 1	12/15/2016
200309	50927	SPS	Lagarto 115 kV Substation	6/1/2018
200309	50951	SPS	Cardinal - Lagarto 115 kV Ckt 1	12/15/2016
200309	50967	SPS	Cardinal 115 kV Substation	12/15/2016
200411	50923	SPS	Ponderosa - Ponderosa Tap 115 kV Ckt 1	6/1/2017
200395		SPS	Canyon West – Dawn – Panda – Deaf Smith 115kV Ckt 1	12/15/2018
200369		SPS	Canyon East Sub – Randall County Interchange 115kV Ckt 1	12/31/2020
200359	11509	SPS	Carlisle 230/115kV transformer replacement	3/27/2018
200309		SPS	Hobbs – Yoakum – TUCO 345kV project	6/1/2018
200395		SPS	Terry County – Wolfforth 115kV Ckt 1 terminal equipment replacement	6/1/2018
200391		OGE	DeGrasse 345/138kV project	6/1/2019
200396		WFEC	DeGrasse 345/138kV project	12/31/2019
200395		SPS	Harrington East – Potter 230kV Ckt 1 terminal equipment replacement	6/1/2019
200228		WERE	Viola 345/138kV project	6/1/2018
200228		MKEC	Viola 345/138kV project	6/1/2018
200395		SPS	Seminole 230/115kV transformer Ckt 1 & 2 replacement	5/15/2018
200262		SPS	Yoakum County Interchange 230/115kV transformer Ckt 1 & 2 replacement	6/1/2019
200407	51550	SPS	Tolk - Yoakum Tap 230/115 kV Substation and Transformer	12/15/2020

2.4.5 CONTINGENT UPGRADES

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

Assigned Study	Upgrade Name	Estimated Date of Upgrade Completion (EOC)
DISIS-2010-002	Twin Church - Dixon County 230kV Line Upgrade	11/1/2018
DISIS-2010-002	Buckner - Spearville 345 kV Ckt 1 Terminal Upgrades	Complete 7/20/2017
DISIS-2011-001	Hoskins - Dixon County 230kV Line Upgrade	11/1/2018
DISIS-2014-002	Plant X - Tolk 230kV rebuild circuit #1	5/31/2018
DISIS-2014-002	Plant X - Tolk 230kV rebuild circuit #2	5/31/2018
DISIS-2014-002	TUCO Interchange 345/230kV CKT 1 Replacement	6/1/2018
DISIS-2015-001	(NRIS Only) Renfrow – Renfrow 138kV circuit #1 rebuild.	9/25/2017
DISIS-2015-001	Oklaunion 345kV Reactive Power	TBD
DISIS-2015-002	Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	TBD
DISIS-2015-002	Border - Chisholm 345kV CKT 1 & 2	TBD
DISIS-2015-002	Bushland - Potter County 230kV CKT 1	TBD
DISIS-2015-002	Carlisle 115/69/13kV Transformer CKT 1	TBD
DISIS-2015-002	Chisholm Substation Upgrade 345kV	TBD
DISIS-2015-002	Cleo Corner - Cleo Plant Tap 138kV CKT 1	TBD
DISIS-2015-002	Cleveland - Silver City 138kV CKT 1	TBD
DISIS-2015-002	Cornville Tap - Naples Tap 138kV CKT 1	TBD
DISIS-2015-002	Crawfish Draw 345/230kV Substation Upgrade Taps TUCO – Border 345kV, TUCO – Oklaunion 345kV, and TUCO – Swisher 230kV Build 345/230/13kV transformer	TBD
DISIS-2015-002	Crawfish Draw - Border 345kV CKT 2	TBD
DISIS-2015-002	Daglum - Dickinson 230kV CKT 1	TBD
DISIS-2015-002	Dickinson 230/115/13.8kV CKT 2	TBD
DISIS-2015-002	Gavins Point - Yankton Junction 115kV CKT 1	TBD
DISIS-2015-002	GEN-2015-063 Tap - Mathewson 345kV CKT 1	TBD
DISIS-2015-002	Grapevine - Wheeler 230kV CKT 1	TBD
DISIS-2015-002	Naples Tap - Payne 138kV CKT 1	TBD
DISIS-2015-002	Norge - Southwest Station 138kV CKT 1	TBD
DISIS-2015-002	Potter County Interchange 345/230/13kV Transformer circuit #2, build.	TBD
DISIS-2015-002	Albion - Petersburg - North Petersburg 115kV CKT 1	TBD
DISIS-2015-002	Wheeler - Sweetwater 230kV CKT 1	TBD
DISIS-2015-002	Woodward 345/138/13kV Transformer CKT 3	TBD

2.4.6 POTENTIAL UPGRADES NOT IN THE BASE CASE

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

2.4.7 REGIONAL GROUPINGS

The interconnection requests listed in [Appendix A](#) are for Groups 3, 6, and 8 based on geographical and electrical impacts. Groupings are shown in [Appendix C](#).

Southwest Power Pool, Inc.

To determine interconnection impacts Groups 3, 6, and 8, base case dispatch scenarios were developed for spring, summer, light, and winter scenarios.

2.5 DEVELOPMENT OF ANALYSIS CASES

2.5.1 POWER FLOW

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

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

All generators (VER and peaking) that requested Network Resource Interconnection Service (NRIS) are dispatched in an additional analysis into the interconnecting Transmission Owner’s (T.O.) area at 100% nameplate with Energy Resource Interconnection Service (ERIS) only requests at 80% nameplate. This method allows for identification of network constraints that are common between regional groupings to have affecting requests share the mitigating upgrade costs throughout the cluster.

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

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

2.5.2 DYNAMIC STABILITY

A dynamic stability restudy was determined to be unnecessary for the withdrawals made.

2.5.3 SHORT CIRCUIT

A short circuit analysis restudy was determined to be unnecessary for the withdrawals made.

3 IDENTIFICATION OF NETWORK CONSTRAINTS (SYSTEM PERFORMANCE)

3.1 THERMAL OVERLOADS

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

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

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

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

Appropriate transmission reinforcements are identified to mitigate the constraints.

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

3.2 VOLTAGE

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

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

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

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

Areas and specific buses having more-stringent voltage criteria:

Areas/Facilities	System Intact	Contingency
AEPW – all buses EMDE High Voltage	0.95 – 1.05 per unit	0.92 – 1.05 per unit
WERE Low Voltage	0.95 – 1.05 per unit	0.93 – 1.05 per unit
WERE High Voltage	0.95 – 1.05 per unit	0.95 – 1.05 per unit
TUCO 230 kV Bus #525830	0.925 – 1.05 per unit	0.925 – 1.05 per unit
Wolf Creek 345 kV Bus #532797	0.985 – 1.03 per unit	0.985 – 1.03 per unit
S1251 Bus #646251	1.001 – 1.047 per unit	1.001 – 1.047 per unit

First-Tier External Areas facilities 115 kV and greater.

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

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

3.3 DYNAMIC STABILITY

A dynamic stability restudy was determined to be unnecessary for the withdrawals made.

3.4 UPGRADES ASSIGNED

Thermal overloads that require transmission support to mitigate are discussed in Section 8 and listed in [Appendix G-T](#) (Cluster & Stand Alone Analysis). Voltage constraints that may require

transmission support are discussed in Section 8 and listed in [Appendix G-V](#) (Cluster & Stand Alone Analysis). Constraints that are identified solely through the stability analysis are discussed in Section 8 and the appropriate appendix for the detailed stability study of that Interconnection Request. All of these upgrades are cost assigned in [Appendix E](#) and [Appendix F](#).

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

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

4 DETERMINATION OF COST ALLOCATED NETWORK UPGRADES

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

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

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

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

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

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

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

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

Repeat previous for each responsible GI request for each Project.

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

4.1 CREDITS/COMPENSATION FOR AMOUNTS ADVANCED FOR NETWORK UPGRADES

Interconnection Customer shall be entitled to either credits or potentially incremental Long Term Congestion Rights (iLTCR), otherwise known as compensation, in accordance with Attachment Z2 of the SPP Tariff for any Network Upgrades, including any tax gross-up or any other tax-related payments associated with the Network Upgrades, and not refunded to the Interconnection Customer².

5 REQUIRED INTERCONNECTION FACILITIES

The requirement to interconnect the requested generation into the existing and proposed transmission systems in the affected areas of the SPP transmission footprint consist of the necessary cost allocated shared facilities listed in [Appendix F](#) by upgrade. The interconnection requirements for clusters 3, 6, and 8 total an approximate \$823,610,681, not including the following costs.

- **Costs Not Included** – Potential additional upgrades required based on review of Laramie Generation Station (LGS) stability limit in southeastern Wyoming. LGS stability limit is to be analyzed by BEPC as part of the Interconnection Facilities Study.
- **Costs Not Included** – Potential additional upgrades required based on review of Gerald Gentleman Station (GGS) stability interface in western Nebraska. GGS stability interface is to be analyzed by NPPD as part of the Interconnection Facilities Study.
- **Costs Not Included** – Costs on Mid-Continent Independent System Operator (MISO).
- **Costs Not Included** – Particular Interconnection Facilities observing instability in the transient stability analysis due to Interconnection Facilities configuration or Interconnection Customer provided dynamic model settings and parameters. Please refer to [Appendix E](#) for requests that are identified as requiring further review or costs for Interconnection Facilities.

Interconnection Facilities specific to each interconnection request are listed in [Appendix E](#). A preliminary one-line diagram for each request is listed in [Appendix D](#).

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

5.1 FACILITIES ANALYSIS

The interconnecting Transmission Owner for each Interconnection Request has provided its preliminary analysis of required Transmission Owner Interconnection Facilities and the associated Network Upgrades, shown in [Appendix D](#). This analysis was limited only to the expected facilities to be constructed by the Transmission Owner at the Point of Interconnection. These costs are included in the one-line diagrams in [Appendix D](#) and also listed in [Appendix E](#) and [F](#) as combined

² A FERC filing is pending in Docket No. ER18-374 to change the provisions of Attachment Z2 which may result in certain upgrades no longer being eligible for revenue credits.

“Interconnection Costs”. If the one-lines and costs in [Appendix D](#) have been updated by the Transmission Owner’s Interconnection Facilities Study, those costs will be noted in the appendix. These costs will be further refined by the Transmission Owner as part of the Interconnection Facilities Study. Any additional Network Upgrades identified by this DISIS beyond the Point of Interconnection are defined and estimated by either the Transmission Owner or by SPP. These additional Network Upgrade costs will also be refined further by the Transmission Owner within the Interconnection Facilities Study.

5.2 ENVIRONMENTAL REVIEW

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

6 AFFECTED SYSTEMS COORDINATION

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

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

7 POWER FLOW ANALYSIS

7.1 POWER FLOW ANALYSIS METHODOLOGY

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

7.2 POWER FLOW ANALYSIS

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

8 POWER FLOW RESULTS

8.1 CLUSTER SCENARIO

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

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

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

8.1.1 CLUSTER GROUP 1 (WOODWARD AREA)

Previous power flow analysis is still valid.

8.1.2 CLUSTER GROUP 2 (HITCHLAND AREA)

Previous power flow analysis is still valid.

8.1.3 CLUSTER GROUP 3 (SPEARVILLE AREA)

New requests for this study group as well as prior-queued requests are listed in [Appendix C](#).

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

In addition, several adjustments were made to Group 01 and 02 elements to achieve a solved case for non-converged constraints. Adjustments include locking Woodward and Hitchland switchable shunts and turning off the following in-line reactors: G16_03T – Woodward 345 kV Ckt 1, G16_03T – Woodward 345 kV Ckt 2, Woodward – DeGrasse 345 kV Ckt 1, Woodward – DeGrasse 345 kV Ckt 2, Beaver Co. – Badger 345 kV Ckt 2.

While alternative upgrades were considered to alleviate ERIS Non-converged constraints, only Beaver County – Clark 345 kV Ckt 1 mitigated all constraints.

Table 8.1 Group 3 Cluster ERIS Non-Convergence Constraints

Contingency	Mitigation
'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	1. Build 125 miles of new 345kV from Beaver County - Clark County 2. Group 01 and 02 adjustments to switchable shunts and in-line reactors.
'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	
'G13-010T 345.00 - POST ROCK 345KV CKT 1'	
'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	

Table 8.2 Group 3 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
'CLEARWATER - MILAN TAP 138KV CKT 1'	110	113.1659	System Intact	Viola 345/138 Project and HPILS Project (NTC)
'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	105.0808	'G13-010T 345.00 - POST ROCK 345KV CKT 1'	Resolved with Beaver – Clark Co. 345 kV
'HUNTSVILLE - ST_JOHN 115KV CKT 1'	80	106.4706	'CIRCLE - MULLERGREN 230KV CKT 1'	Updated rating sufficient for mitigation.

The table below summarizes constraints and associated mitigations assignable to incremental ERIS steady state voltage.

Table 8.3 Group 3 Cluster ERIIS Voltage Constraints

Monitored Element	TC Voltage (PU)	VMIN (PU)	VMAX (PU)	Contingency	Mitigation
'GREENSBURG 115KV'	0.889648	0.9	1.05	'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	Switch out reactors at Buckner - Spearville, Buckner - Holcomb, & Spearville - Post Rock 345 kV
'SEWRDMW3 115KV'	1.116245	0.9	1.05	'SEWARD - SEWRDMW3 115KV CKT 1'	Mitigated by locking Seward xfmr taps
'SUN CITY 115KV'	0.893559	0.9	1.05	'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	Switch out reactors at Buckner - Spearville, Buckner - Holcomb, & Spearville - Post Rock 345 kV
'WOLF CREEK 345KV'	1.030266	0.985	1.03	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'	Mitigated by locking Waverly xfmr taps

The table below summarizes constraints and associated mitigations assignable to those requests that elect NRIS.

Table 8.4 Group 3 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
None in addition to ERIIS constraints				

The table below summarizes constraints and associated mitigations assignable to incremental NRIS steady state voltage.

Table 8.5 Group 3 Cluster NRIS Voltage Constraints

Monitored Element	TC Voltage (PU)	VMIN (PU)	VMAX (PU)	Contingency	Mitigation
'RENO COUNTY 345KV'	0.948261	0.95	1.05	'RENO COUNTY - WICHITA 345KV CKT 1'	Enabled switch shunt reactors on Reno 345/115 kV xfmrs

8.1.4 CLUSTER GROUP 4 (NORTHWEST KANSAS AREA)

Previous power flow analysis is still valid.

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

New requests for this study group as well as prior-queued requests are listed in [Appendix C](#).

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

Reactive power at Border and Oklaunion was required to dispatch the study models. Once models were reviewed after ACCC, the reactive power included in the dispatched cases was reviewed for evaluation of current study upgrade requirements. Crawfish Draw – Tolk – Potter County – Chisholm 345kV and Oklaunion reactive power support was required light load conditions to dispatch the DISIS-2016-001 Group 6 generation.

Table 8.6 Group 6 Cluster ERIS Non-Convergence Constraints

Contingency	Mitigation
'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1'	In addition to DISIS-2014-002, DISIS-2015-001, and DISIS-2015-002 assigned upgrades, the following new upgrades are required for group 6 potential voltage collapse:
'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2'	
'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	
'ELM CREEK - MRWYP16 230KV CKT 1'	
'Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1'	
'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	

Table 8.7 Group 6 Cluster ERIS Thermal Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
COCHRAN INTERCHANGE - NEWTAP3 115.00 115KV CKT 1'	120.9	120.5914	System Intact	Reconductor New Tap - Cochran – Lost Draw 115 kV Ckt 1

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
'CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1'	89.63	103.1464	System Intact	Mitigated by voltage collapse upgrades and higher queued upgrades
'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'	318.69	122.4462	System Intact	Mitigated by voltage collapse upgrades and higher queued upgrades
'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	119.3691	System Intact	Replace auto and jumpers, upgrade terminal and bus.
'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	103.1448	System Intact	Mitigated by voltage collapse upgrades and higher queued upgrades
'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	107.2492	System Intact	Mitigated by voltage collapse upgrades and higher queued upgrades.
'ALLRED TAP - INK_BASIN 3115.00 115KV CKT 1'	131.46	119.9019	'INK_BASIN 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	Mitigated by other ERS upgrades
'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	171.0929	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	Hobbs – Andrews 230kV (345kV Built) conversion to operate at 345kV, Install two new Andrews 345/115/13kV Transformers
'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	170.2555	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	
'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	421.9	133.039	'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'	
'CIMARRON - MINCO 345KV CKT 1'	956	104.5586	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'	Updated rating is sufficient for mitigation
'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	1042	150.1671	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'	Terminal upgrades at Tucu 345 kV
'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	102.58	217.2868	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	Build approximately 17.1 miles of 345 kV for Hobbs – G14_012T Ckt 2
'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'	525	107.1771	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	
'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	174.88	138.6662	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	159.34	127.6541	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	
'JAL SUB - WHITTEN SUB 115KV CKT 1'	119.9	116.2707	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	
'OXY_S_HOBBS3115.00 - SWITCH 4J44 115KV CKT 1'	141	101.6034	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	
'G15079_T 230.00 - INK_BASIN 6230.00 230KV CKT 1'	377.65	104.8008	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'	Mitigated by voltage collapse upgrades and higher queued upgrades
'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	109.0306	'TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1'	Advance Yoakum – Hobbs & Yoakum 230/345 kV transformer
'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	114.1181	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'	Upgrade terminal equipment
'JOHNSON DRAW - TAYLOR SWITCHING STATION 115KV CKT 1'	172.29	106.0123	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	Mitigated by voltage collapse upgrades and higher queued upgrades
'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	155.1162	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'	Rebuild approximately 4 miles of 115kV (NTC 200360)
'National Enrichment Plant Tap (Cardinal) - TARGA 3115.00 115KV CKT 1'	119.9	143.5224	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'	Rebuild approximately 3 miles of 115kV (NTC 200360)
'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	128.1207	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	Mitigated by voltage collapse upgrades and higher queued upgrades
'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	126.8969	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	Mitigated by voltage collapse upgrades and higher queued upgrades

The table below summarizes constraints and associated mitigations assignable to incremental ERIIS steady state voltage.

Table 8.8 Group 6 Cluster ERS Voltage Constraints

Monitored Element	TC Voltage (PU)	VMIN (PU)	VMAX (PU)	Contingency	Mitigation
'ELK CITY 230KV 230KV'	0.91736	0.92	1.05	"P23:345:AEPW:LAWTON EASTSIDE CB 3429B NBTB"	Turn off in-line reactors at Woodward – Thistle 345 kV Ckt2 1 & 2
'SHAMROCK 115KV'	1.075571	0.9	1.05	'LAWTON EASTSIDE - OKLAUNION 345KV CKT 1'	Add 20 MVAR of capacitor banks at Shamrock 115 kV
'SHAMROCK 138KV'	1.061923	0.9	1.05	"P12:115:SPS:T56.2.DC_S.MUSTG"	
'SHAMROCK 69KV'	0.895443	0.9	1.05	'LAWTON EASTSIDE - OKLAUNION 345KV CKT 1'	
'SHAMROCK 115KV'	1.07557	0.9	1.05	"P12:115:SPS:T56.2.DC_S.MUSTG"	Switch out Shamrock 69 kV cap bank.

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

Table 8.9 Group 6 Cluster NRIS Thermal Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
'JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1'	191.22	101.3357	'LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1'	Rebuild 3.3 miles of 230 kV from Jones Station – Lubbock Power & Light (Holly Plant) Ckt 1
'TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1'	119.51	111.5896	'SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1'	Mitigated by other upgrades

The table below summarizes constraints and associated mitigations assignable to incremental NRIS steady state voltage.

Table 8.10 Group 6 Cluster NRIS Voltage Constraints

Monitored Element	TC Voltage (PU)	VMIN (PU)	VMAX (PU)	Contingency	Mitigation
Currently none that are incremental to ERS non-convergence, ERS thermal, and NRIS thermal mitigations					

8.1.6 CLUSTER GROUP 7 (SOUTHWESTERN OKLAHOMA AREA)

Previous power flow analysis is still valid.

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

New requests for this study group as well as prior-queued requests are listed in [Appendix C](#).

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

Table 8.11 Group 8 Cluster ERS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
'CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1'	106	183.3931	System Intact	Re-conductor/Rebuild 3.45 miles of 138kV
'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	126.3476	System Intact	Re-conductor/Rebuild 10.3 miles of 138kV
'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	166.8239	'MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1'	
'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	101.3822	System Intact	Upgrade terminal equipment
'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	117.8292	'SOONER - SPRING CREEK 345KV CKT 1'	Higher queued upgrade mitigates this constraint
'G15063_T 345.00 - WOODRING 345KV CKT 1'	1016	109.2602	'SOONER - SPRING CREEK 345KV CKT 1'	Replace structures
'RANCHR7 345.00 - SOONER 345KV CKT 1'	1195	103.2281	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'	Upgrade terminal equipment

The table below summarizes constraints and associated mitigations assignable to incremental ERIS steady state voltage.

Table 8.12 Group 8 Cluster ERIS Voltage Constraints

Monitored Element	TC Voltage (PU)	VMIN (PU)	VMAX (PU)	Contingency	Mitigation
'WOLF CREEK 345KV'	0.984572	0.985	1.03	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'	Mitigated by locking Waverly xfmr taps
Multiple	0.892641	0.9	1.05	'SUMNER 4 - TIMBJCT4 138KV CKT 1'	Unlock Timber Junction 69/138 kV xfmr taps.

No NRIS thermal constraints were observed for system-intact or single-contingency (N-1) conditions.

The table below summarizes constraints and associated mitigations assignable to incremental NRIS steady state voltage.

Table 8.13 Group 8 Cluster NRIS Voltage Constraints

Monitored Element	TC Voltage (PU)	VMIN (PU)	VMAX (PU)	Contingency	Mitigation
Currently none that are incremental to ERIS thermal, voltage, and NRIS thermal mitigations					

8.1.8 CLUSTER GROUP 9 (NEBRASKA AREA)

Previous power flow analysis is still valid.

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

Previous power flow analysis is still valid.

8.1.10 CLUSTER GROUP 12 (NORTHWEST ARKANSAS AREA)

Previous power flow analysis is still valid.

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

Previous power flow analysis is still valid.

8.1.12 CLUSTER GROUP 14 (SOUTH CENTRAL OKLAHOMA AREA)

Previous power flow analysis is still valid.

8.1.13 CLUSTER GROUP 15 (EASTERN SOUTH DAKOTA)

Previous power flow analysis is still valid.

8.1.14 CLUSTER GROUP 16 (WESTERN NORTH DAKOTA)

Previous power flow analysis is still valid.

8.1.15 CLUSTER GROUP 17 (WESTERN SOUTH DAKOTA)

Previous power flow analysis is still valid.

8.1.16 CLUSTER GROUP 18 (EASTERN NORTH DAKOTA)

Previous power flow analysis is still valid.

8.2 STAND-ALONE SCENARIO

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

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

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

Limited Operation results are listed below. While these results are based on the criteria listed in GIP 8.4.3, the Interconnection Customer may request additional scenarios for Limited Operation based on higher-queued Interconnection Requests not being placed in service. All of these amounts listed are based on SPP limitations and do not account for limitations on Affected Systems.

Table 8.14 Limited Operation Results

Group Number	Request	Available MW Before Mitigation	Most-Limiting Constraint	Mitigation
	GEN-2015-095	0	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	DeGrasse 345/138kV Project
	GEN-2016-003	248.4	None	
	GEN-2016-020	0	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	DeGrasse 345/138kV Project
	GEN-2016-045	501.4	None	
	GEN-2016-047	469	None	
	GEN-2016-057	501.4	None	
Group 2	GEN-2015-082	200	None	
	GEN-2016-070	0	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	Replace line traps at both terminal (higher queued upgrades)
Group 3	GEN-2016-005	ERIS - 0	Non-convergence constraints listed in Section 8 Group 3 tables	Build Beaver Co - Clark Co 345kV
		NRIS - 0		
	GEN-2016-016	0		
		0		
GEN-2016-046	0			
Group 4	GEN-2016-067	73.6	None	
Group 6	GEN-2015-041	ERIS - 5	None	Rebuild 3.3 miles of 230 kV from Jones Station - Lubbock Power & Light (Holly Plant) Ckt 1
		NRIS - 0	'JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1'	
	GEN-2016-015	0	Non-convergence constraints listed in Section 8 Group 6 tables	<ol style="list-style-type: none"> 1) Oklaunion +/-100Mvar SVC 2) Border +300Mvar SVC and 300Mvars of capacitor bank(s) 3) Build approximately 64 miles of new 345kV from Crawfish Draw - Tolk 4) Build approximately 115 miles of new 345kV from Tolk - Potter County 5) Build approximately 140 miles of new 345 kV from Potter - Grapevine - Chisholm
	GEN-2016-056	0		
	GEN-2016-062	0		
	GEN-2016-069	0		
Group 7	GEN-2016-037	300	None	
	GEN-2016-051	9.8	None	
Group 8	GEN-2016-009	14.5	None	
	GEN-2016-022	113	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'	Upgrade terminal equipment for Ranch Rd - Sooner 345 kV
	GEN-2016-031	1		
	GEN-2016-032	ERIS - 181	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	Upgrade terminal equipment for Lacygne - Waverly 345 kV Ckt 1
		NRIS - 181	None	
	GEN-2016-060	0	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	Rebuild Farber - Belle Plains 138kV CKT 1
	GEN-2016-061	1	'SOONER - SPRING CREEK 345KV CKT 1'	Replace structures for G15063_T - Mathewson 345 kV Ckt 1
	GEN-2016-068	1		
	GEN-2016-071	0	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'	Rebuild Farber - Belle Plains 138kV CKT 1
GEN-2016-073	119	'LACYGNE - WAVERLY7	Upgrade terminal equipment for Lacygne	

Group Number	Request	Available MW Before Mitigation	Most-Limiting Constraint	Mitigation
			345.00 345KV CKT 1'	- Waverly 345 kV Ckt 1
Group 9	GEN-2015-089	0	Non-convergence constraints listed in Section 8 Group 9 tables	R- Plan (Gentleman – Thedford – Holt 345kV).
	GEN-2016-021	300	None	
	GEN-2016-023	0	Non-convergence constraints listed in Section 8 Group 9 tables	Build Banner Co – Keystone 345kV CKT 1, Keystone – GGS 345kV CKT 2, and R-Plan
	GEN-2016-029	0		
	GEN-2016-043	230	None	
	GEN-2016-050	250.7	None	
	GEN-2016-075	0	Non-convergence constraints listed in Section 8 Group 9 tables	R- Plan (Gentleman – Thedford – Holt 345kV).
Group 12	GEN-2016-013	ERIS – 10	None	
		NRIS – 0	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	Rebuild Neosho – Riverton 161kV CKT 1
	GEN-2016-014	ERIS – 10	None	
		NRIS – 0	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	Rebuild Neosho – Riverton 161kV CKT 1
Group 14	GEN-2015-036	303.6	None	
	GEN-2016-028	100	None	
	GEN-2016-030	100	None	
	GEN-2016-063	200	None	
Group 15	GEN-2016-017	250.7	None	
Group 16	GEN-2016-004	ERIS – 201.6		
		NRIS – 0	GLENHAM - L3 HAWDON 230KV CKT 1 and Low voltage at GRPRAR 345KV GRAND ISLAND 345KV	Rplan and Replace terminal equipment
	GEN-2016-052	3.3	None	
	GEN-2016-053	3.3	None	
Group 17	GEN-2016-054	3.4	None	
Group 18	GEN-2016-007	100.05	None	

8.3 CURTAILMENT AND SYSTEM RELIABILITY

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

9 STABILITY & SHORT CIRCUIT ANALYSIS

Dynamic stability and short circuit analysis were not re-evaluated as part of this restudy.

10 CONCLUSION

The minimum cost of interconnecting groups 3, 6, and 8 new generation interconnection requests included in this Definitive Interconnection System Impact Study is estimated at, \$823,610,681 not including the exceptions noted in Section 5.

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

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

Please note higher queued, MISO 2016-FEB-West Phase 2 analysis is not complete at this time. Depending on the results and mitigations assigned in MISO-2016-FEB-West Phase 2, SPP could require a restudy for Group 9, 15, 16, 17, and 18 due to higher queue study assumption changes.

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

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

11 APPENDICES

*11.1 A: GENERATION INTERCONNECTION REQUESTS CONSIDERED FOR
IMPACT STUDY*

A: Generation Interconnection Requests Considered for Study

Request	Amount	Service	Area	Requested Point of Interconnection	Proposed Point of Interconnection	Requested In-Service Date	In Service Date Delayed Until no earlier than*
ASGI-2016-002	0.35	ER	SPS	Hurlwood 115kV	SP-Yuma 115kV		TBD
ASGI-2016-003	6.00	ER	KCPL		Paola 161kV		TBD
ASGI-2016-004	9.60	ER	SPS		Palo Duro 115kV		TBD
GEN-2015-036	303.60	ER	OKGE	Johnston County 345kV	Johnston County 345kV	12/31/2017	TBD
GEN-2015-041	5.00	ER/NR	SPS	TUCO Interchange 345kV	TUCO Interchange 345kV	7/1/2015	TBD
GEN-2015-082	200.00	ER	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV	12/1/2017	TBD
GEN-2015-089	200.00	ER	WAPA	Utica 230kV	Utica 230kV	6/30/2017	TBD
GEN-2015-095	176.00	ER	OKGE	Tap Rose Valley - Mooreland 138kV	DeGrasse 138kV	12/1/2017	TBD
GEN-2016-003	248.40	ER	OKGE	Tap Badger - Woodward 345kV	Tap Badger - Woodward 345kV	12/31/2017	TBD
GEN-2016-004	202.00	ER/NR	WAPA	Leland Olds 230kV	Leland Olds 230kV	12/1/2018	TBD
GEN-2016-005	150.00	ER/NR	SUNCMKEC	Tap Clark County - Thistle 345kV	Tap Clark County - Thistle 345kV	12/31/2018	TBD
GEN-2016-007	100.00	ER	WAPA	Valley City 115kV	Valley City 115kV	12/31/2018	TBD
GEN-2016-009	29.00	ER	OKGE	Osage 69kV	Osage 69kV	9/30/2018	TBD
GEN-2016-013	10.00	ER/NR	EMDE	La Russell 161kV	La Russell 161kV	4/25/2003	TBD
GEN-2016-014	10.00	ER/NR	EMDE	La Russell 161kV	La Russell 161kV	4/25/2003	TBD
GEN-2016-015	100.00	ER	SPS	Andrews 230kV	Andrews 230kV	10/1/2018	TBD
GEN-2016-016	78.20	ER	MIDW	North Kinsley 115kV	North Kinsley 115kV	12/1/2017	TBD
GEN-2016-017	250.70	ER	WAPA	Tap Fort Thompson - Leland Olds 345kV	Tap Fort Thompson - Leland Olds 345kV	12/1/2017	TBD
GEN-2016-020	150.00	ER	WFEC	Mooreland 138kV	Mooreland 138kV	12/31/2018	TBD
GEN-2016-021	300.00	ER	NPPD	Hoskins 345kV	Hoskins 345kV	12/1/2018	TBD
GEN-2016-022	151.80	ER	OKGE	Ranch Road 345kV	Ranch Road 345kV	12/31/2017	TBD
GEN-2016-023	150.50	ER	WAPA	Tap Laramie River – Sidney 345kV	Tap Laramie River – Sidney 345kV	12/31/2017	TBD
GEN-2016-028	100.00	ER	AEPW	Clayton 138kV	Clayton 138kV	12/31/2018	TBD
GEN-2016-029	150.00	ER	WAPA	Tap Laramie River – Sidney 345kV	Tap Laramie River – Sidney 345kV	12/31/2017	TBD
GEN-2016-030	100.00	ER/NR	OKGE	Brown 138kV	Brown 138kV	1/1/2019	TBD
GEN-2016-031	1.50	ER	OKGE	Ranch Road 345kV	Ranch Road 345kV	11/30/2016	TBD
GEN-2016-032	200.00	ER/NR	OKGE	Tap Marshall - Cottonwood Creek 138kV	Tap Marshall - Cottonwood Creek 138kV	10/1/2018	TBD
GEN-2016-037	300.00	ER	AEPW	Tap Chisholm - Gracemont 345kV	Tap Chisholm - Gracemont 345kV	12/1/2018	TBD
GEN-2016-043	230.00	ER	NPPD	Hoskins 345kV	Hoskins 345kV	9/1/2018	TBD
GEN-2016-045	499.10	ER	OKGE	Mathewson 345kV	Mathewson 345kV	8/31/2018	TBD
GEN-2016-046	299.00	ER	SUNCMKEC	Tap Clark County - Ironwood 345kV	Tap Clark County - Ironwood 345kV	12/1/2018	TBD
GEN-2016-047	24.00	ER	OKGE	Mustang 69kV	Mustang 69kV	12/31/2017	TBD
GEN-2016-050	250.70	ER	NPPD	Tap Axtell - Post Rock 345kV	Tap Axtell - Post Rock 345kV	12/1/2018	TBD
GEN-2016-051	9.80	ER	AEPW	Tap Clinton Junction - Weatherford Southeast 138kV	Tap Clinton Junction - Weatherford Southeast 138kV		TBD
GEN-2016-052	3.30	ER	WAPA	Hilken 230kV	Hilken 230kV	12/31/2016	TBD
GEN-2016-053	3.30	ER	WAPA	Hilken 230kV	Hilken 230kV	12/31/2016	TBD
GEN-2016-054	3.40	ER	WAPA	Wessington Springs 230kV	Wessington Springs 230kV		TBD
GEN-2016-056	200.00	ER	SPS	Carlisle 230kV	Carlisle 230kV	12/15/2018	TBD

Request	Amount	Service	Area	Requested Point of Interconnection	Proposed Point of Interconnection	Requested In-Service Date	In Service Date Delayed Until no earlier than*
GEN-2016-057	499.10	ER	OKGE	Mathewson 345kV	Mathewson 345kV	8/31/2018	TBD
GEN-2016-060	25.30	ER	WERE	Belle Plain 138kV	Belle Plain 138kV	12/31/2017	TBD
GEN-2016-061	250.70	ER	OKGE	Tap Woodring - Sooner 345kV	Tap Woodring - Sooner 345kV	12/1/2017	TBD
GEN-2016-062	250.70	ER	SPS	Andrews 230kV	Andrews 230kV	12/1/2018	TBD
GEN-2016-063	200.00	ER/NR	OKGE	Tap Sunnyside – Hugo 345kV	Tap Sunnyside – Hugo 345kV	12/31/2018	TBD
GEN-2016-067	73.60	ER	SUNCMKEC	Mingo 345kV	Mingo 345kV	11/1/2017	TBD
GEN-2016-068	250.00	ER	OKGE	Woodring 345kV	Woodring 345kV	12/1/2017	TBD
GEN-2016-069	31.40	ER	SPS	Chaves County 115kV	Chaves County 115kV	6/1/2018	TBD
GEN-2016-070	5.30	ER	SPS	Martin 115kV	Martin 115kV	11/1/2016	TBD
GEN-2016-071	200.10	ER	WFEC	Chilocco 138kV	Chilocco 138kV	9/30/2018	TBD
GEN-2016-073	220.00	ER	WERE	Tap Thistle – Wichita 345kV Dbl CKT	Tap Thistle – Wichita 345kV Dbl CKT	12/31/2017	TBD
GEN-2016-075	50.00	ER	WAPA	Tap Fort Thompson - Grand Island 345kV	Grand Prairie 345kV	12/31/2017	TBD
Total:		7,261.45					

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

11.2 B: PRIOR-QUEUED INTERCONNECTION REQUESTS

C. Study Groups

GROUP 1: WOODWARD AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-014	96.00	WFEC	Ft Supply 138kV
GEN-2001-037	100.00	OKGE	FPL Moreland Tap 138kV
GEN-2005-008	120.00	OKGE	Woodward 138kV
GEN-2006-024S	19.80	WFEC	Buffalo Bear Tap 69kV
GEN-2006-046	131.00	OKGE	Dewey 138kV
GEN-2007-021	201.00	OKGE	Tatonga 345kV
GEN-2007-043	200.00	OKGE	Minco 345kV
GEN-2007-044	300.00	OKGE	Tatonga 345kV
GEN-2007-050	170.00	OKGE	Woodward EHV 138kV
GEN-2007-062	425.00	OKGE	Woodward EHV 345kV
GEN-2008-003	101.00	OKGE	Woodward EHV 138kV
GEN-2008-044	197.80	OKGE	Tatonga 345kV
GEN-2010-011	29.70	OKGE	Tatonga 345kV
GEN-2010-040	300.00	OKGE	Cimarron 345kV
GEN-2011-010	100.80	OKGE	Minco 345kV
GEN-2011-019	175.00	OKGE	Woodward 345kV
GEN-2011-020	165.60	OKGE	Woodward 345kV
GEN-2011-054	300.00	OKGE	Cimarron 345kV
GEN-2014-002	10.50	OKGE	Tatonga 345kV (GEN-2007-021 POI)
GEN-2014-003	15.80	OKGE	Tatonga 345kV (GEN-2007-044 POI)
GEN-2014-005	5.70	OKGE	Minco 345kV (GEN-2011-010 POI)
GEN-2014-020	100.00	AEPW	Tuttle 138kV
GEN-2014-056	250.00	OKGE	Minco 345kV
GEN-2015-029	161.00	OKGE	Tatonga 345kV
GEN-2015-048	200.00	OKGE	Cleo Corner 138kV
GEN-2015-057	100.00	OKGE	Minco 345kV
GEN-2015-093	250.00	OKGE	Gracemont 345kV
PRIOR QUEUED SUBTOTAL	4,225.70		
GEN-2015-095	176.00	OKGE	DeGrasse 138kV
GEN-2016-003	248.40	OKGE	Tap Badger - Woodward 345kV
GEN-2016-020	150.00	WFEC	Mooreland 138kV
GEN-2016-045	499.10	OKGE	Mathewson 345kV
GEN-2016-047	24.00	OKGE	Mustang 69kV
GEN-2016-057	499.10	OKGE	Mathewson 345kV
CURRENT CLUSTER SUBTOTAL	1,596.60		
AREA TOTAL	5,822.30		

GROUP 2: HITCHLAND AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2011-002	20.00	SPS	Herring 115kV
ASGI-2013-001	11.50	SPS	PanTex South 115kV
GEN-2002-008	240.00	SPS	Hitchland 345kV
GEN-2002-009	80.00	SPS	Hansford 115kV
GEN-2002-022	240.00	SPS	Bushland 230kV
GEN-2003-020	160.00	SPS	Martin 115kV
GEN-2006-020S	18.90	SPS	DWS Frisco 115kV
GEN-2006-044	370.00	SPS	Hitchland 345kV
GEN-2007-046	200.00	SPS	Hitchland 115kV
GEN-2008-047	300.00	OKGE	Beaver County 345kV
GEN-2008-051	322.00	SPS	Potter County 345kV
GEN-2010-001	300.00	OKGE	Beaver County 345kV
GEN-2010-014	358.80	SPS	Hitchland 345kV
GEN-2011-014	201.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV
GEN-2011-022	299.00	SPS	Hitchland 345kV
GEN-2013-030	300.00	OKGE	Beaver County 345kV
GEN-2014-037	200.00	SPS	Tap Hitchland - Beaver County Dbl Ckt (Optima) 345kV
Llano Estacado (White Deer)	80.00	SPS	Llano Wind 115kV
SPS Distributed (Carson)	10.00	SPS	Martin 115kV
SPS Distributed (Dumas 19th St)	20.00	SPS	Dumas 19th Street 115kV
SPS Distributed (Etter)	20.00	SPS	Etter 115kV
SPS Distributed (Moore E)	25.00	SPS	Moore East 115kV
SPS Distributed (Sherman)	20.00	SPS	Sherman 115kV
SPS Distributed (Spearman)	10.00	SPS	Spearman 69kV
SPS Distributed (TC-Texas County)	20.00	SPS	Texas County 115kV
PRIOR QUEUED SUBTOTAL	3,826.20		
GEN-2015-082	200.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV
GEN-2016-070	5.30	SPS	Martin 115kV
CURRENT CLUSTER SUBTOTAL	205.30		
AREA TOTAL	4,031.50		

GROUP 3: SPEARVILLE AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2012-006	22.50	SUNCMKEC	Tap Hugoton - Rolla 69kV
ASGI-2015-001	6.13	SUNCMKEC	Ninnescah 115kV
GEN-2001-039A	105.00	SUNCMKEC	Shooting Star Tap 115kV
GEN-2002-025A	150.00	SUNCMKEC	Spearville 230kV
GEN-2004-014	154.50	SUNCMKEC	Spearville 230kV
GEN-2005-012	250.00	SUNCMKEC	Ironwood 345kV
GEN-2006-021	101.00	SUNCMKEC	Flat Ridge Tap 138kV
GEN-2007-040	200.00	SUNCMKEC	Buckner 345kV
GEN-2008-018	250.00	SPS	Finney 345kV
GEN-2008-079	99.20	SUNCMKEC	Crooked Creek 115kV
GEN-2008-124	200.10	SUNCMKEC	Ironwood 345kV
GEN-2010-009	165.60	SUNCMKEC	Buckner 345kV
GEN-2010-045	197.80	SUNCMKEC	Buckner 345kV
GEN-2011-008	600.00	SUNCMKEC	Clark County 345kV
GEN-2011-016	200.10	SUNCMKEC	Ironwood 345kV
GEN-2012-007	120.00	SUNCMKEC	Rubart 115kV
GEN-2012-024	180.00	SUNCMKEC	Clark County 345kV
GEN-2013-010	99.00	SUNCMKEC	Tap Spearville - Post Rock (North of GEN-2011-017 Tap) 345kV
GEN-2015-021	20.00	SUNCMKEC	Johnson Corner 115kV
Gray County Wind (Montezuma)	110.00	SUNCMKEC	Gray County Tap 115kV
PRIOR QUEUED SUBTOTAL	3,230.93		
GEN-2016-005	150.00	SUNCMKEC	Tap Clark County - Thistle 345kV
GEN-2016-016	78.20	MIDW	North Kinsley 115kV
GEN-2016-046	299.00	SUNCMKEC	Tap Clark County - Ironwood 345kV
CURRENT CLUSTER SUBTOTAL	527.20		
AREA TOTAL	3,758.13		

GROUP 4: NORTHWEST KANSAS AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2013-004	36.60	SUNCMKEC	Morris 115kV
GEN-2001-039M	100.00	SUNCMKEC	Central Plains Tap 115kV
GEN-2003-006A	200.00	SUNCMKEC	Elm Creek 230kV
GEN-2003-019	250.00	MIDW	Smoky Hills Tap 230kV
GEN-2006-031	75.00	MIDW	Knoll 115kV
GEN-2008-092	200.60	MIDW	Post Rock 230kV
GEN-2009-008	199.50	MIDW	South Hays 230kV
GEN-2009-020	48.30	MIDW	Walnut Creek 69kV
GEN-2010-057	201.00	MIDW	Rice County 230kV
GEN-2013-033	28.00	MIDW	Knoll 115kV
GEN-2014-025	2.40	MIDW	Walnut Creek 69kV
GEN-2015-064	197.80	SUNCMKEC	Mingo 115kV
GEN-2015-065	202.40	SUNCMKEC	Mingo 345kV
PRIOR QUEUED SUBTOTAL	1,741.60		
GEN-2016-067	73.60	SUNCMKEC	Mingo 345kV
CURRENT CLUSTER SUBTOTAL	73.60		
AREA TOTAL	1,815.20		

GROUP 6: SOUTH TEXAS PANHANDLE/NEW MEXICO AREA

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2010-010	42.20	SPS	Lovington 115kV
ASGI-2010-020	30.00	SPS	Tap LE-Tatum - LE-Crossroads 69kV
ASGI-2010-021	15.00	SPS	Tap LE-Saunders Tap - LE-Anderson 69kV
ASGI-2011-001	27.30	SPS	Lovington 115kV
ASGI-2011-003	10.00	SPS	Hendricks 69kV
ASGI-2011-004	20.00	SPS	Pleasant Hill 69kV
ASGI-2012-002	18.15	SPS	FE-Clovis Interchange 115kV
ASGI-2013-002	18.40	SPS	FE Tucumcari 115kV
ASGI-2013-003	18.40	SPS	FE Clovis 115kV
ASGI-2013-005	1.65	SPS	FE Clovis 115kV
ASGI-2013-006	2.00	SPS	SP-Erskine 115kV
ASGI-2014-001	2.50	SPS	SP-Erskine 115kV
ASGI-2015-002	2.00	SPS	SP-Yuma 69kV
GEN-2001-033	180.00	SPS	San Juan Tap 230kV
GEN-2001-036	80.00	SPS	Norton 115kV
GEN-2006-018	170.00	SPS	TUCO Interchange 230kV
GEN-2006-026	502.00	SPS	Hobbs 230kV & Hobbs 115kV
GEN-2008-022	300.00	SPS	Crossroads 345kV
GEN-2010-006	205.00	SPS	Jones 230kV
GEN-2010-046	56.00	SPS	TUCO Interchange 230kV
GEN-2011-025	80.00	SPS	Tap Floyd County - Crosby County 115kV
GEN-2011-045	205.00	SPS	Jones 230kV
GEN-2011-046	27.00	SPS	Lopez 115kV
GEN-2011-048	175.00	SPS	Mustang 230kV
GEN-2012-001	61.20	SPS	Cirrus Tap 230kV
GEN-2012-020	478.00	SPS	TUCO 230kV
GEN-2012-034	7.00	SPS	Mustang 230kV
GEN-2012-035	7.00	SPS	Mustang 230kV
GEN-2012-036	7.00	SPS	Mustang 230kV
GEN-2012-037	203.00	SPS	TUCO 345kV
GEN-2013-016	203.00	SPS	TUCO 345kV
GEN-2013-022	25.00	SPS	Norton 115kV
GEN-2013-027	150.00	SPS	Tap Tolk - Yoakum 230kV
GEN-2014-012	225.00	SPS	Tap Hobbs Interchange - Andrews 230kV
GEN-2014-033	70.00	SPS	Chaves County 115kV
GEN-2014-034	70.00	SPS	Chaves County 115kV
GEN-2014-035	30.00	SPS	Chaves County 115kV
GEN-2014-040	320.40	SPS	Castro 115kV
GEN-2014-047	40.00	SPS	Crossroads 345kV
GEN-2015-014	150.00	SPS	Tap Cochran - Lehman 115kV
GEN-2015-020	100.00	SPS	Oasis 115kV
GEN-2015-022	112.00	SPS	Swisher 115kV
GEN-2015-031	150.53	SPS	Tap Amarillo South - Swisher 230kV
GEN-2015-056	101.20	SPS	Crossroads 345kV
GEN-2015-058	50.00	SPS	Atoka 115kV
GEN-2015-068	300.00	SPS	TUCO Interchange 345kV
GEN-2015-075	51.50	SPS	Carlisle 69kV
GEN-2015-079	129.20	SPS	Tap Yoakum - Hobbs Interchange 230kV
GEN-2015-080	129.20	SPS	Tap Yoakum - Hobbs Interchange 230kV

SPS Distributed (Hopi)	10.00	SPS	Hopi 115kV
SPS Distributed (Jal)	10.00	SPS	S Jal 115kV
SPS Distributed (Lea Road)	10.00	SPS	Lea Road 115kV
SPS Distributed (Monument)	10.00	SPS	Monument 115kV
SPS Distributed (Ocotillo)	10.00	SPS	S_Jal 115kV
SPS Distributed (Yuma)	2.57	SPS	SP-Yuma 69kV
PRIOR QUEUED SUBTOTAL	5,410.40		
ASGI-2016-002	0.35	SPS	SP-Yuma 115kV
ASGI-2016-004	9.60	SPS	Palo Duro 115kV
GEN-2015-041	5.00	SPS	TUCO Interchange 345kV
GEN-2016-015	100.00	SPS	Andrews 230kV
GEN-2016-056	200.00	SPS	Carlisle 230kV
GEN-2016-062	250.70	SPS	Andrews 230kV
GEN-2016-069	31.40	SPS	Chaves County 115kV
CURRENT CLUSTER SUBTOTAL	597.05		
AREA TOTAL	6,007.45		

GROUP 7: SOUTHWEST OKLAHOMA AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-026	74.30	WFEC	Washita 138kV
GEN-2002-005	120.00	WFEC	Red Hills Tap 138kV
GEN-2003-004	100.00	WFEC	Washita 138kV
GEN-2003-005	100.00	WFEC	Anadarko - Paradise (Blue Canyon) 138kV
GEN-2003-022	120.00	AEPW	Weatherford 138kV
GEN-2004-020	27.00	AEPW	Weatherford 138kV
GEN-2004-023	20.60	WFEC	Washita 138kV
GEN-2005-003	30.60	WFEC	Washita 138kV
GEN-2006-002	101.00	AEPW	Sweetwater 230kV
GEN-2006-035	225.00	AEPW	Sweetwater 230kV
GEN-2006-043	99.00	AEPW	Sweetwater 230kV
GEN-2007-052	150.00	WFEC	Anadarko 138kV
GEN-2008-023	150.00	AEPW	Hobart Junction 138kV
GEN-2008-037	101.00	WFEC	Slick Hills 138kV
GEN-2011-037	7.00	WFEC	Blue Canyon 5 138kV
GEN-2011-049	250.70	OKGE	Border 345kV
GEN-2012-028	74.80	WFEC	Gotebo 69kV
GEN-2015-004	52.90	OKGE	Border 345kV
GEN-2015-013	120.00	WFEC	Synder 138kV
GEN-2015-055	40.00	WFEC	Erick 138kV
GEN-2015-071	200.00	AEPW	Chisholm 345kV
GEN-2015-084	51.30	AEPW	Hollis 138kV
GEN-2015-085	122.40	AEPW	Altus Junction 138kV
PRIOR QUEUED SUBTOTAL	2,337.60		
GEN-2016-037	300.00	AEPW	Tap Chisholm - Gracemont 345kV
GEN-2016-051	9.80	AEPW	Tap Clinton Junction - Weatherford Southeast 138kV
CURRENT CLUSTER SUBTOTAL	309.80		
AREA TOTAL	2,647.40		

GROUP 8: NORTH OKLAHOMA/SOUTH CENTRAL KANSAS AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2010-006	150.00	AECI	Remington 138kV
ASGI-2014-014	56.40	GRDA	Ferguson 69kV
ASGI-2015-004	56.36	GRDA	Coffeyville City 69kV
GEN-2002-004	200.00	WERE	Latham 345kV
GEN-2005-013	201.00	WERE	Caney River 345kV
GEN-2007-025	300.00	WERE	Viola 345kV
GEN-2008-013	300.00	OKGE	Hunter 345kV
GEN-2008-021	42.00	WERE	Wolf Creek 345kV
GEN-2008-098	100.80	WERE	Waverly 345kV
GEN-2009-025	59.80	OKGE	Nardins 69kV
GEN-2010-003	100.80	WERE	Waverly 345kV
GEN-2010-005	299.20	WERE	Viola 345kV
GEN-2010-055	4.50	AEPW	Wekiwa 138kV
GEN-2011-057	150.40	WERE	Creswell 138kV
GEN-2012-032	300.00	OKGE	Open Sky 345kV
GEN-2012-033	98.10	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV
GEN-2012-041	121.50	OKGE	Ranch Road 345kV
GEN-2013-012	147.00	OKGE	Redbud 345kV
GEN-2013-028	559.50	GRDA	Tap N Tulsa - GRDA 1 345kV

GEN-2013-029	300.00	OKGE	Renfrow 345kV
GEN-2014-001	200.60	WERE	Tap Wichita - Emporia Energy Center (GEN-2014-001 Tap) 345kV
GEN-2014-028	35.00	EMDE	Riverton 161kV
GEN-2014-064	248.40	OKGE	Otter 138kV
GEN-2015-001	200.00	OKGE	Ranch Road 345kV
GEN-2015-015	154.60	OKGE	Tap Medford Tap - Coyote 138kV
GEN-2015-016	200.00	KCPL	Tap Marmaton - Centerville 161kV
GEN-2015-024	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT
GEN-2015-025	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT
GEN-2015-030	200.10	OKGE	Sooner 345kV
GEN-2015-034	200.00	OKGE	Ranch Road 345kV
GEN-2015-047	300.00	OKGE	Sooner 345kV
GEN-2015-052	300.00	WERE	Tap Open Sky - Rose Hill 345kV
GEN-2015-062	4.50	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV
GEN-2015-063	300.00	OKGE	Tap Woodring - Mathewson 345kV
GEN-2015-066	248.40	OKGE	Tap Cleveland - Sooner 345kV
GEN-2015-069	300.00	WERE	Union Ridge 230kV
GEN-2015-073	200.10	WERE	Emporia Energy Center 345kV
GEN-2015-083	125.00	WERE	Belle Plain 138kV
GEN-2015-090	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT
PRIOR QUEUED SUBTOTAL	7,424.06		
GEN-2016-009	29.00	OKGE	Osage 69kV
GEN-2016-022	151.80	OKGE	Ranch Road 345kV
GEN-2016-031	1.50	OKGE	Ranch Road 345kV
GEN-2016-032	200.00	OKGE	Tap Marshall - Cottonwood Creek 138kV
GEN-2016-060	25.30	WERE	Belle Plain 138kV
GEN-2016-061	250.70	OKGE	Tap Woodring - Sooner 345kV
GEN-2016-068	250.00	OKGE	Woodring 345kV
GEN-2016-071	200.10	WFEC	Chilocco 138kV
GEN-2016-073	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT
CURRENT CLUSTER SUBTOTAL	1,328.4		
AREA TOTAL	8,752.46		

GROUP 9: NEBRASKA AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2002-023N	0.80	NPPD	Harmony 115kV
GEN-2003-021N	75.00	NPPD	Ainsworth Wind Tap 115kV
GEN-2004-023N	75.00	NPPD	Columbus Co 115kV
GEN-2006-020N	42.00	NPPD	Bloomfield 115kV
GEN-2006-037N1	75.00	NPPD	Broken Bow 115kV
GEN-2006-038N005	80.00	NPPD	Broken Bow 115kV
GEN-2006-038N019	80.00	NPPD	Petersburg North 115kV
GEN-2006-044N	40.50	NPPD	North Petersburg 115kV
GEN-2007-011N08	81.00	NPPD	Bloomfield 115kV
GEN-2007-017IS	166.00	WAPA	Ft Thompson-Grand Island 345kV
GEN-2007-018IS	234.00	WAPA	Ft Thompson-Grand Island 345kV
GEN-2008-086N02	201.00	NPPD	Meadow Grove 230kV
GEN-2008-1190	60.00	OPPD	S1399 161kV
GEN-2008-123N	89.70	NPPD	Tap Pauline - Guide Rock (Rosemont) 115kV
GEN-2009-040	73.80	WERE	Marshall 115kV
GEN-2010-041	10.50	OPPD	S1399 161kV
GEN-2010-051	200.00	NPPD	Tap Hoskins - Twin Church (Dixon County) 230kV

GEN-2011-018	73.60	NPPD	Steele City 115kV
GEN-2011-027	120.00	NPPD	Tap Hoskins - Twin Church (Dixon County) 230kV
GEN-2011-056	3.60	NPPD	Jeffrey 115kV
GEN-2011-056A	3.60	NPPD	John 1 115kV
GEN-2011-056B	4.50	NPPD	John 2 115kV
GEN-2012-021	4.80	LES	Terry Bundy Generating Station 115kV
GEN-2013-002	50.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2
GEN-2013-008	1.20	NPPD	Steele City 115kV
GEN-2013-019	73.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2
GEN-2013-032	204.00	NPPD	Antelope 115kV
GEN-2014-004	4.00	NPPD	Steele City 115kV (GEN-2011-018 POI)
GEN-2014-013	73.50	NPPD	Meadow Grove (GEN-2008-086N2 Sub) 230kV
GEN-2014-031	35.80	NPPD	Meadow Grove 230kV
GEN-2014-032	10.20	NPPD	Meadow Grove 230kV
GEN-2014-039	73.40	NPPD	Friend 115kV
GEN-2015-007	160.00	NPPD	Hoskins 345kV
GEN-2015-023	300.70	NPPD	Holt County 345kV
GEN-2015-053	50.00	NPPD	Antelope 115kV
GEN-2015-076	158.40	NPPD	Belden 115kV
GEN-2015-087	66.00	NPPD	Tap Fairbury - Hebron 115kV
GEN-2015-088	300.00	NPPD	Tap Moore - Pauline 345kV
NPPD Distributed (Broken Bow)	8.30	NPPD	Broken Bow 115kV
NPPD Distributed (Buffalo County Solar)	10.00	NPPD	Kearney Northeast
NPPD Distributed (Burt County Wind)	12.00	NPPD	Tekamah & Oakland 115kV
NPPD Distributed (Burwell)	3.00	NPPD	Ord 115kV
NPPD Distributed (Columbus Hydro)	45.00	NPPD	Columbus 115kV
NPPD Distributed (North Platte - Lexington)	54.00	NPPD	Multiple: Jeffrey 115kV, John_1 115kV, John_2 115kV
NPPD Distributed (Ord)	11.90	NPPD	Ord 115kV
NPPD Distributed (Stuart)	2.10	NPPD	Ainsworth 115kV
PRIOR QUEUED SUBTOTAL	3,502.10		
GEN-2015-089	200.00	WAPA	Utica 230kV
GEN-2016-021	300.00	NPPD	Hoskins 345kV
GEN-2016-023	150.50	WAPA	Tap Laramie River – Sidney 345kV
GEN-2016-029	150.00	WAPA	Tap Laramie River – Sidney 345kV
GEN-2016-043	230.00	NPPD	Hoskins 345kV
GEN-2016-050	250.70	NPPD	Tap Axtell - Post Rock 345kV
GEN-2016-075	50.00	WAPA	Grand Prairie 345kV
CURRENT CLUSTER SUBTOTAL	1,331.20		
AREA TOTAL	4,833.30		

GROUP 10: SOUTHEAST OKLAHOMA/NORTHEAST TEXAS AREA

Request	Capacity	Area	Proposed Point of Interconnection
AREA TOTAL	0.00		

GROUP 12: NORTHWEST ARKANSAS AREA

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

GROUP 13: NORTHWEST MISSOURI AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2008-129	80.00	KCPL	Pleasant Hill 161kV
GEN-2010-036	4.60	WERE	6th Street 115kV
GEN-2011-011	50.00	KCPL	Iatan 345kV
GEN-2014-021	300.00	KCPL	Tap Nebraska City - Mullin Creek 345kV
GEN-2015-005	200.10	KCPL	Tap Nebraska City - Sibley 345kV
PRIOR QUEUED SUBTOTAL	634.70		
ASGI-2016-003	6.00	KCPL	Paola 161kV
CURRENT CLUSTER SUBTOTAL	6.00		
AREA TOTAL	640.70		

GROUP 14: SOUTH CENTRAL OKLAHOMA AREA

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2015-006	9.00	SWPA	Tupelo 138kV
GEN-2011-040	111.00	OKGE	Carter County 138kV
GEN-2011-050	109.80	AEPW	Santa Fe Tap 138kV
GEN-2012-004	41.40	OKGE	Carter County 138kV
GEN-2013-007	100.30	OKGE	Tap Prices Falls - Carter 138kV
GEN-2014-057	250.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV
GEN-2015-045	20.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV
GEN-2015-092	250.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV
PRIOR QUEUED SUBTOTAL	891.50		
GEN-2015-036	303.60	OKGE	Johnston County 345kV
GEN-2016-028	100.00	AEPW	Clayton 138kV
GEN-2016-030	100.00	OKGE	Brown 138kV
GEN-2016-063	200.00	OKGE	Tap Sunnyside – Hugo 345kV
CURRENT CLUSTER SUBTOTAL	703.60		
AREA TOTAL	1,595.10		

GROUP 15: E-SOUTH DAKOTA AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2016-005	20.00	WAPA	Tap White Lake - Stickeny 69kV
ASGI-2016-006	20.00	WAPA	Mitchall
ASGI-2016-007	20.00	WAPA	Kimball 69kV
G176	100.00	XEL	Yankee 115kV
G255	100.00	XEL	Yankee 115kV
G586	30.00	XEL	Yankee 115kV
G736	200.00	OTP	Big Stone South 230kV
GEN-2002-009IS	40.00	WAPA	Ft Thompson 69kV [Hyde 69kV]
GEN-2007-013IS	50.00	WAPA	Wessington Springs 230kV
GEN-2007-014IS	100.00	WAPA	Wessington Springs 230kV
GEN-2007-023IS	50.00	WAPA	Formit-Summit 115kV
GEN-2009-001IS	200.00	WAPA	Groton-Watertown 345kV
GEN-2009-018IS	100.00	WAPA	Groton 115kV
GEN-2010-001IS	99.00	WAPA	Bismarck-Glenham 230kV
GEN-2010-003IS	34.00	WAPA	Wessington Springs 230kV
GEN-2012-014IS	99.50	WAPA	Groton 115kV
GEN-2013-001IS	90.00	WAPA	Summit-Watertown 115kV
GEN-2013-009IS	19.50	WAPA	Redfield NW 115kV
GEN-2014-001IS	103.70	WAPA	Newell-Maurine 115kV
H081	200.00	XEL	Tap Brookings - Lyons County 345kV
J432	98.00	XEL	Brookings 345kV
J436	150.00	OTP	Big Stone South 345kV
J437	150.00	OTP	Big Stone South 345kV
J442	200.00	OTP	Big Stone 230 kV
J460	200.00	XEL	Tap Brookings - Lyons County 345kV
J488	151.80	OTP	Tap Big Stone - Ellendale 345kV
J489	151.80	OTP	Tap Big Stone - Ellendale 345kV
J493	150.00	OTP	Burr 115kV
J510	326.90	OTP	Tap Brookings - Big Stone 345kV
J525	50.00	XEL	Lake Wilson 69kV
J526	300.00	OTP	Tap Brookings - Big Stone 345kV
PRIOR QUEUED SUBTOTAL	3,604.20		
GEN-2016-017	250.70	WAPA	Tap Fort Thompson - Leland Olds 345kV
CURRENT CLUSTER SUBTOTAL	250.70		
AREA TOTAL	3,854.90		

GROUP 16: W-NORTH DAKOTA AREA

Request	Capacity	Area	Proposed Point of Interconnection
G380	150.00	OTP	Rugby 115kV
G408	12.00	XEL	Tap McHenry - Souris 115kV
G502	50.60	MP	Milton Young 230kV
G645	50.00	GRE	Ladish 115kV
G723	10.00	MDU	Haskett 115kV
G752	150.00	MDU	Tap Bison - Hettinger 230kV
G788	49.00	GRE	Ladish 115kV
G830	99.00	GRE	GRE McHenry 115kV
GEN-2005-008IS	50.00	WAPA	Hilken 230kV [Ecklund 230kV]
GEN-2006-015IS	50.00	WAPA	Hilken 230kV [Ecklund 230kV]
GEN-2007-015IS	100.00	WAPA	Hilken 230kV [Ecklund 230kV]
GEN-2009-026IS	110.00	WAPA	Dickenson-Heskett 230kV
GEN-2010-007IS	172.50	WAPA	Antelope Valley 345kV
GEN-2012-006IS	125.01	WAPA	Williston-Ch. Creek 230kV
GEN-2012-012IS	75.00	WAPA	Wolf Point-Circle 115kV
GEN-2014-003IS	91.00	WAPA	Culbertson 115kV
GEN-2014-004IS	384.20	WAPA	Charlie Creek 345kV
GEN-2014-006IS	125.00	WAPA	Williston 115kV
GEN-2014-010IS	150.00	WAPA	Neset 115kV
GEN-2014-014IS	151.50	WAPA	Belfield-Rhame 230kV
GEN-2015-046	300.00	WAPA	Tande 345kV
GEN-2015-096	150.00	WAPA	Tap Belfied - Rhame 230kV
GEN-2015-098	100.00	WAPA	Mingusville 230kV
J003	20.00	MDU	Baker 115kV
J249	180.00	MDU	MDU Tatanka 230kV
J262	100.00	OTP	Jamestown 345
J263	100.00	OTP	Jamestown 345
J290	150.00	XEL	Tap Glenboro South - Rugby 230kV
J316	150.00	MDU	MDU 230 kV Tatanka-Ellendale line
MPC01200	44.00	OTP	Sidney 230kV
MPC02100	100.00	OTP	Sidney 230kV
PRIOR QUEUED SUBTOTAL	3,548.81		
GEN-2016-004	202.00	WAPA	Leland Olds 230kV
GEN-2016-052	3.30	WAPA	Hilken 230kV
GEN-2016-053	3.30	WAPA	Hilken 230kV
CURRENT CLUSTER SUBTOTAL	208.60		
AREA TOTAL	0.00		

GROUP 17: W-SOUTH DAKOTA AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2006-002IS	51.00	WAPA	Wessington Springs 230kV
GEN-2009-006IS	90.00	WAPA	Mission 115kV
GEN-2009-007IS	100.00	WAPA	Mission 115kV
GEN-2009-020AIS	130.50	WAPA	Tripp Junction 115kV
GEN-2012-009IS	99.00	WAPA	Fort Randall 115kV
J490	60.00	MDU	McIntosh 115kV
PRIOR QUEUED SUBTOTAL	530.50		
GEN-2016-054	3.40	WAPA	Wessington Springs 230kV
CURRENT CLUSTER SUBTOTAL	3.40		
AREA TOTAL	0.00		

GROUP 18: E-NORTH DAKOTA AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2002-008IS	40.50	WAPA	Edgeley 115kV [Pomona 115kV]
GEN-2005-003IS	100.00	WAPA	Nelson 115kV
GEN-2006-001IS	10.00	XEL	Marshall 115kV
GEN-2006-006IS	10.00	XEL	Marshall 115kV
GEN-2007-020IS	16.00	WAPA	Nelson 115kV
GEN-2008-008IS	5.00	WAPA	Nelson 115kV
PRIOR QUEUED SUBTOTAL	181.50		
GEN-2016-007	100.00	WAPA	Valley City 115kV
CURRENT CLUSTER SUBTOTAL	100.00		
AREA TOTAL	0.00		

CLUSTER TOTAL (CURRENT STUDY)	7,261.5	MW
PQ TOTAL (PRIOR QUEUED)	41,119.8	MW
CLUSTER TOTAL (INCLUDING PRIOR QUEUED)	48,381.3	MW

B: Prior Queued Interconnection Requests

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
ASGI-2010-006	150.00	AECI	Remington 138kV	AECI queue Affected Study
ASGI-2010-010	42.20	SPS	Lovington 115kV	Lea County Affected Study
ASGI-2010-020	30.00	SPS	Tap LE-Tatum - LE-Crossroads 69kV	Lea County Affected Study
ASGI-2010-021	15.00	SPS	Tap LE-Saunders Tap - LE-Anderson 69kV	Lea County Affected Study
ASGI-2011-001	27.30	SPS	Lovington 115kV	On-Line
ASGI-2011-002	20.00	SPS	Herring 115kV	On-Line
ASGI-2011-003	10.00	SPS	Hendricks 69kV	On-Line
ASGI-2011-004	20.00	SPS	Pleasant Hill 69kV	Under Study (DISIS-2011-002)
ASGI-2012-002	18.15	SPS	FE-Clovis Interchange 115kV	Under Study (DISIS-2012-002)
ASGI-2012-006	22.50	SUNCMKEC	Tap Hugoton - Rolla 69kV	Under Study (DISIS-2012-001)
ASGI-2013-001	11.50	SPS	PanTex South 115kV	Under Study (DISIS-2013-001)
ASGI-2013-002	18.40	SPS	FE Tucumcari 115kV	Under Study (DISIS-2013-001)
ASGI-2013-003	18.40	SPS	FE Clovis 115kV	Under Study (DISIS-2013-001)
ASGI-2013-004	36.60	SUNCMKEC	Morris 115kV	Under Study (DISIS-2013-002)
ASGI-2013-005	1.65	SPS	FE Clovis 115kV	Under Study (DISIS-2013-002)
ASGI-2013-006	2.00	SPS	SP-Erskine 115kV	
ASGI-2014-001	2.50	SPS	SP-Erskine 115kV	Under Study (DISIS-2014-001)
ASGI-2014-014	56.40	GRDA	Ferguson 69kV	Under Study (DISIS-2014-002)
ASGI-2015-001	6.13	SUNCMKEC	Ninnescah 115kV	Under Study (DISIS-2015-001)
ASGI-2015-002	2.00	SPS	SP-Yuma 69kV	Under Study (DISIS-2015-001)
ASGI-2015-004	56.36	GRDA	Coffeyville City 69kV	Under Study (DISIS-2015-001)
ASGI-2015-006	9.00	SWPA	Tupelo 138kV	Under Study (DISIS-2015-002)
ASGI-2016-005	20.00	WAPA	Tap White Lake - Stickeny 69kV	Northwester Queued Request
ASGI-2016-006	20.00	WAPA	Mitchall	Northwester Queued Request
ASGI-2016-007	20.00	WAPA	Kimball 69kV	Northwester Queued Request
G176	100.00	XEL	Yankee 115kV	
G255	100.00	XEL	Yankee 115kV	MISO Queued Request
G380	150.00	OTP	Rugby 115kV	MISO Queued Request
G408	12.00	XEL	Tap McHenry - Souris 115kV	MISO Queued Request
G502	50.60	MP	Milton Young 230kV	MISO Queued Request
G586	30.00	XEL	Yankee 115kV	
G645	50.00	GRE	Ladish 115kV	MISO Queued Request
G723	10.00	MDU	Haskett 115kV	MISO Queued Request
G736	200.00	OTP	Big Stone South 230kV	
G752	150.00	MDU	Tap Bison - Hettinger 230kV	MISO Queued Request
G788	49.00	GRE	Ladish 115kV	MISO Queued Request
G830	99.00	GRE	GRE McHenry 115kV	MISO Queued Request
GEN-2001-014	96.00	WFEC	Ft Supply 138kV	On-Line
GEN-2001-026	74.30	WFEC	Washita 138kV	On-Line
GEN-2001-033	180.00	SPS	San Juan Tap 230kV	On-Line at 120MW
GEN-2001-036	80.00	SPS	Norton 115kV	On-Line
GEN-2001-037	100.00	OKGE	FPL Moreland Tap 138kV	On-Line
GEN-2001-039A	105.00	SUNCMKEC	Shooting Star Tap 115kV	On-Line
GEN-2001-039M	100.00	SUNCMKEC	Central Plains Tap 115kV	On-Line
GEN-2002-004	200.00	WERE	Latham 345kV	On-Line at 150MW
GEN-2002-005	120.00	WFEC	Red Hills Tap 138kV	On-Line

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2002-008	240.00	SPS	Hitchland 345kV	On-Line at 120MW
GEN-2002-008IS	40.50	WAPA	Edgeley 115kV [Pomona 115kV]	Commercial Operation
GEN-2002-009	80.00	SPS	Hansford 115kV	On-Line
GEN-2002-009IS	40.00	WAPA	Ft Thompson 69kV [Hyde 69kV]	Commercial Operation
GEN-2002-022	240.00	SPS	Bushland 230kV	On-Line
GEN-2002-023N	0.80	NPPD	Harmony 115kV	On-Line
GEN-2002-025A	150.00	SUNCMKEC	Spearville 230kV	On-Line
GEN-2003-004	100.00	WFEC	Washita 138kV	On-Line
GEN-2003-005	100.00	WFEC	Anadarko - Paradise (Blue Canyon) 138kV	On-Line
GEN-2003-006A	200.00	SUNCMKEC	Elm Creek 230kV	On-Line
GEN-2003-019	250.00	MIDW	Smoky Hills Tap 230kV	On-Line
GEN-2003-020	160.00	SPS	Martin 115kV	On-Line
GEN-2003-021N	75.00	NPPD	Ainsworth Wind Tap 115kV	On-Line
GEN-2003-022	120.00	AEPW	Weatherford 138kV	On-Line
GEN-2004-014	154.50	SUNCMKEC	Spearville 230kV	On-Line at 100MW
GEN-2004-020	27.00	AEPW	Weatherford 138kV	On-Line
GEN-2004-023	20.60	WFEC	Washita 138kV	On-Line
GEN-2004-023N	75.00	NPPD	Columbus Co 115kV	On-Line
GEN-2005-003	30.60	WFEC	Washita 138kV	On-Line
GEN-2005-003IS	100.00	WAPA	Nelson 115kV	Commercial Operation
GEN-2005-008	120.00	OKGE	Woodward 138kV	On-Line
GEN-2005-008IS	50.00	WAPA	Hilken 230kV [Ecklund 230kV]	Commercial Operation
GEN-2005-012	250.00	SUNCMKEC	Ironwood 345kV	On-Line at 160MW
GEN-2005-013	201.00	WERE	Caney River 345kV	On-Line
GEN-2006-001IS	10.00	XEL	Marshall 115kV	Commercial Operation
GEN-2006-002	101.00	AEPW	Sweetwater 230kV	On-Line
GEN-2006-002IS	51.00	WAPA	Wessington Springs 230kV	Commercial Operation
GEN-2006-006IS	10.00	XEL	Marshall 115kV	Commercial Operation
GEN-2006-015IS	50.00	WAPA	Hilken 230kV [Ecklund 230kV]	Commercial Operation
GEN-2006-018	170.00	SPS	TUCO Interchange 230kV	On-Line
GEN-2006-020N	42.00	NPPD	Bloomfield 115kV	On-Line
GEN-2006-020S	18.90	SPS	DWS Frisco 115kV	On-Line
GEN-2006-021	101.00	SUNCMKEC	Flat Ridge Tap 138kV	On-Line
GEN-2006-024S	19.80	WFEC	Buffalo Bear Tap 69kV	On-Line
GEN-2006-026	502.00	SPS	Hobbs 230kV & Hobbs 115kV	On-Line
GEN-2006-031	75.00	MIDW	Knoll 115kV	On-Line
GEN-2006-035	225.00	AEPW	Sweetwater 230kV	On-Line at 132MW
GEN-2006-037N1	75.00	NPPD	Broken Bow 115kV	On-Line
GEN-2006-038N005	80.00	NPPD	Broken Bow 115kV	On-Line
GEN-2006-038N019	80.00	NPPD	Petersburg North 115kV	On-Line
GEN-2006-043	99.00	AEPW	Sweetwater 230kV	On-Line
GEN-2006-044	370.00	SPS	Hitchland 345kV	On-Line at 120MW
GEN-2006-044N	40.50	NPPD	North Petersburg 115kV	On-Line
GEN-2006-046	131.00	OKGE	Dewey 138kV	On-Line
GEN-2007-011N08	81.00	NPPD	Bloomfield 115kV	On-Line
GEN-2007-013IS	50.00	WAPA	Wessington Springs 230kV	Commercial Operation
GEN-2007-014IS	100.00	WAPA	Wessington Springs 230kV	Commercial Operation
GEN-2007-015IS	100.00	WAPA	Hilken 230kV [Ecklund 230kV]	Commercial Operation
GEN-2007-017IS	166.00	WAPA	Ft Thompson-Grand Island 345kV	On Schedule
GEN-2007-018IS	234.00	WAPA	Ft Thompson-Grand Island 345kV	On Schedule

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2007-020IS	16.00	WAPA	Nelson 115kV	Commercial Operation
GEN-2007-021	201.00	OKGE	Tatonga 345kV	On-Line
GEN-2007-023IS	50.00	WAPA	Formit-Summit 115kV	On Suspension
GEN-2007-025	300.00	WERE	Viola 345kV	On-Line
GEN-2007-040	200.00	SUNCMKEC	Buckner 345kV	On-Line at 132MW
GEN-2007-043	200.00	OKGE	Minco 345kV	On-Line
GEN-2007-044	300.00	OKGE	Tatonga 345kV	On-Line at 199MW
GEN-2007-046	200.00	SPS	Hitchland 115kV	On-Line
GEN-2007-050	170.00	OKGE	Woodward EHV 138kV	On-Line at 150MW
GEN-2007-052	150.00	WFEC	Anadarko 138kV	On-Line
GEN-2007-062	425.00	OKGE	Woodward EHV 345kV	On-Line for 225MW, On Schedule and 2017
GEN-2008-003	101.00	OKGE	Woodward EHV 138kV	On-Line
GEN-2008-008IS	5.00	WAPA	Nelson 115kV	Commercial Operation
GEN-2008-013	300.00	OKGE	Hunter 345kV	On-Line at 235MW
GEN-2008-018	250.00	SPS	Finney 345kV	On-Line
GEN-2008-021	42.00	WERE	Wolf Creek 345kV	On-Line
GEN-2008-022	300.00	SPS	Crossroads 345kV	On-Line
GEN-2008-023	150.00	AEPW	Hobart Junction 138kV	On-Line
GEN-2008-037	101.00	WFEC	Slick Hills 138kV	On-Line
GEN-2008-044	197.80	OKGE	Tatonga 345kV	On-Line
GEN-2008-047	300.00	OKGE	Beaver County 345kV	On-Line
GEN-2008-051	322.00	SPS	Potter County 345kV	On-Line at 161MW
GEN-2008-079	99.20	SUNCMKEC	Crooked Creek 115kV	On-Line
GEN-2008-086N02	201.00	NPPD	Meadow Grove 230kV	On-Line
GEN-2008-092	200.60	MIDW	Post Rock 230kV	On-Line
GEN-2008-098	100.80	WERE	Waverly 345kV	On-Line
GEN-2008-119O	60.00	OPPD	S1399 161kV	On-Line
GEN-2008-123N	89.70	NPPD	Tap Pauline - Guide Rock (Rosemont) 115kV	On Schedule for 2016
GEN-2008-124	200.10	SUNCMKEC	Ironwood 345kV	On Schedule for 2016
GEN-2008-129	80.00	KCPL	Pleasant Hill 161kV	On-Line
GEN-2009-001IS	200.00	WAPA	Groton-Watertown 345kV	On Schedule
GEN-2009-006IS	90.00	WAPA	Mission 115kV	On Suspension
GEN-2009-007IS	100.00	WAPA	Mission 115kV	On Suspension
GEN-2009-008	199.50	MIDW	South Hays 230kV	On-Line
GEN-2009-018IS	100.00	WAPA	Groton 115kV	Commercial Operation
GEN-2009-020	48.30	MIDW	Walnut Creek 69kV	On-Line
GEN-2009-020AIS	130.50	WAPA	Tripp Junction 115kV	Commercial Operation
GEN-2009-025	59.80	OKGE	Nardins 69kV	On-Line
GEN-2009-026IS	110.00	WAPA	Dickenson-Heskett 230kV	On Schedule
GEN-2009-040	73.80	WERE	Marshall 115kV	On-Line
GEN-2010-001	300.00	OKGE	Beaver County 345kV	On-Line
GEN-2010-001IS	99.00	WAPA	Bismarck-Glenham 230kV	On Schedule
GEN-2010-003	100.80	WERE	Waverly 345kV	On-Line
GEN-2010-003IS	34.00	WAPA	Wessington Springs 230kV	Commercial Operation
GEN-2010-005	299.20	WERE	Viola 345kV	On-Line at 170MW
GEN-2010-006	205.00	SPS	Jones 230kV	On-Line
GEN-2010-007IS	172.50	WAPA	Antelope Valley 345kV	On Suspension
GEN-2010-009	165.60	SUNCMKEC	Buckner 345kV	On-Line
GEN-2010-011	29.70	OKGE	Tatonga 345kV	On-Line

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2010-014	358.80	SPS	Hitchland 345kV	On Schedule for 2018
GEN-2010-036	4.60	WERE	6th Street 115kV	On-Line
GEN-2010-040	300.00	OKGE	Cimarron 345kV	On-Line
GEN-2010-041	10.50	OPPD	S1399 161kV	On Schedule for 2015
GEN-2010-045	197.80	SUNCMKEC	Buckner 345kV	On Suspension
GEN-2010-046	56.00	SPS	TUCO Interchange 230kV	On Schedule for 2016
GEN-2010-051	200.00	NPPD	Tap Hoskins - Twin Church (Dixon County) 230kV	On Suspension
GEN-2010-055	4.50	AEPW	Wekiwa 138kV	On-Line
GEN-2010-057	201.00	MIDW	Rice County 230kV	On-Line
GEN-2011-008	600.00	SUNCMKEC	Clark County 345kV	On-Line
GEN-2011-010	100.80	OKGE	Minco 345kV	On-Line
GEN-2011-011	50.00	KCPL	Iatan 345kV	On-Line
GEN-2011-014	201.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV	On-Line
GEN-2011-016	200.10	SUNCMKEC	Ironwood 345kV	On Suspension
GEN-2011-018	73.60	NPPD	Steele City 115kV	On-Line
GEN-2011-019	175.00	OKGE	Woodward 345kV	On Schedule for 2017
GEN-2011-020	165.60	OKGE	Woodward 345kV	On Schedule for 2017
GEN-2011-022	299.00	SPS	Hitchland 345kV	On Schedule for 2016 (150MW) and 2017 (149MW)
GEN-2011-025	80.00	SPS	Tap Floyd County - Crosby County 115kV	On Schedule for 2016
GEN-2011-027	120.00	NPPD	Tap Hoskins - Twin Church (Dixon County) 230kV	On Schedule for 2018
GEN-2011-037	7.00	WFEC	Blue Canyon 5 138kV	On-Line
GEN-2011-040	111.00	OKGE	Carter County 138kV	On-Line
GEN-2011-045	205.00	SPS	Jones 230kV	On-Line
GEN-2011-046	27.00	SPS	Lopez 115kV	On-Line
GEN-2011-048	175.00	SPS	Mustang 230kV	On-Line
GEN-2011-049	250.70	OKGE	Border 345kV	On Schedule for 2016
GEN-2011-050	109.80	AEPW	Santa Fe Tap 138kV	On-Line
GEN-2011-054	300.00	OKGE	Cimarron 345kV	On-Line
GEN-2011-056	3.60	NPPD	Jeffrey 115kV	On-Line
GEN-2011-056A	3.60	NPPD	John 1 115kV	On-Line
GEN-2011-056B	4.50	NPPD	John 2 115kV	On-Line
GEN-2011-057	150.40	WERE	Creswell 138kV	On-Line
GEN-2012-001	61.20	SPS	Cirrus Tap 230kV	On-Line
GEN-2012-004	41.40	OKGE	Carter County 138kV	On-Line
GEN-2012-006IS	125.01	WAPA	Williston-Ch. Creek 230kV	On Schedule
GEN-2012-007	120.00	SUNCMKEC	Rubart 115kV	On-Line
GEN-2012-009IS	99.00	WAPA	Fort Randall 115kV	On Suspension
GEN-2012-012IS	75.00	WAPA	Wolf Point-Circle 115kV	On Suspension
GEN-2012-014IS	99.50	WAPA	Groton 115kV	On Schedule
GEN-2012-020	478.00	SPS	TUCO 230kV	On Schedule for 2016
GEN-2012-021	4.80	LES	Terry Bundy Generating Station 115kV	On-Line
GEN-2012-024	180.00	SUNCMKEC	Clark County 345kV	On Schedule for 2016
GEN-2012-028	74.80	WFEC	Gotebo 69kV	On-Line
GEN-2012-032	300.00	OKGE	Open Sky 345kV	On-Line
GEN-2012-033	98.10	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV	On-Line
GEN-2012-034	7.00	SPS	Mustang 230kV	On-Line
GEN-2012-035	7.00	SPS	Mustang 230kV	On-Line
GEN-2012-036	7.00	SPS	Mustang 230kV	On-Line

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2012-037	203.00	SPS	TUCO 345kV	On-Line
GEN-2012-041	121.50	OKGE	Ranch Road 345kV	On-Line
GEN-2013-001IS	90.00	WAPA	Summit-Watertown 115kV	On Suspension
GEN-2013-002	50.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2	On Suspension
GEN-2013-007	100.30	OKGE	Tap Prices Falls - Carter 138kV	On-Line
GEN-2013-008	1.20	NPPD	Steele City 115kV	On-Line
GEN-2013-009IS	19.50	WAPA	Redfield NW 115kV	Commercial Operation
GEN-2013-010	99.00	SUNCMKEC	Tap Spearville - Post Rock (North of GEN-2011-017 Tap) 345kV	On Suspension
GEN-2013-011	30.00	AEPW	Turk 138kV	On-Line
GEN-2013-012	147.00	OKGE	Redbud 345kV	On-Line
GEN-2013-016	203.00	SPS	TUCO 345kV	On Schedule for 2017
GEN-2013-019	73.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2	On Suspension
GEN-2013-022	25.00	SPS	Norton 115kV	On-Line
GEN-2013-027	150.00	SPS	Tap Tolk - Yoakum 230kV	On Schedule for 2018
GEN-2013-028	559.50	GRDA	Tap N Tulsa - GRDA 1 345kV	On Schedule for 2017
GEN-2013-029	300.00	OKGE	Renfrow 345kV	On-Line for 151.6MW
GEN-2013-030	300.00	OKGE	Beaver County 345kV	On Schedule for 2016 (200MW) and 2017 (100MW)
GEN-2013-032	204.00	NPPD	Antelope 115kV	On Schedule for 2017
GEN-2013-033	28.00	MIDW	Knoll 115kV	On-Line
GEN-2014-001	200.60	WERE	Tap Wichita - Emporia Energy Center (GEN-2014-001 Tap) 345kV	On Suspension
GEN-2014-001IS	103.70	WAPA	Newell-Maurine 115kV	On Suspension
GEN-2014-002	10.50	OKGE	Tatonga 345kV (GEN-2007-021 POI)	On Schedule for 2015
GEN-2014-003	15.80	OKGE	Tatonga 345kV (GEN-2007-044 POI)	On Schedule for 2015
GEN-2014-003IS	91.00	WAPA	Culbertson 115kV	On Schedule
GEN-2014-004	4.00	NPPD	Steele City 115kV (GEN-2011-018 POI)	On-Line
GEN-2014-004IS	384.20	WAPA	Charlie Creek 345kV	IA Pending
GEN-2014-005	5.70	OKGE	Minco 345kV (GEN-2011-010 POI)	On-Line
GEN-2014-006IS	125.00	WAPA	Williston 115kV	On Schedule
GEN-2014-010IS	150.00	WAPA	Neset 115kV	On Schedule
GEN-2014-012	225.00	SPS	Tap Hobbs Interchange - Andrews 230kV	On Suspension
GEN-2014-013	73.50	NPPD	Meadow Grove (GEN-2008-086N2 Sub) 230kV	On-Line
GEN-2014-014IS	151.50	WAPA	Belfield-Rhame 230kV	On Schedule
GEN-2014-020	100.00	AEPW	Tuttle 138kV	On Schedule for 2017
GEN-2014-021	300.00	KCPL	Tap Nebraska City - Mullin Creek 345kV	On Schedule for 2016
GEN-2014-025	2.40	MIDW	Walnut Creek 69kV	On-Line
GEN-2014-028	35.00	EMDE	Riverton 161kV	On-Line
GEN-2014-031	35.80	NPPD	Meadow Grove 230kV	On-Line
GEN-2014-032	10.20	NPPD	Meadow Grove 230kV	On Schedule for 2016
GEN-2014-033	70.00	SPS	Chaves County 115kV	On-Line
GEN-2014-034	70.00	SPS	Chaves County 115kV	On-Line
GEN-2014-035	30.00	SPS	Chaves County 115kV	On Schedule for 2018
GEN-2014-037	200.00	SPS	Tap Hitchland - Beaver County Dbl Ckt (Optima) 345kV	FACILITY STUDY STAGE
GEN-2014-039	73.40	NPPD	Friend 115kV	On Schedule for 2017
GEN-2014-040	320.40	SPS	Castro 115kV	On-Line
GEN-2014-047	40.00	SPS	Crossroads 345kV	On Schedule for 2017
GEN-2014-056	250.00	OKGE	Minco 345kV	On Schedule for 2016

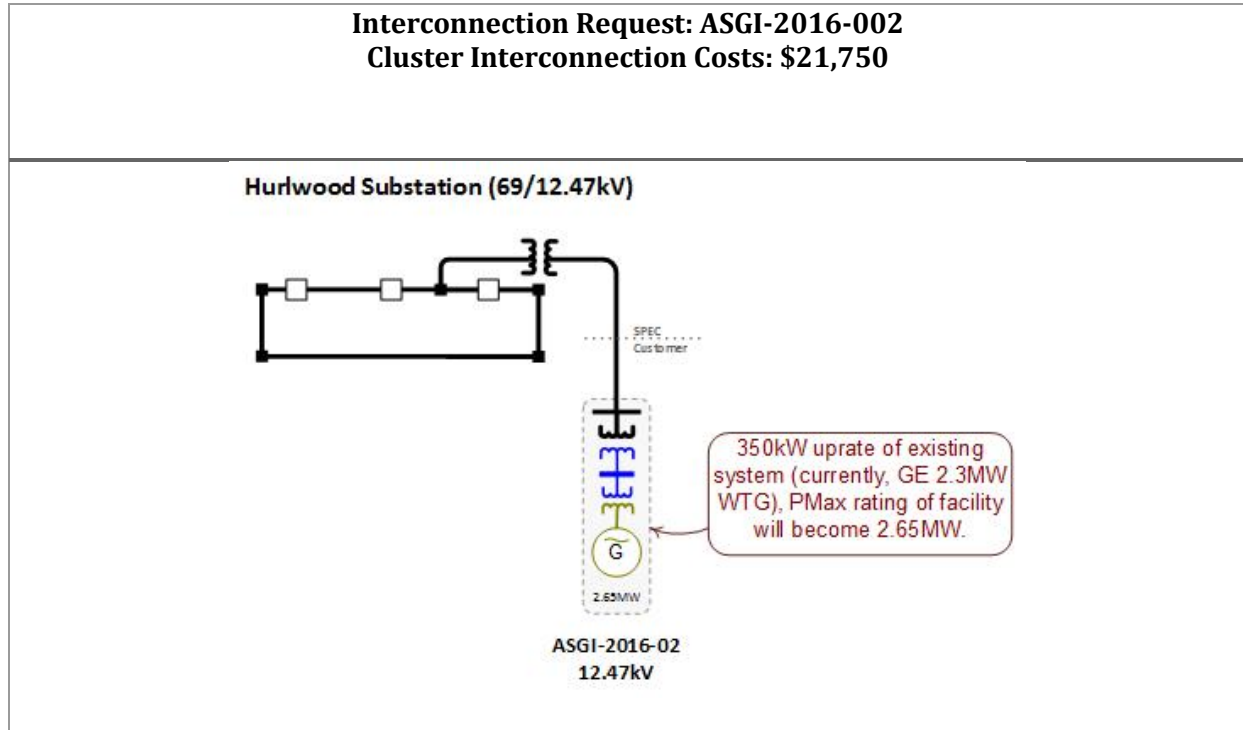
Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2014-057	250.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV	On-Line
GEN-2014-064	248.40	OKGE	Otter 138kV	On Suspension
GEN-2015-001	200.00	OKGE	Ranch Road 345kV	On-Line
GEN-2015-004	52.90	OKGE	Border 345kV	On Schedule for 2017
GEN-2015-005	200.10	KCPL	Tap Nebraska City - Sibley 345kV	On-Line
GEN-2015-007	160.00	NPPD	Hoskins 345kV	FACILITY STUDY STAGE
GEN-2015-013	120.00	WFEC	Synder 138kV	FACILITY STUDY STAGE
GEN-2015-014	150.00	SPS	Tap Cochran - Lehman 115kV	FACILITY STUDY STAGE
GEN-2015-015	154.60	OKGE	Tap Medford Tap - Coyote 138kV	FACILITY STUDY STAGE
GEN-2015-016	200.00	KCPL	Tap Marmaton - Centerville 161kV	FACILITY STUDY STAGE
GEN-2015-020	100.00	SPS	Oasis 115kV	FACILITY STUDY STAGE
GEN-2015-021	20.00	SUNCMKEC	Johnson Corner 115kV	FACILITY STUDY STAGE
GEN-2015-022	112.00	SPS	Swisher 115kV	FACILITY STUDY STAGE
GEN-2015-023	300.70	NPPD	Holt County 345kV	FACILITY STUDY STAGE
GEN-2015-024	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT	On-Line
GEN-2015-025	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT	On-Line
GEN-2015-029	161.00	OKGE	Tatonga 345kV	On Suspension
GEN-2015-030	200.10	OKGE	Sooner 345kV	On Suspension
GEN-2015-031	150.53	SPS	Tap Amarillo South - Swisher 230kV	FACILITY STUDY STAGE
GEN-2015-034	200.00	OKGE	Ranch Road 345kV	FACILITY STUDY STAGE
GEN-2015-045	20.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV	FACILITY STUDY STAGE
GEN-2015-046	300.00	WAPA	Tande 345kV	FACILITY STUDY STAGE
GEN-2015-047	300.00	OKGE	Sooner 345kV	FACILITY STUDY STAGE
GEN-2015-048	200.00	OKGE	Cleo Corner 138kV	FACILITY STUDY STAGE
GEN-2015-052	300.00	WERE	Tap Open Sky - Rose Hill 345kV	FACILITY STUDY STAGE
GEN-2015-053	50.00	NPPD	Antelope 115kV	FACILITY STUDY STAGE
GEN-2015-055	40.00	WFEC	Erick 138kV	FACILITY STUDY STAGE
GEN-2015-056	101.20	SPS	Crossroads 345kV	FACILITY STUDY STAGE
GEN-2015-057	100.00	OKGE	Minco 345kV	FACILITY STUDY STAGE
GEN-2015-058	50.00	SPS	Atoka 115kV	FACILITY STUDY STAGE
GEN-2015-062	4.50	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV	FACILITY STUDY STAGE
GEN-2015-063	300.00	OKGE	Tap Woodring - Mathewson 345kV	FACILITY STUDY STAGE
GEN-2015-064	197.80	SUNCMKEC	Mingo 115kV	FACILITY STUDY STAGE
GEN-2015-065	202.40	SUNCMKEC	Mingo 345kV	FACILITY STUDY STAGE
GEN-2015-066	248.40	OKGE	Tap Cleveland - Sooner 345kV	FACILITY STUDY STAGE
GEN-2015-068	300.00	SPS	TUCO Interchange 345kV	FACILITY STUDY STAGE
GEN-2015-069	300.00	WERE	Union Ridge 230kV	FACILITY STUDY STAGE
GEN-2015-071	200.00	AEPW	Chisholm 345kV	FACILITY STUDY STAGE
GEN-2015-073	200.10	WERE	Emporia Energy Center 345kV	FACILITY STUDY STAGE
GEN-2015-075	51.50	SPS	Carlisle 69kV	FACILITY STUDY STAGE
GEN-2015-076	158.40	NPPD	Belden 115kV	FACILITY STUDY STAGE
GEN-2015-079	129.20	SPS	Tap Yoakum - Hobbs Interchange 230kV	FACILITY STUDY STAGE
GEN-2015-080	129.20	SPS	Tap Yoakum - Hobbs Interchange 230kV	FACILITY STUDY STAGE
GEN-2015-083	125.00	WERE	Belle Plain 138kV	FACILITY STUDY STAGE
GEN-2015-084	51.30	AEPW	Hollis 138kV	FACILITY STUDY STAGE
GEN-2015-085	122.40	AEPW	Altus Junction 138kV	FACILITY STUDY STAGE
GEN-2015-087	66.00	NPPD	Tap Fairbury - Hebron 115kV	FACILITY STUDY STAGE
GEN-2015-088	300.00	NPPD	Tap Moore - Pauline 345kV	FACILITY STUDY STAGE
GEN-2015-090	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT	FACILITY STUDY STAGE

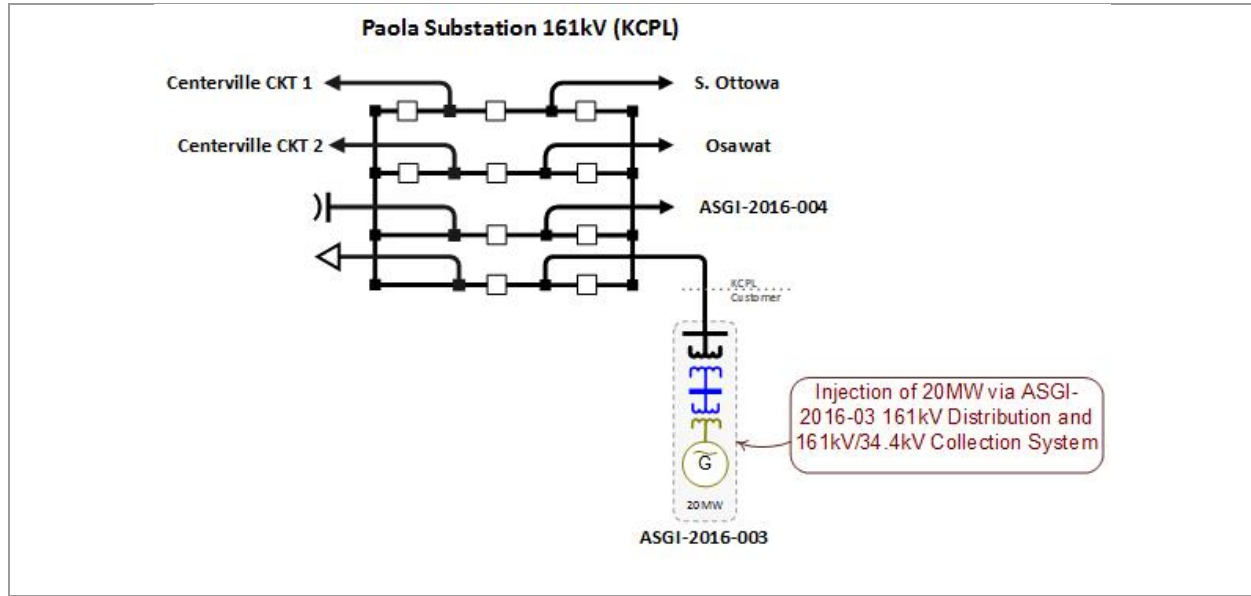
Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2015-092	250.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV	FACILITY STUDY STAGE
GEN-2015-093	250.00	OKGE	Gracemont 345kV	FACILITY STUDY STAGE
GEN-2015-096	150.00	WAPA	Tap Belfied - Rhame 230kV	On-Line
GEN-2015-098	100.00	WAPA	Mingusville 230kV	FACILITY STUDY STAGE
Gray County Wind (Montezuma)	110.00	SUNCMKEC	Gray County Tap 115kV	On-Line
H081	200.00	XEL	Tap Brookings - Lyons County 345kV	Under Study DPP-2016-FEB-West
J003	20.00	MDU	Baker 115kV	MISO Queued Request
J249	180.00	MDU	MDU Tatanka 230kV	MISO Queued Request
J262	100.00	OTP	Jamestown 345	MISO Queued Request
J263	100.00	OTP	Jamestown 345	MISO Queued Request
J290	150.00	XEL	Tap Glenboro South - Rugby 230kV	MISO Queued Request
J316	150.00	MDU	MDU 230 kV Tatanka-Ellendale line	MISO Queued Request
J432	98.00	XEL	Brookings 345kV	Under Study DPP-2016-FEB-West
J436	150.00	OTP	Big Stone South 345kV	MISO Queued Request
J437	150.00	OTP	Big Stone South 345kV	MISO Queued Request
J442	200.00	OTP	Big Stone 230 kV	MISO Queued Request
J460	200.00	XEL	Tap Brookings - Lyons County 345kV	Under Study DPP-2016-FEB-West
J488	151.80	OTP	Tap Big Stone - Ellendale 345kV	Under Study DPP-2016-FEB-West
J489	151.80	OTP	Tap Big Stone - Ellendale 345kV	Under Study DPP-2016-FEB-West
J490	60.00	MDU	McIntosh 115kV	Under Study DPP-2016-FEB-West
J493	150.00	OTP	Burr 115kV	Under Study DPP-2016-FEB-West
J510	326.90	OTP	Tap Brookings - Big Stone 345kV	Under Study DPP-2016-FEB-West
J525	50.00	XEL	Lake Wilson 69kV	Under Study DPP-2016-FEB-West
J526	300.00	OTP	Tap Brookings - Big Stone 345kV	Under Study DPP-2016-FEB-West
Llano Estacado (White Deer)	80.00	SPS	Llano Wind 115kV	On-Line
MPC01200	44.00	OTP	Sidney 230kV	IA Pending
MPC02100	100.00	OTP	Sidney 230kV	On-Line
NPPD Distributed (Broken Bow)	8.30	NPPD	Broken Bow 115kV	On-Line
NPPD Distributed (Buffalo County Solar)	10.00	NPPD	Kearney Northeast	On-Line
NPPD Distributed (Burt County Wind)	12.00	NPPD	Tekamah & Oakland 115kV	On-Line
NPPD Distributed (Burwell)	3.00	NPPD	Ord 115kV	On-Line
NPPD Distributed (Columbus Hydro)	45.00	NPPD	Columbus 115kV	On-Line
NPPD Distributed (North Platte - Lexington)	54.00	NPPD	Multiple: Jeffrey 115kV, John_1 115kV, John_2 115kV	On-Line
NPPD Distributed (Ord)	11.90	NPPD	Ord 115kV	On-Line
NPPD Distributed (Stuart)	2.10	NPPD	Ainsworth 115kV	On-Line
SPS Distributed (Carson)	10.00	SPS	Martin 115kV	On-Line
SPS Distributed (Dumas 19th St)	20.00	SPS	Dumas 19th Street 115kV	On-Line
SPS Distributed (Etter)	20.00	SPS	Etter 115kV	On-Line
SPS Distributed (Hopi)	10.00	SPS	Hopi 115kV	On-Line
SPS Distributed (Jal)	10.00	SPS	S Jal 115kV	On-Line
SPS Distributed (Lea Road)	10.00	SPS	Lea Road 115kV	On-Line

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
SPS Distributed (Monument)	10.00	SPS	Monument 115kV	On-Line
SPS Distributed (Moore E)	25.00	SPS	Moore East 115kV	On-Line
SPS Distributed (Ocotillo)	10.00	SPS	S_Jal 115kV	On-Line
SPS Distributed (Sherman)	20.00	SPS	Sherman 115kV	On-Line
SPS Distributed (Spearman)	10.00	SPS	Spearman 69kV	On-Line
SPS Distributed (TC-Texas County)	20.00	SPS	Texas County 115kV	On-Line
SPS Distributed (Yuma)	2.57	SPS	SP-Yuma 69kV	On-Line
Total:	41,119.8			

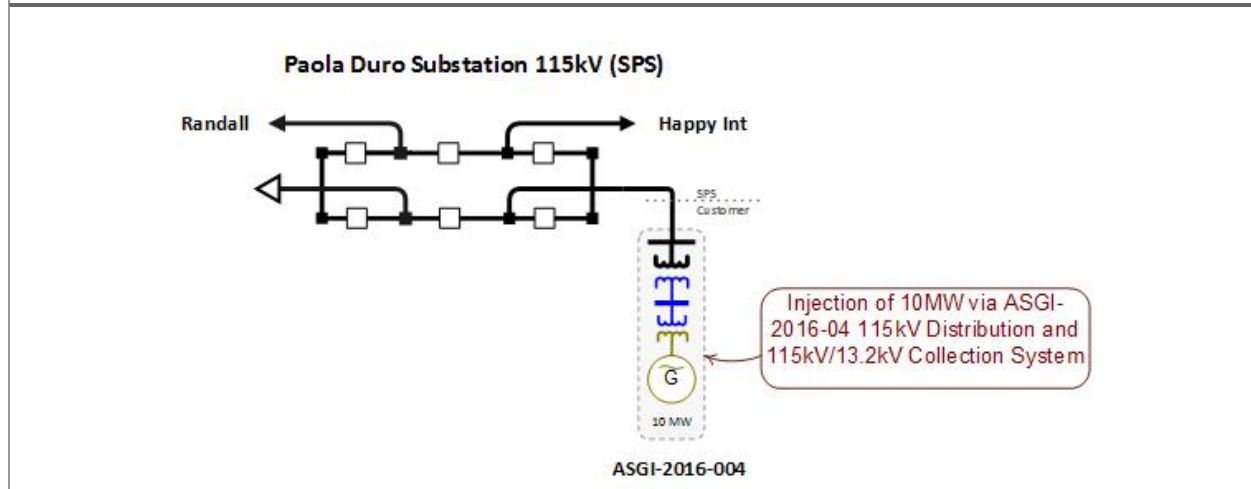
11.3 C: STUDY GROUPINGS

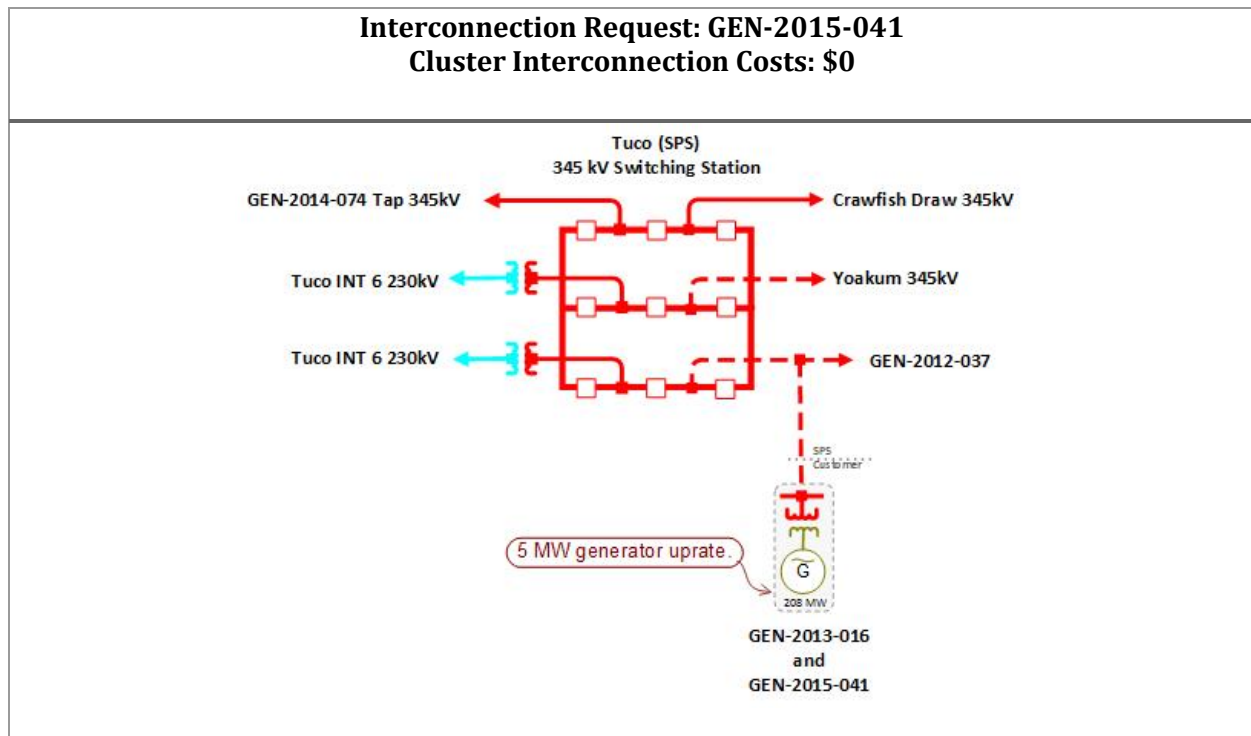
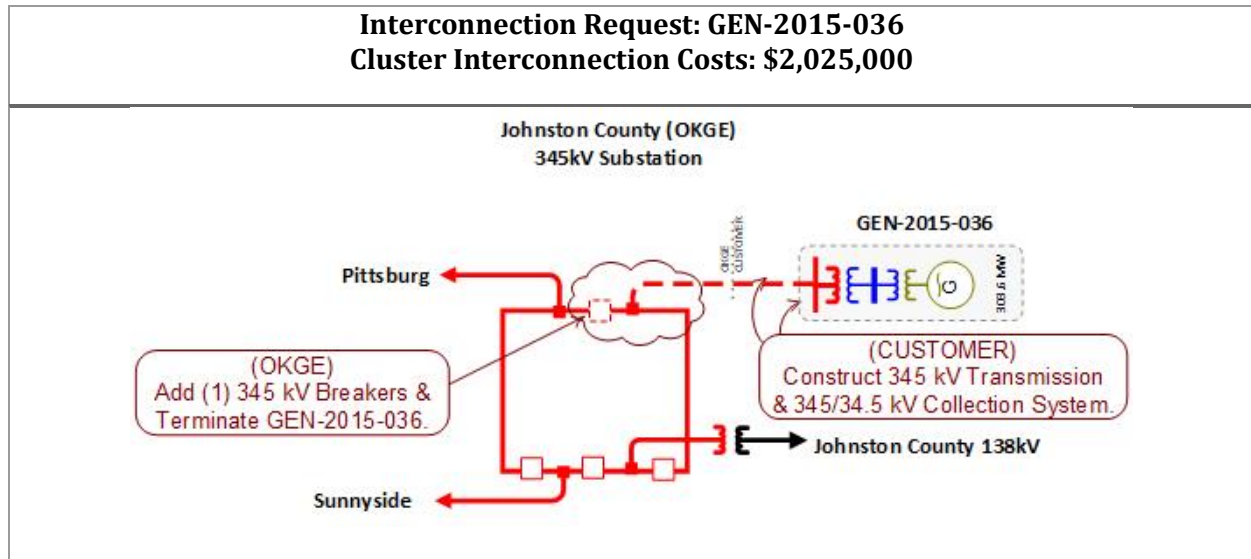
11.4 D: PROPOSED POINT OF INTERCONNECTION ONE-LINE DIAGRAMS



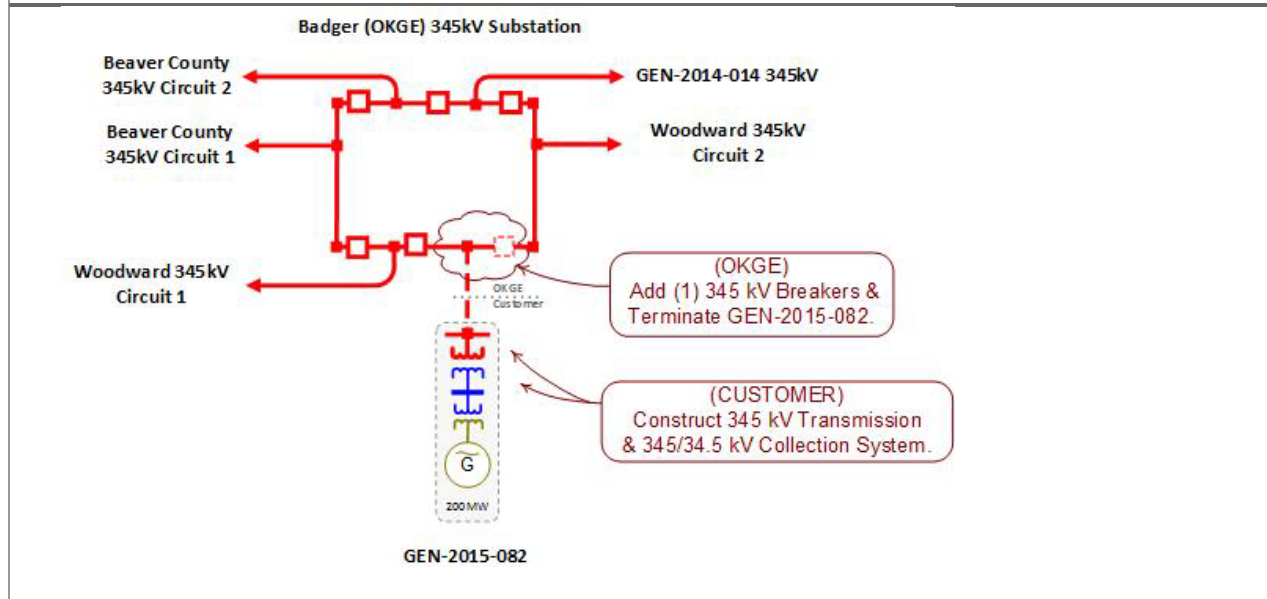


Interconnection Request: ASGI-2016-004
Cluster Interconnection Costs: \$15,000

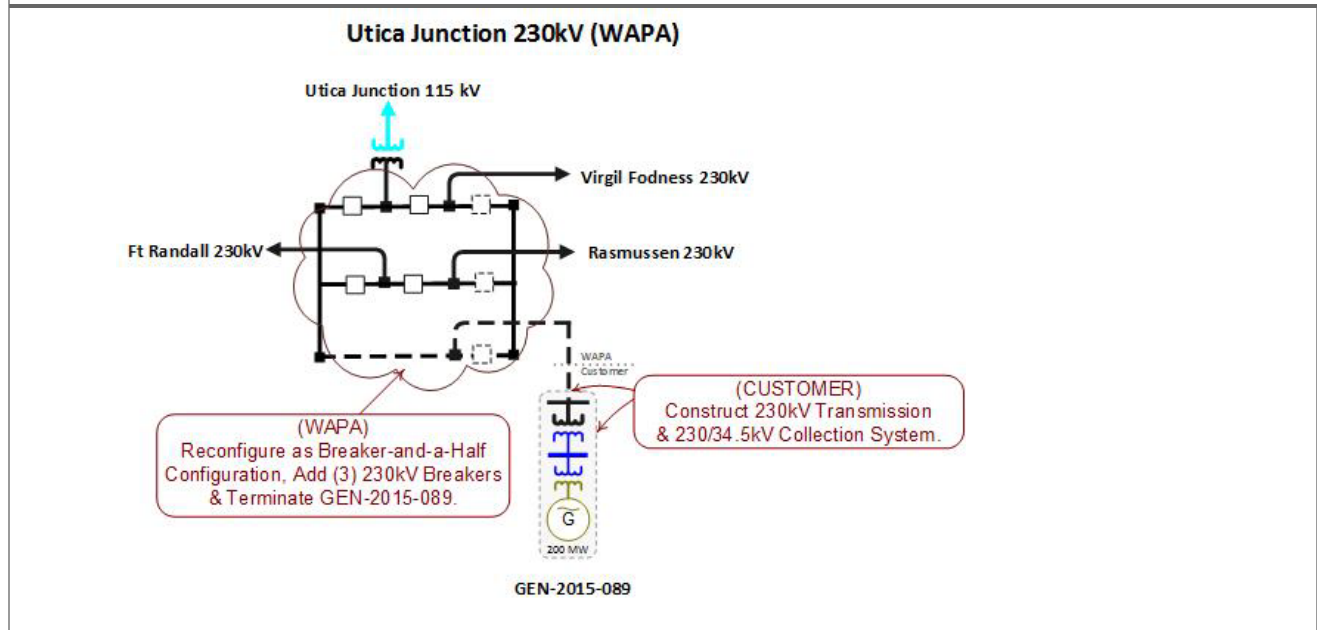




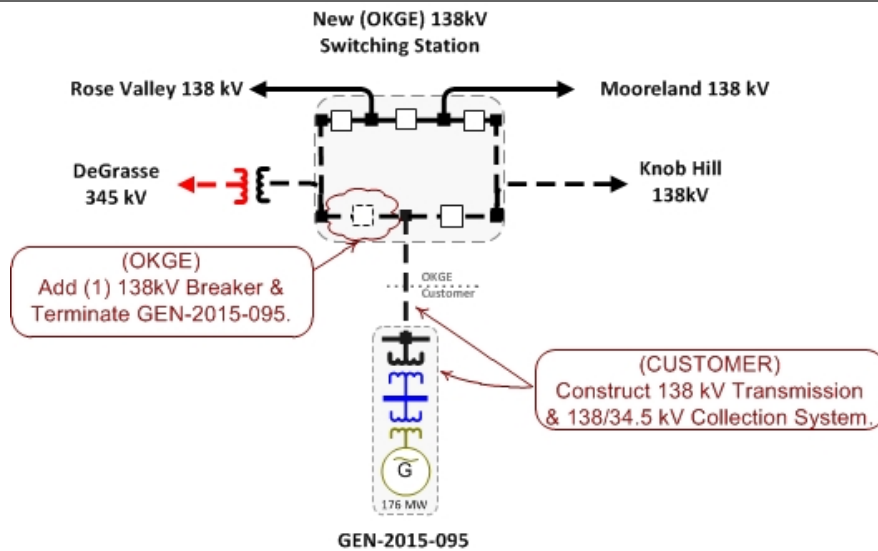
Interconnection Request: GEN-2015-082
Cluster Interconnection Costs: \$1,930,000



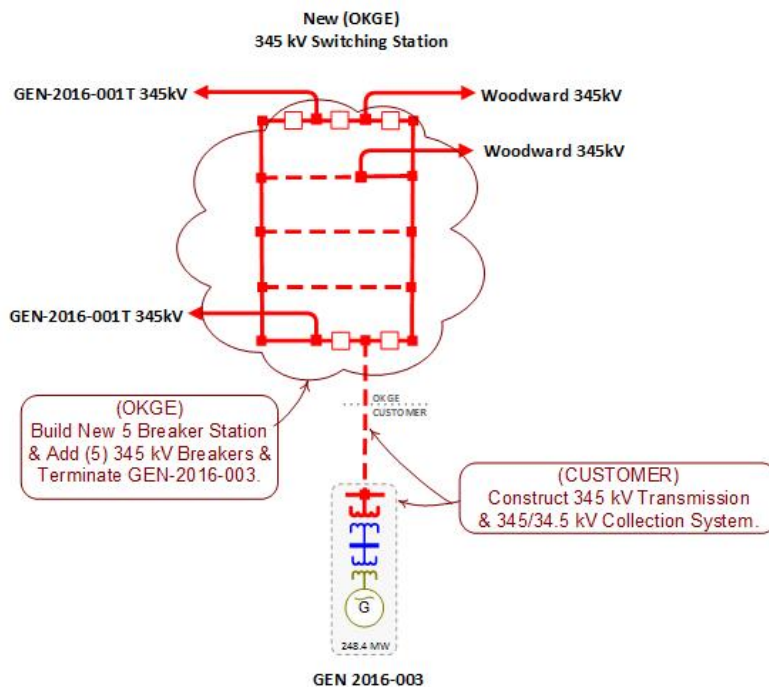
Interconnection Request: GEN-2015-089
Cluster Interconnection Costs: \$2,000,000



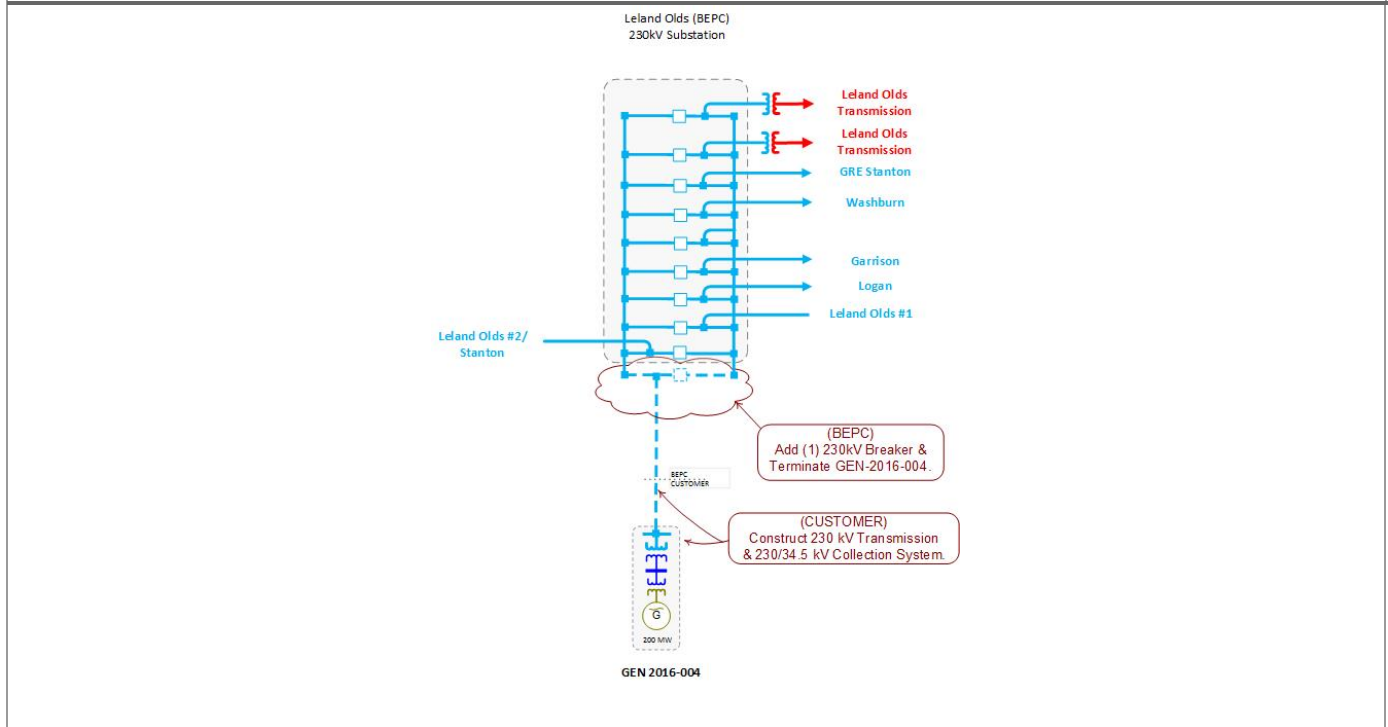
Interconnection Request: GEN-2015-095
Cluster Interconnection Costs: \$942,900



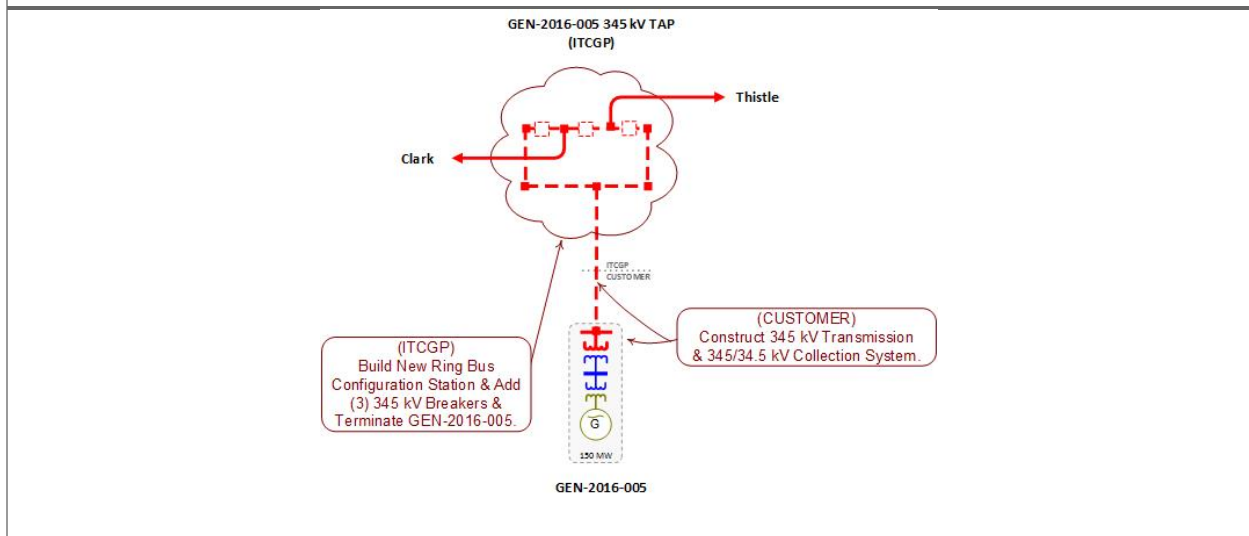
Interconnection Request: GEN-2016-003
Cluster Interconnection Costs: \$15,000,000



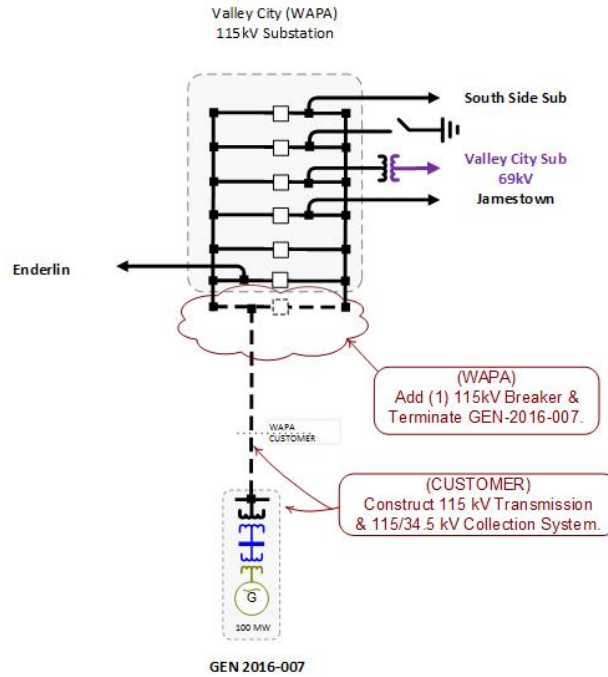
Interconnection Request: GEN-2016-004
Cluster Interconnection Costs: \$2,871,212



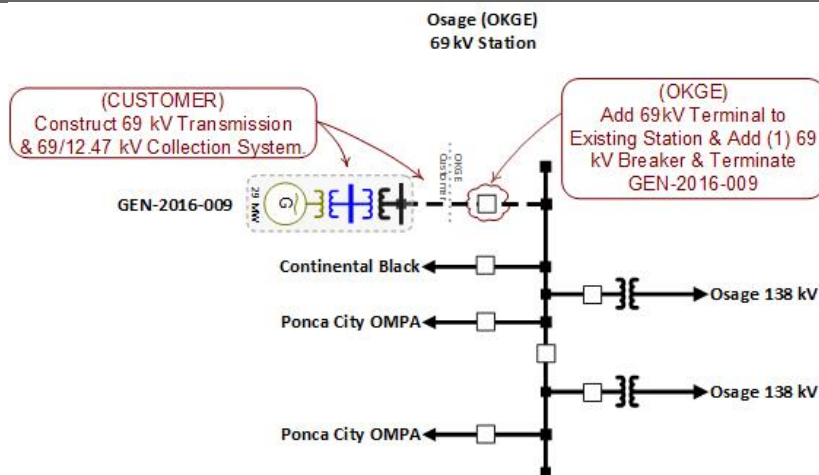
Interconnection Request: GEN-2016-005
Cluster Interconnection Costs: \$8,614,897

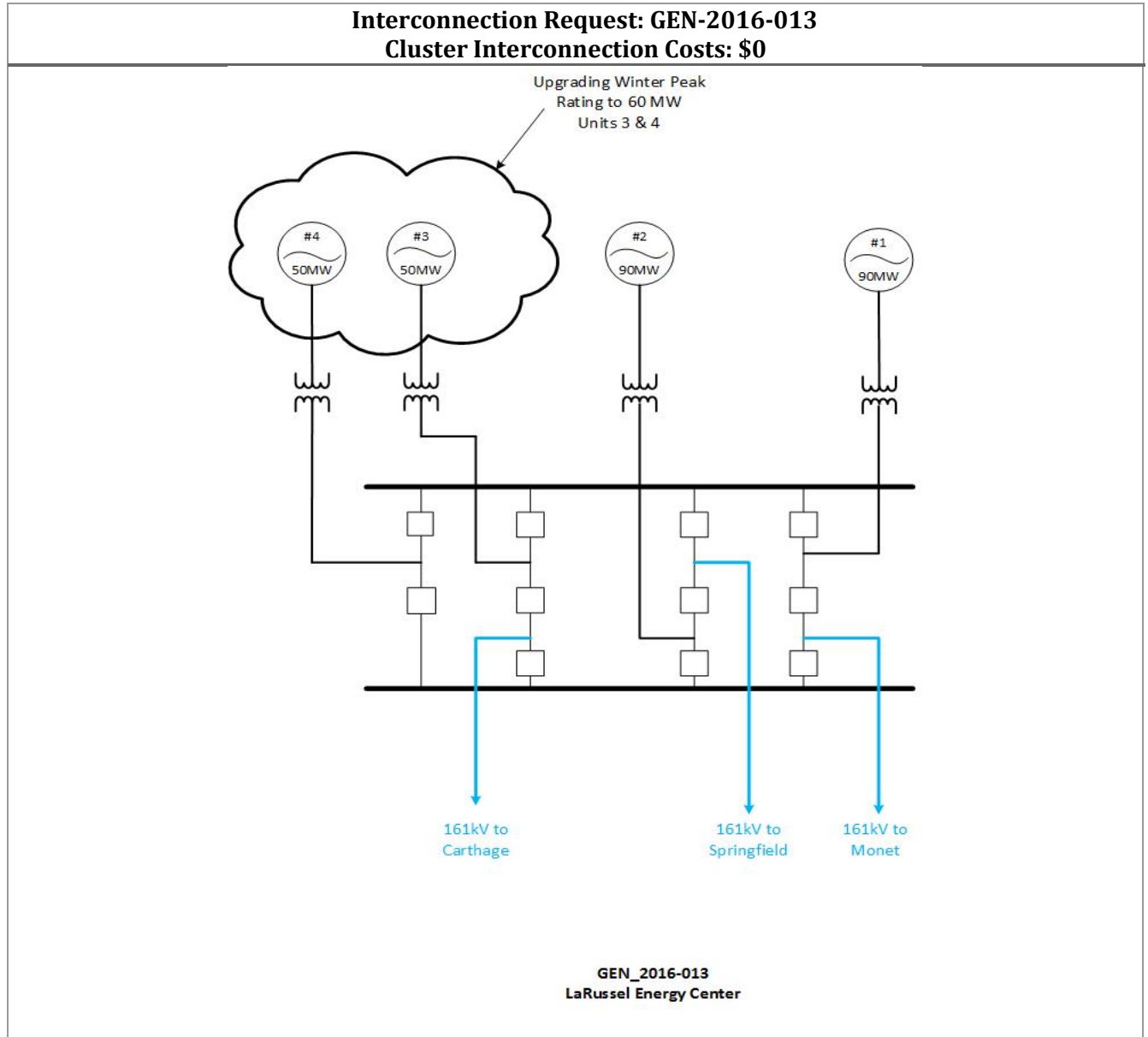


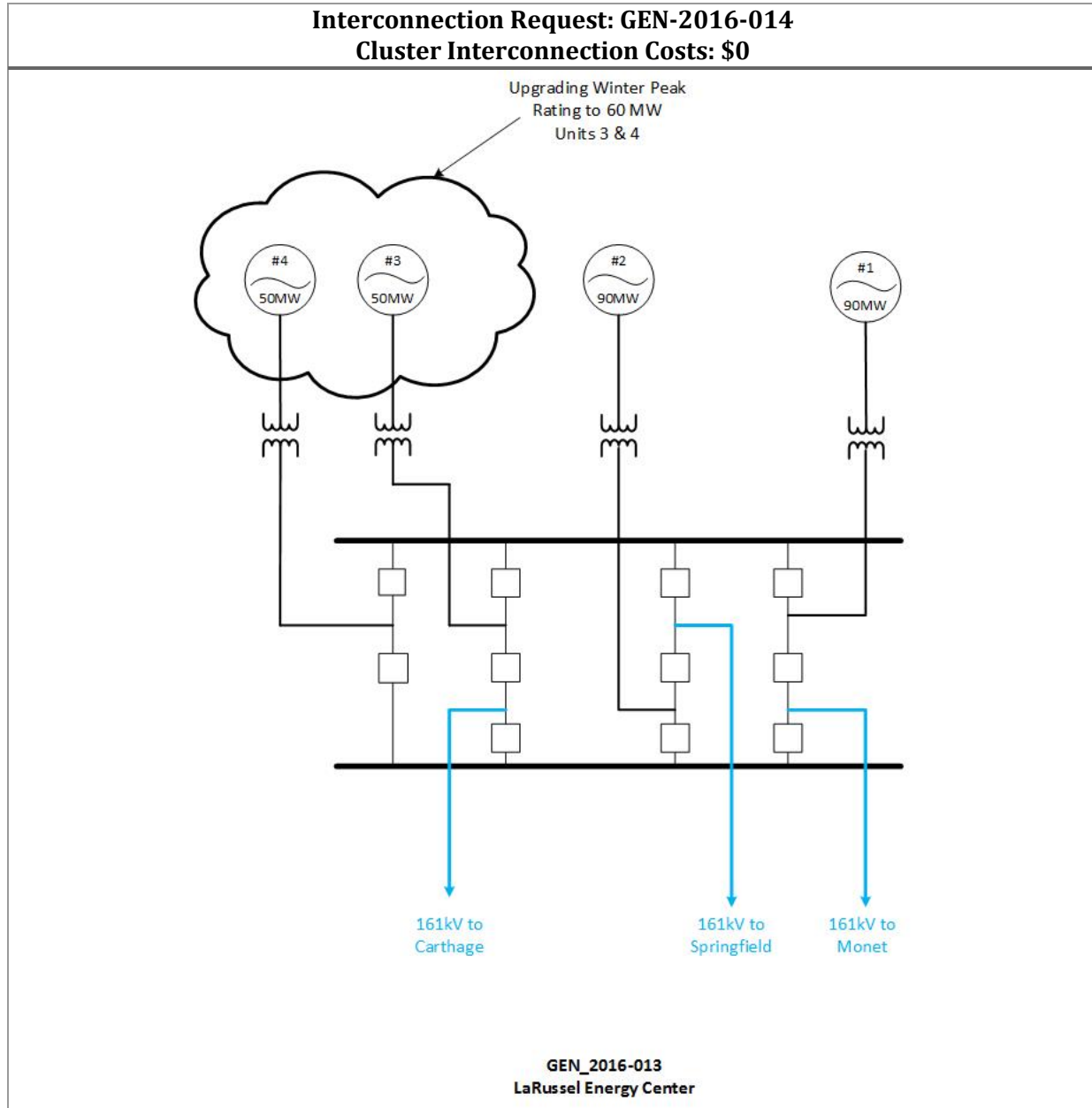
Interconnection Request: GEN-2016-007
Cluster Interconnection Costs: \$1,100,000

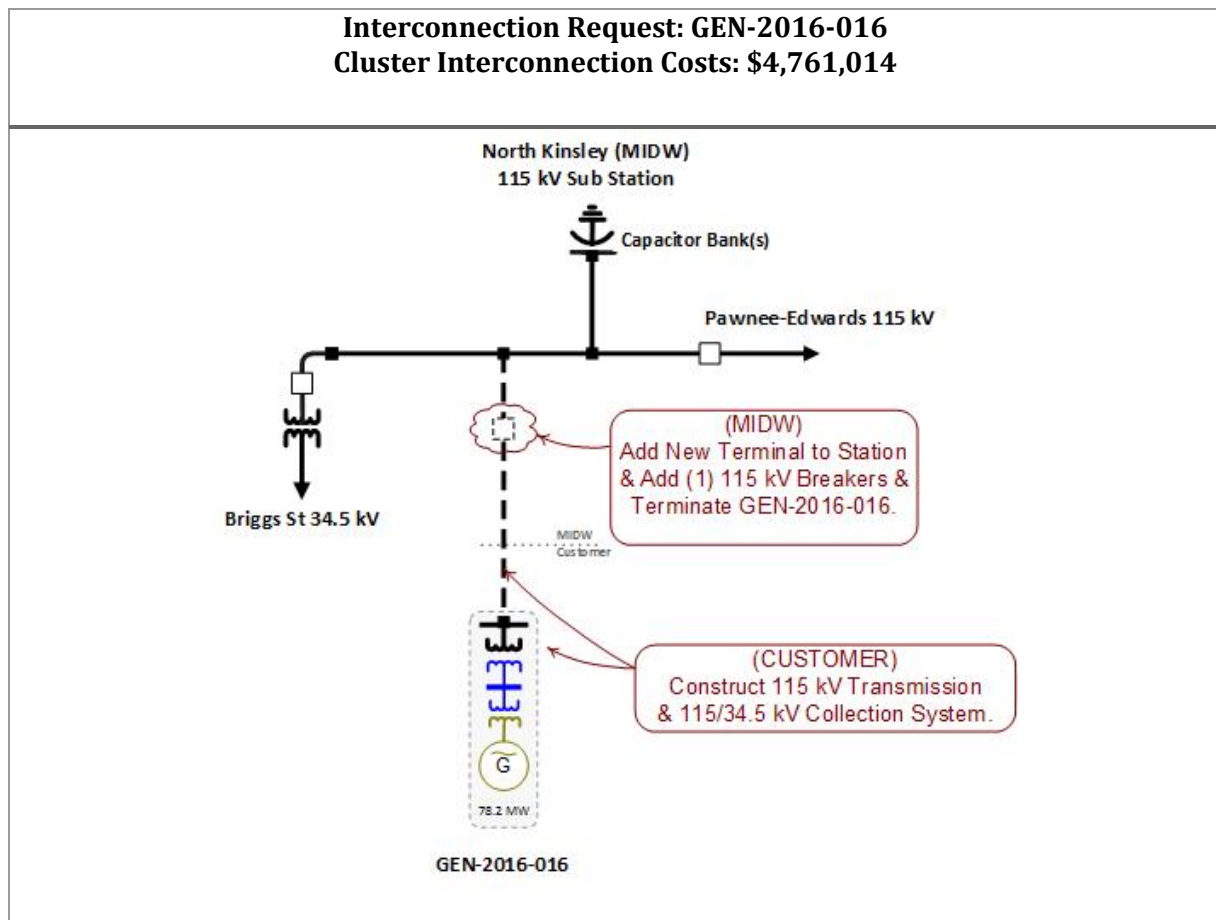
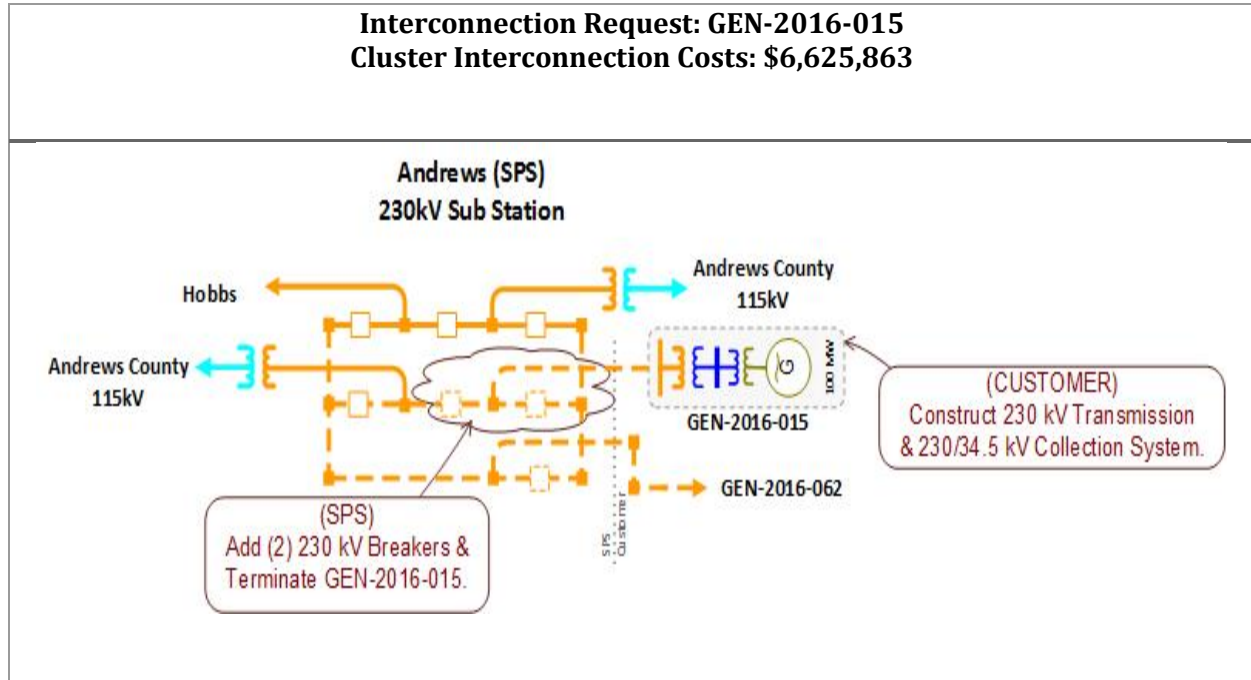


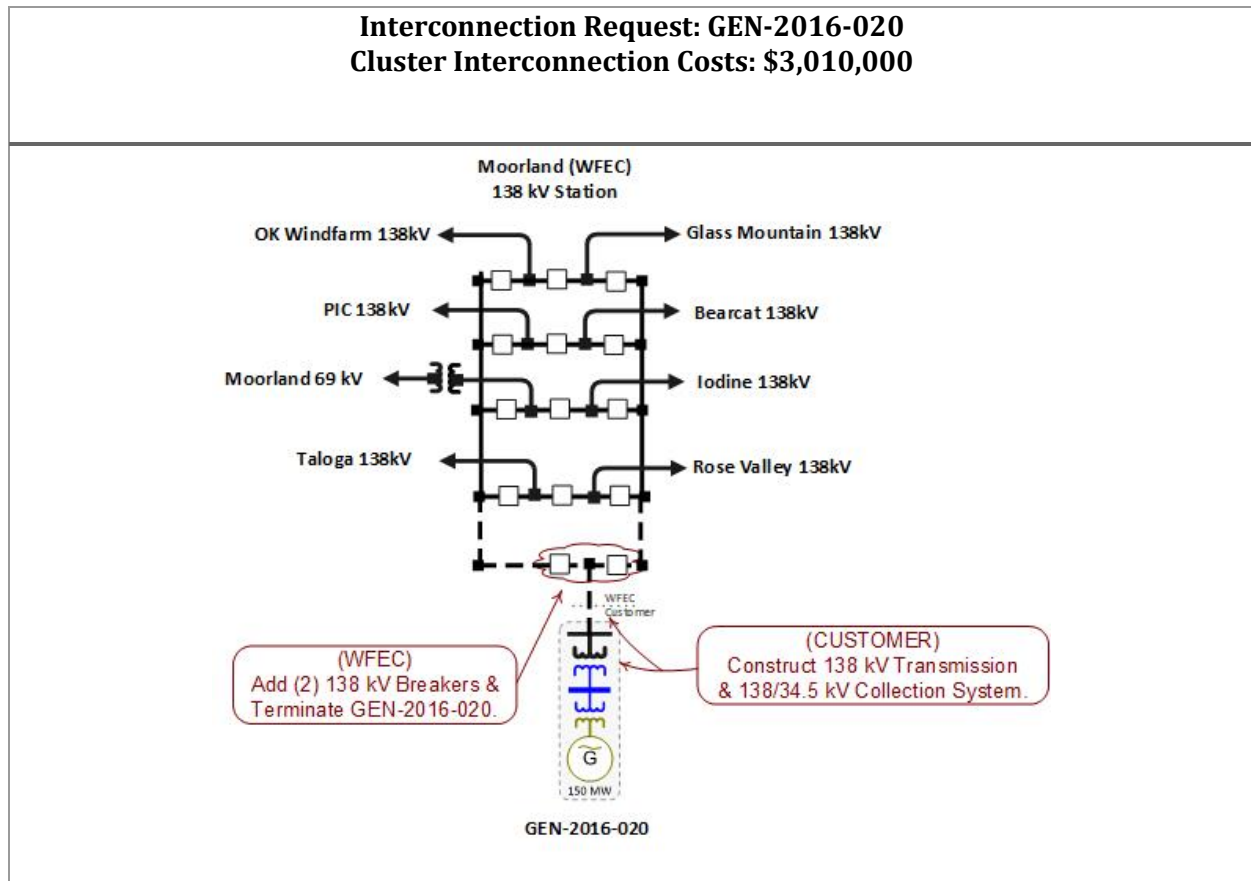
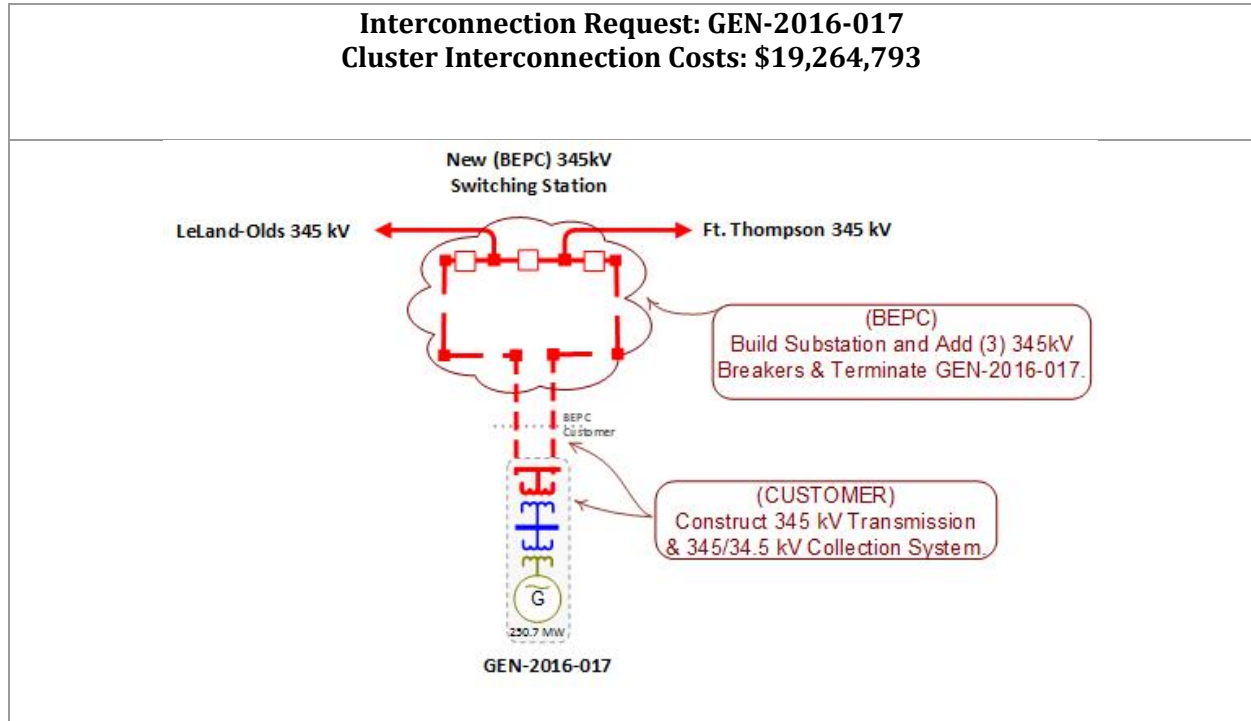
Interconnection Request: GEN-2016-009
Cluster Interconnection Costs: \$650,000

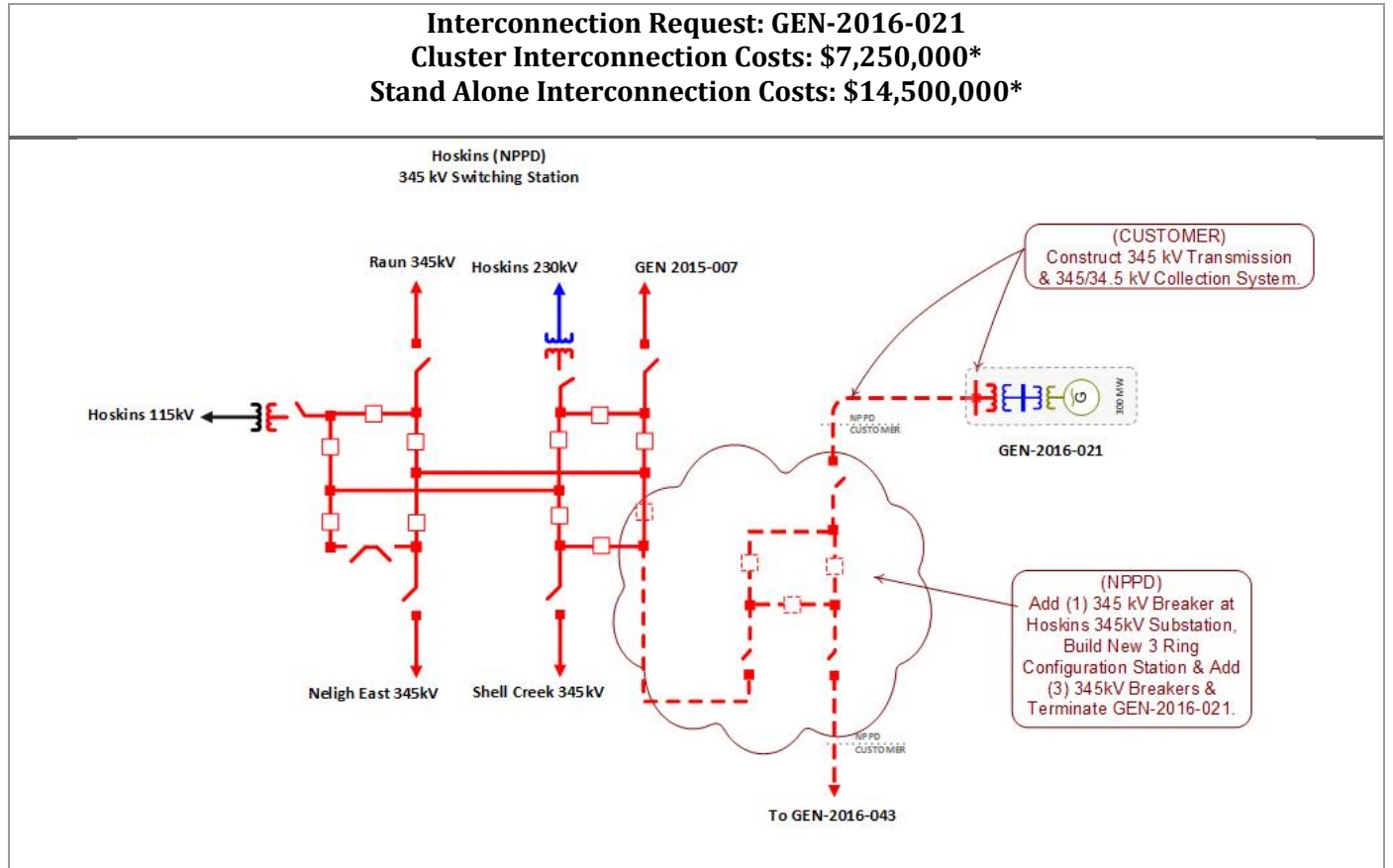




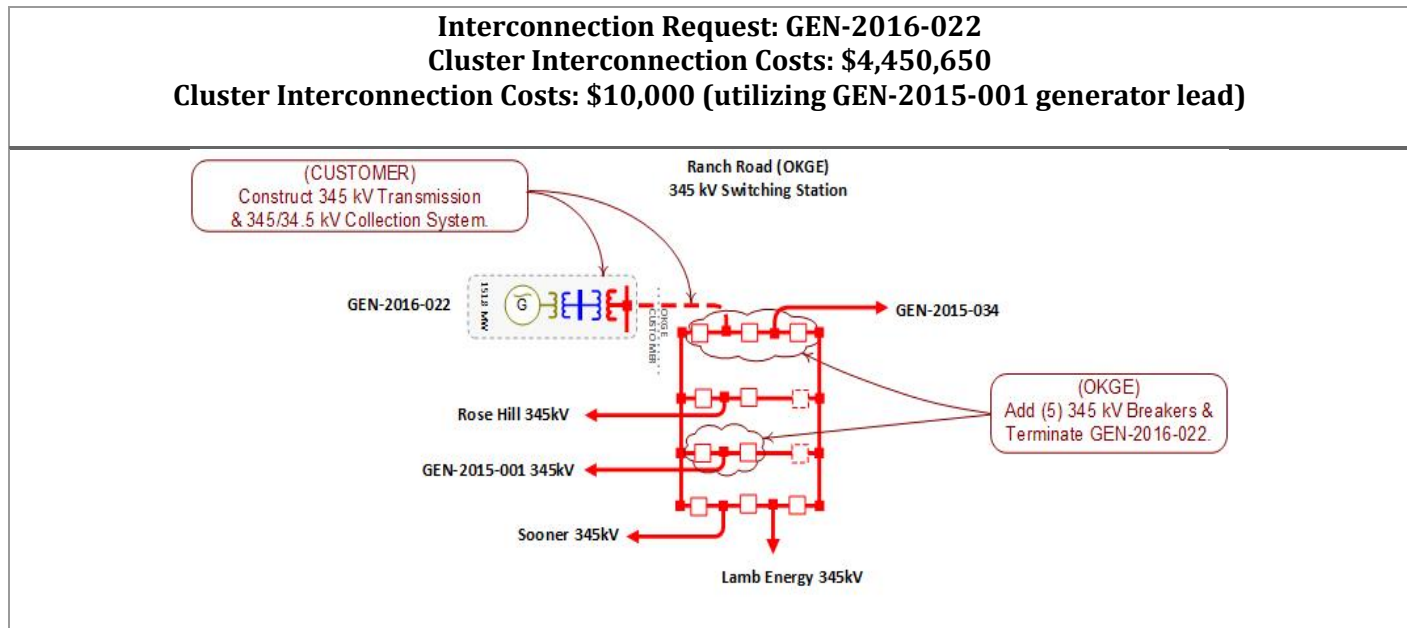




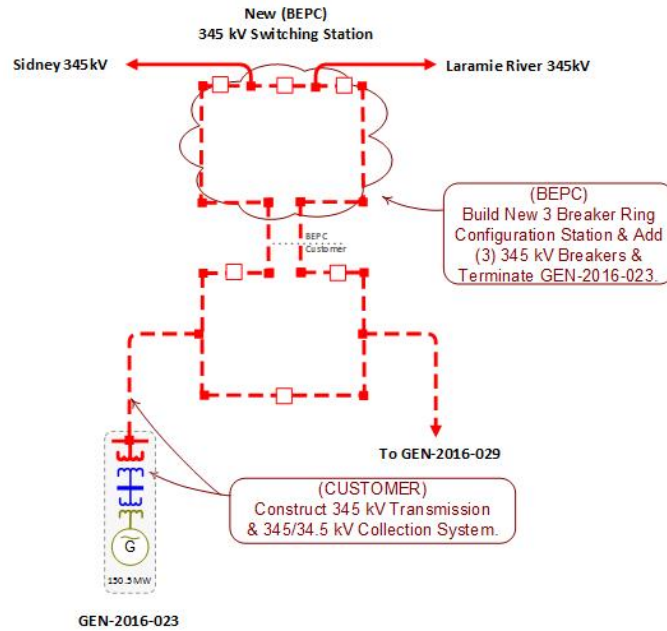




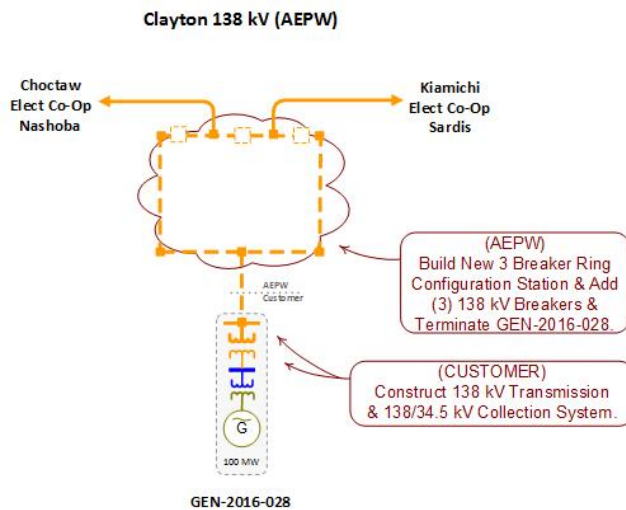
*Includes costs estimate for one breaker at Hoskins and construction of satellite 345kV ring bus substation.



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

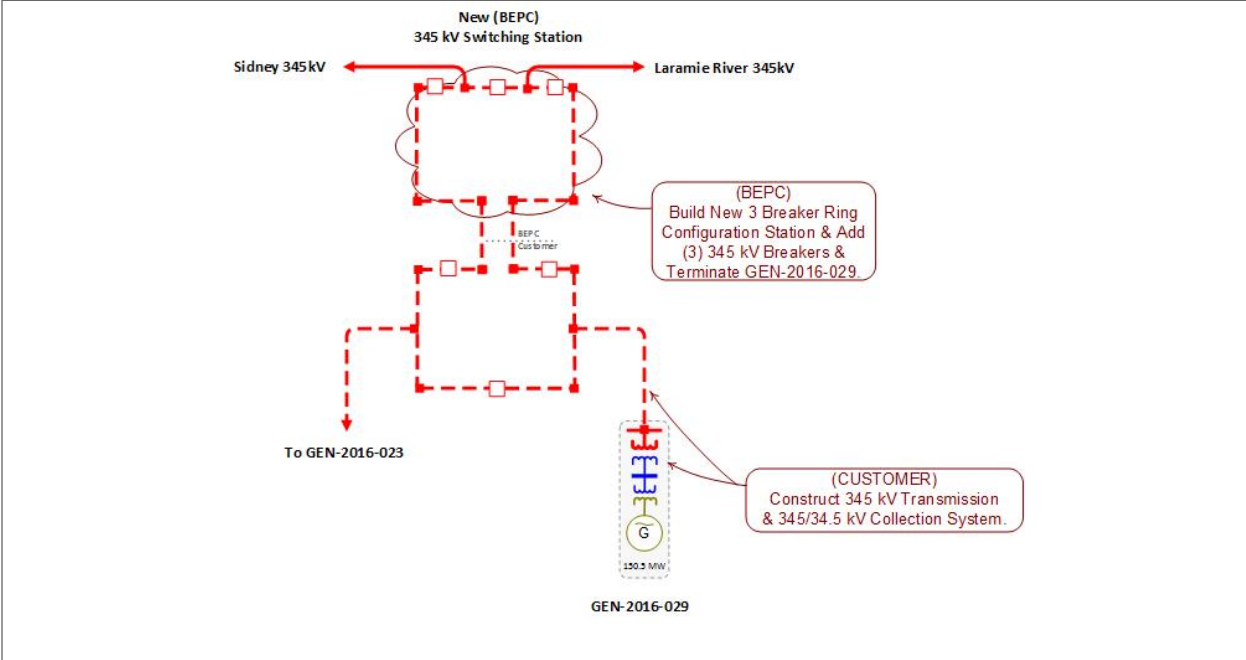


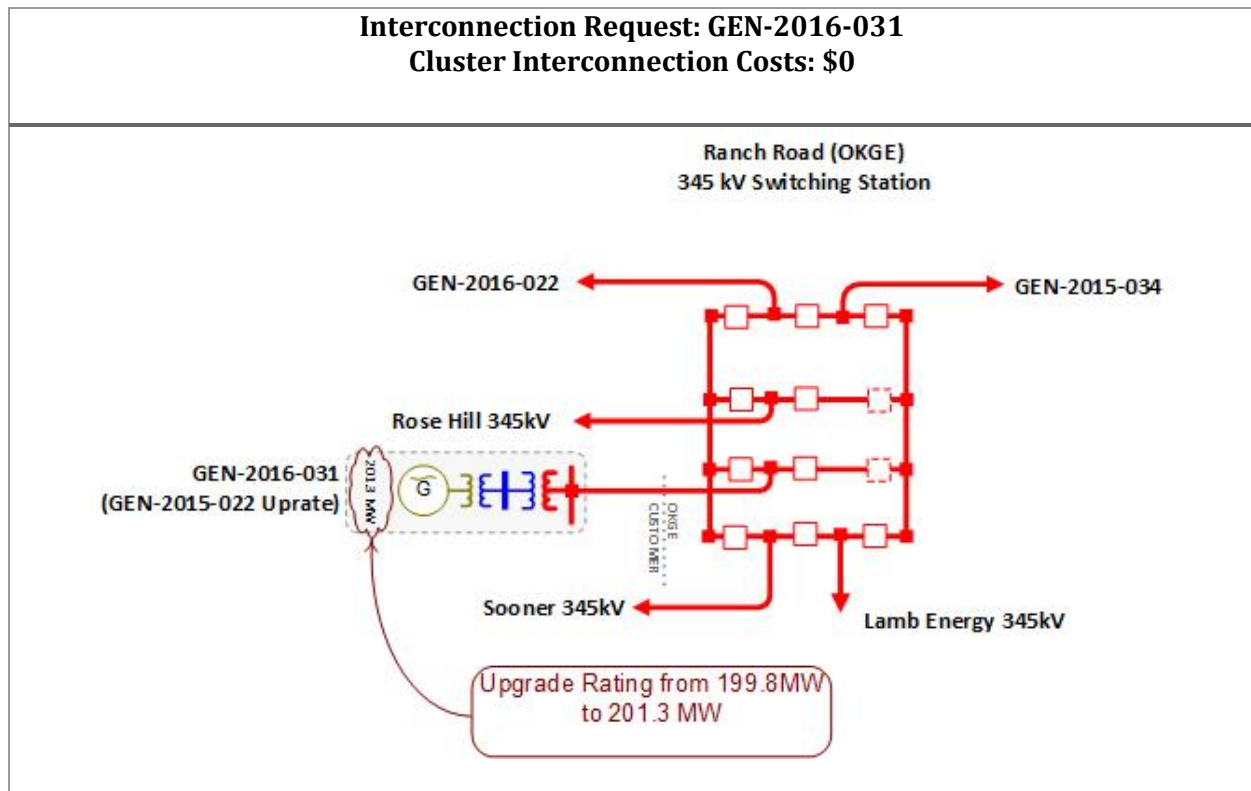
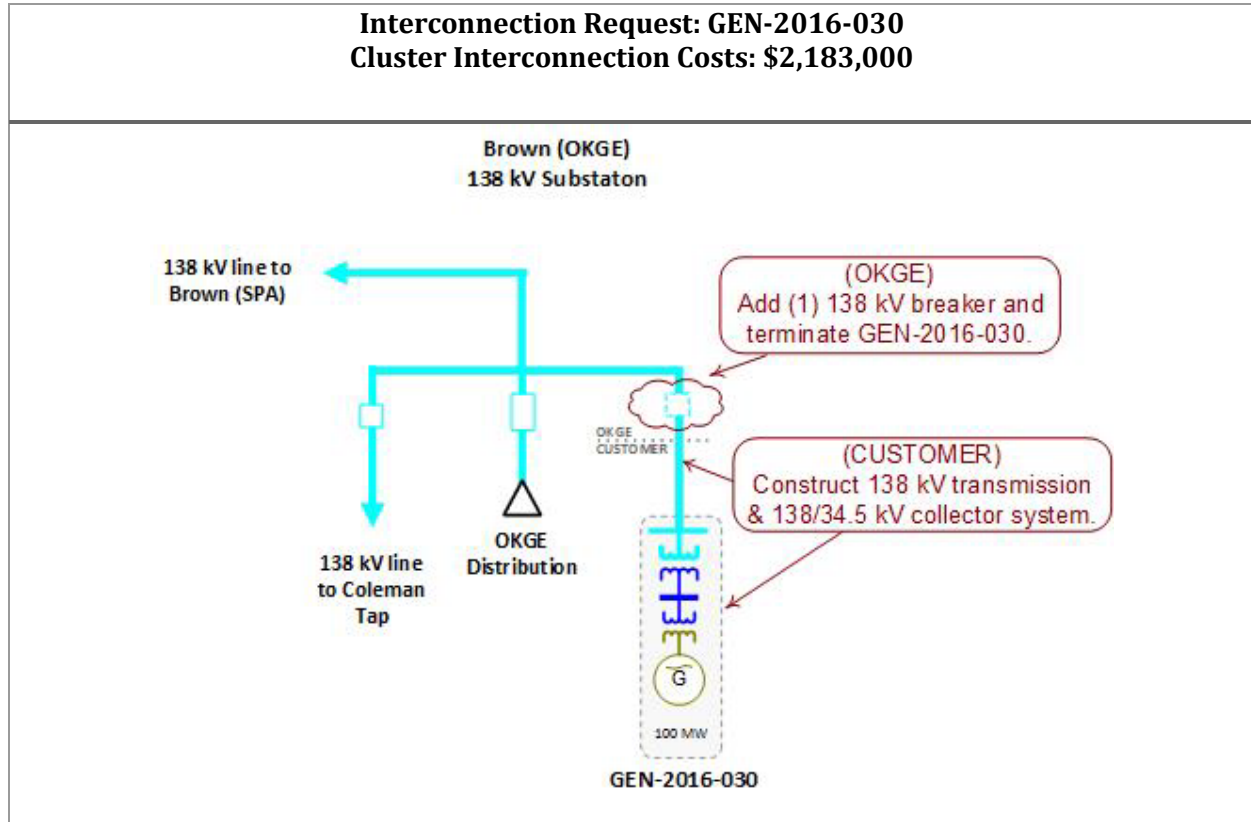
Interconnection Request: GEN-2016-028
Cluster Interconnection Costs: \$9,081,447

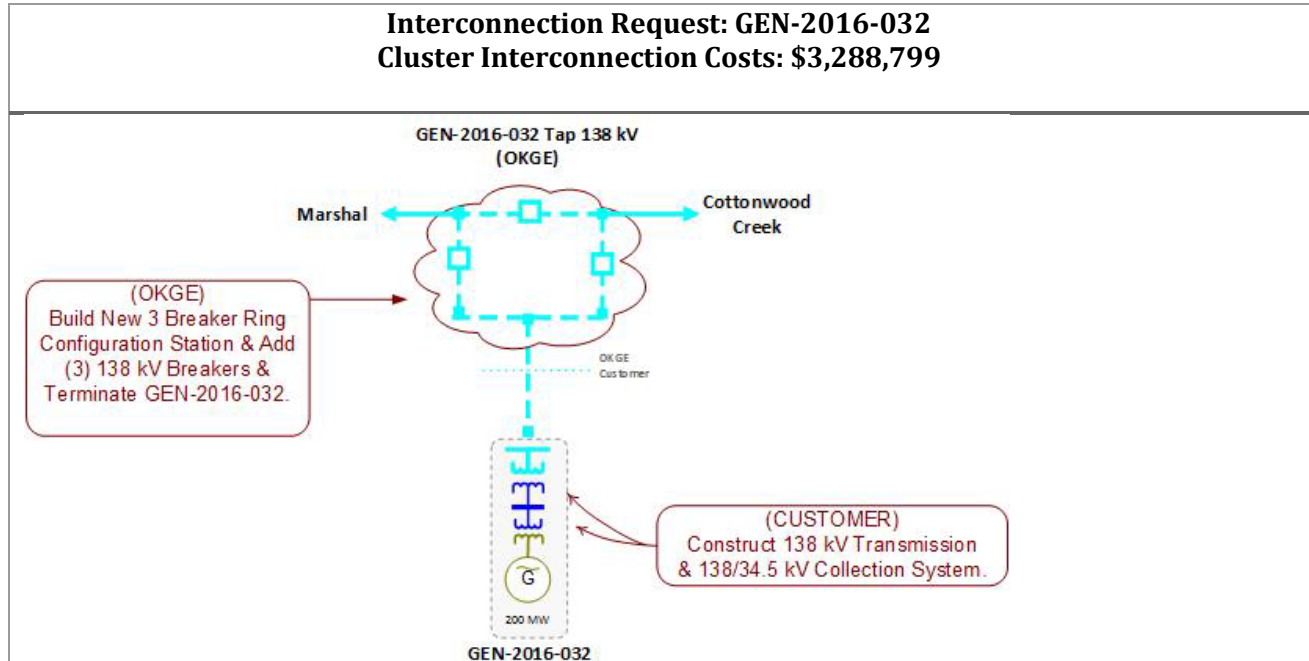


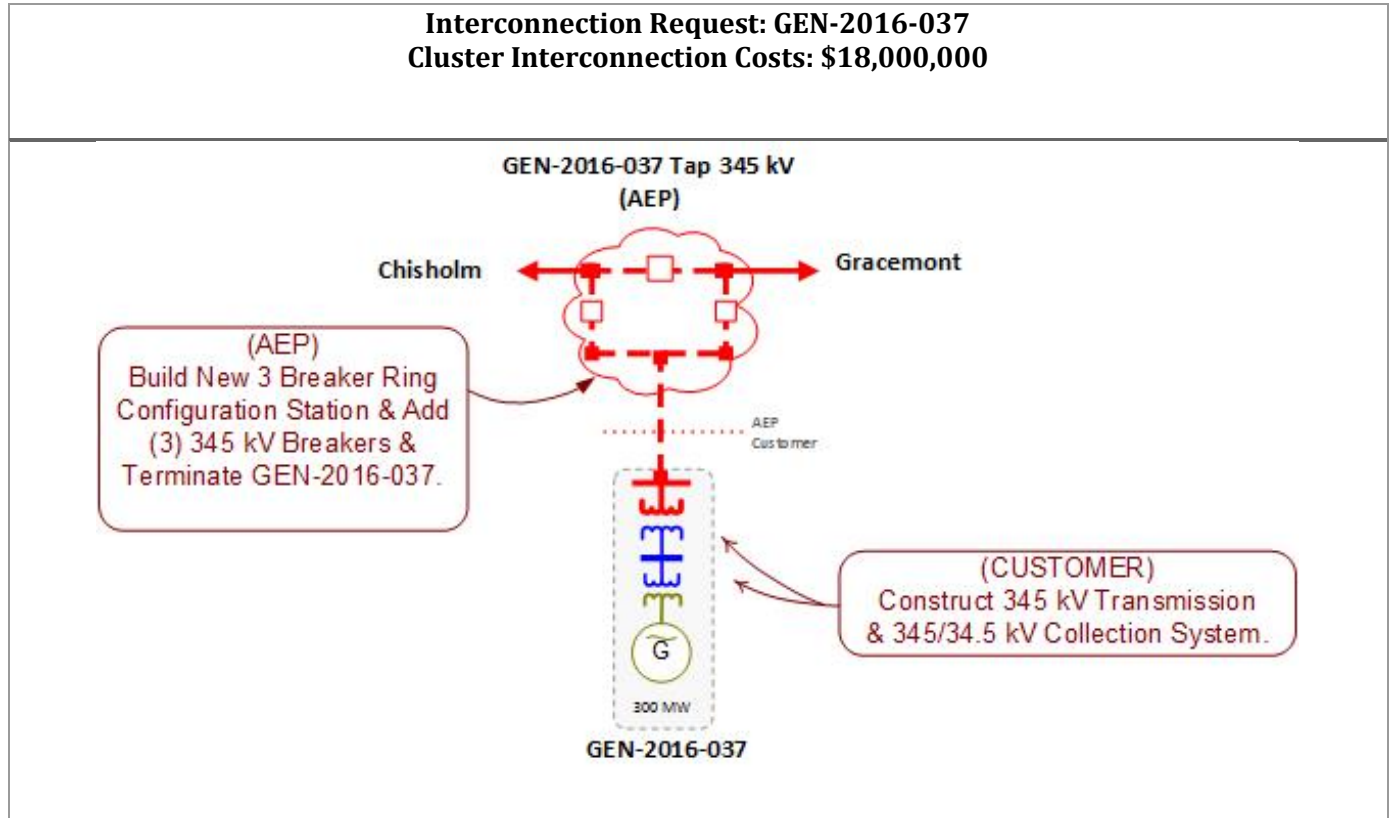


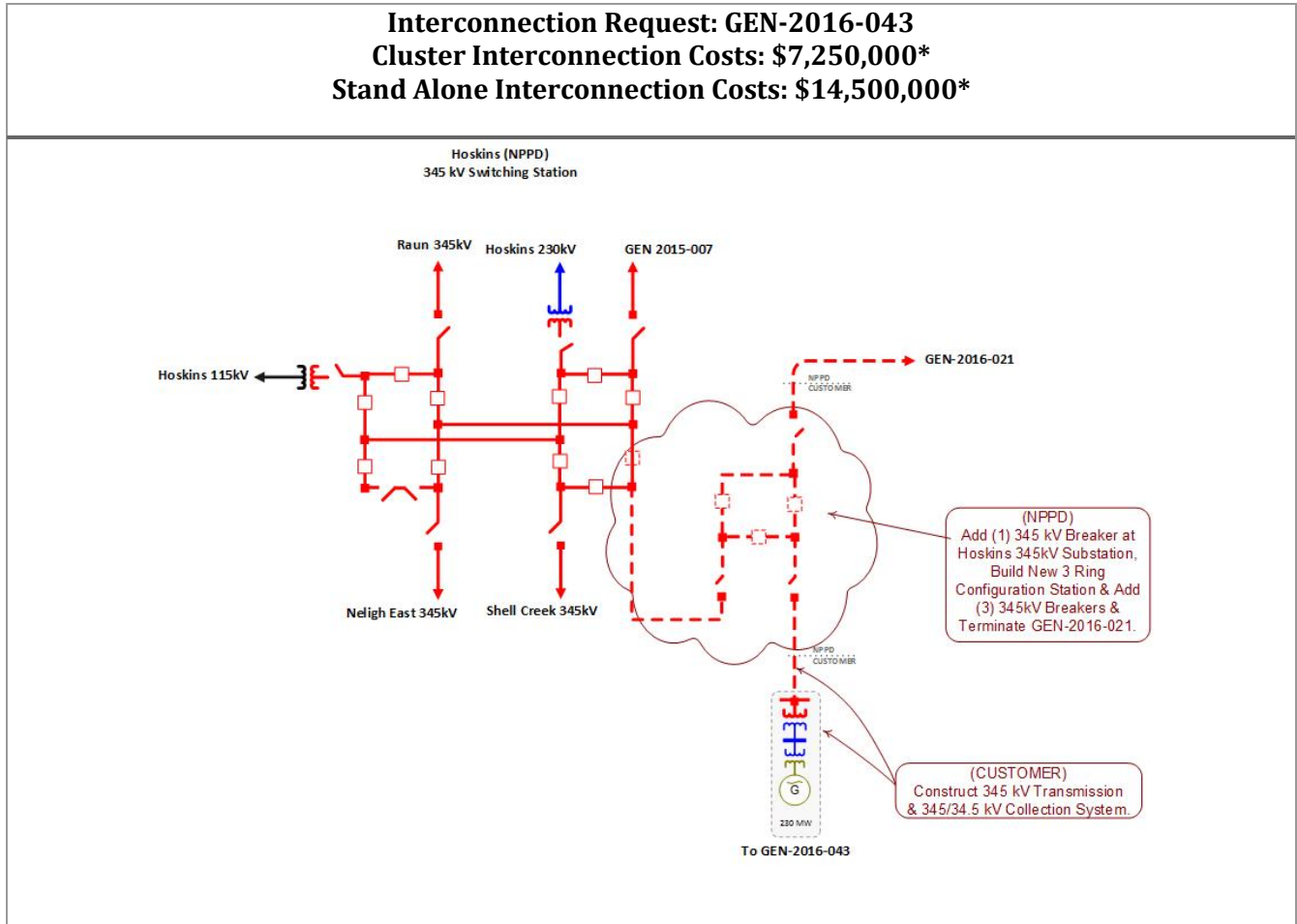
Interconnection Request: GEN-2016-029
Cluster Interconnection Costs: \$9,632,397
Stand Alone Interconnection Costs: \$19,264,793



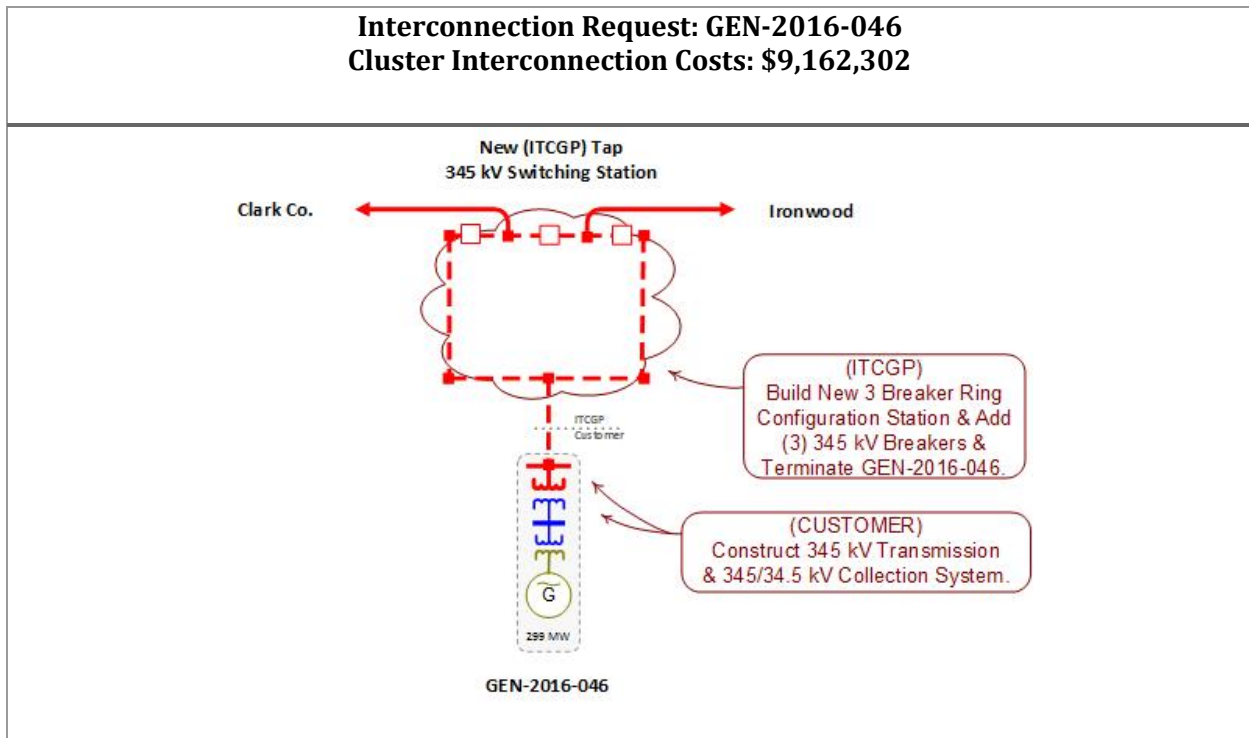
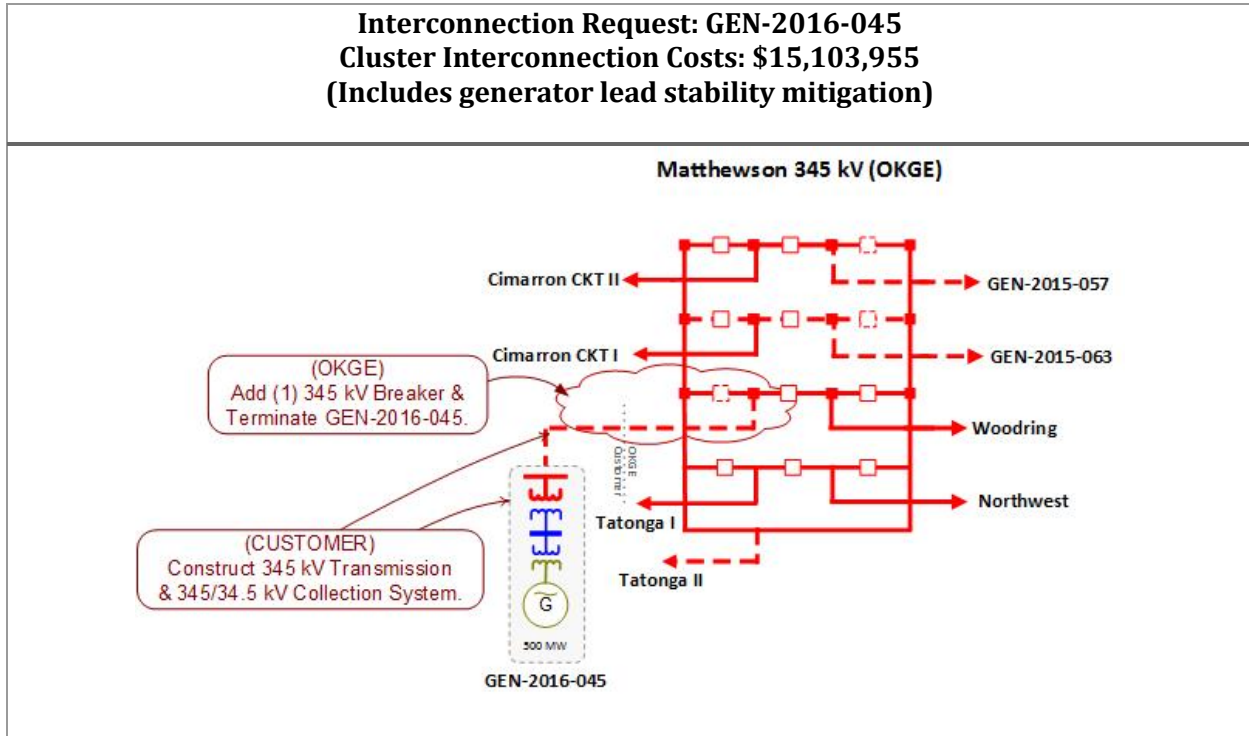




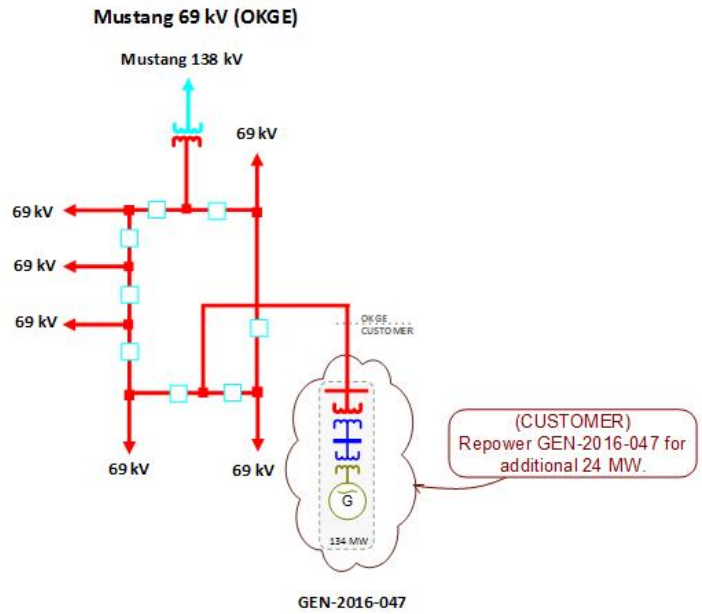




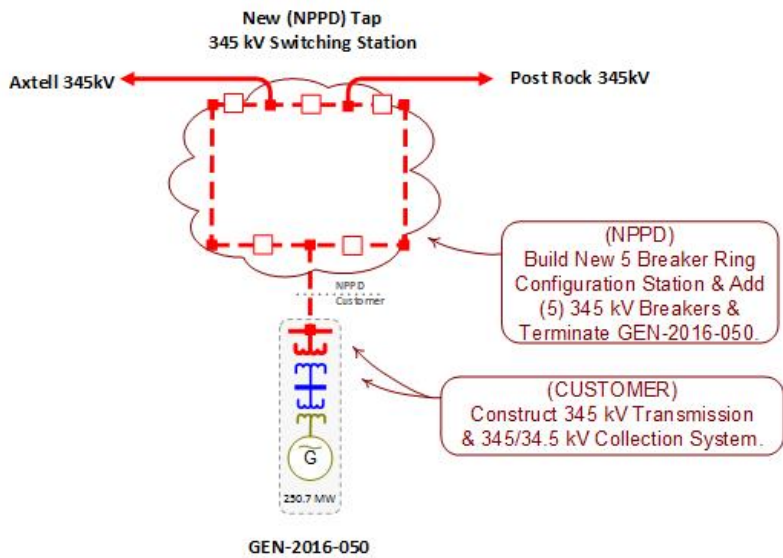
*Includes costs estimate for one breaker at Hoskins and construction of satellite 345kV ring bus substation.

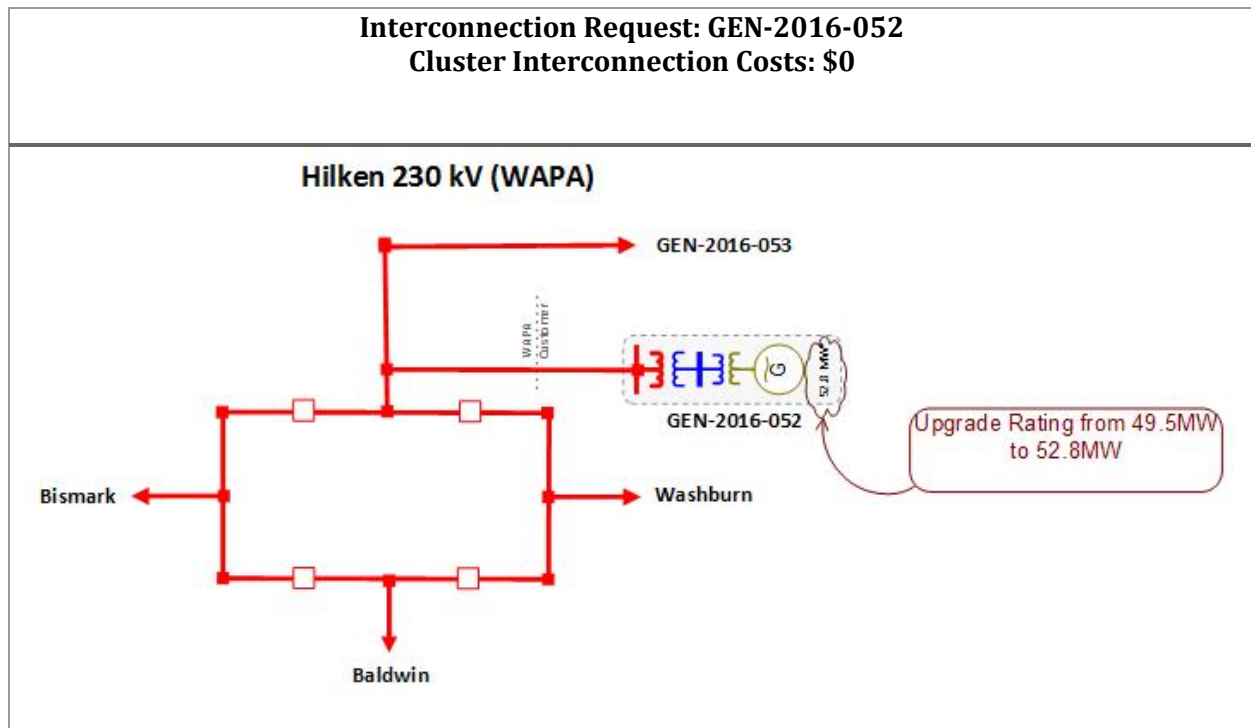
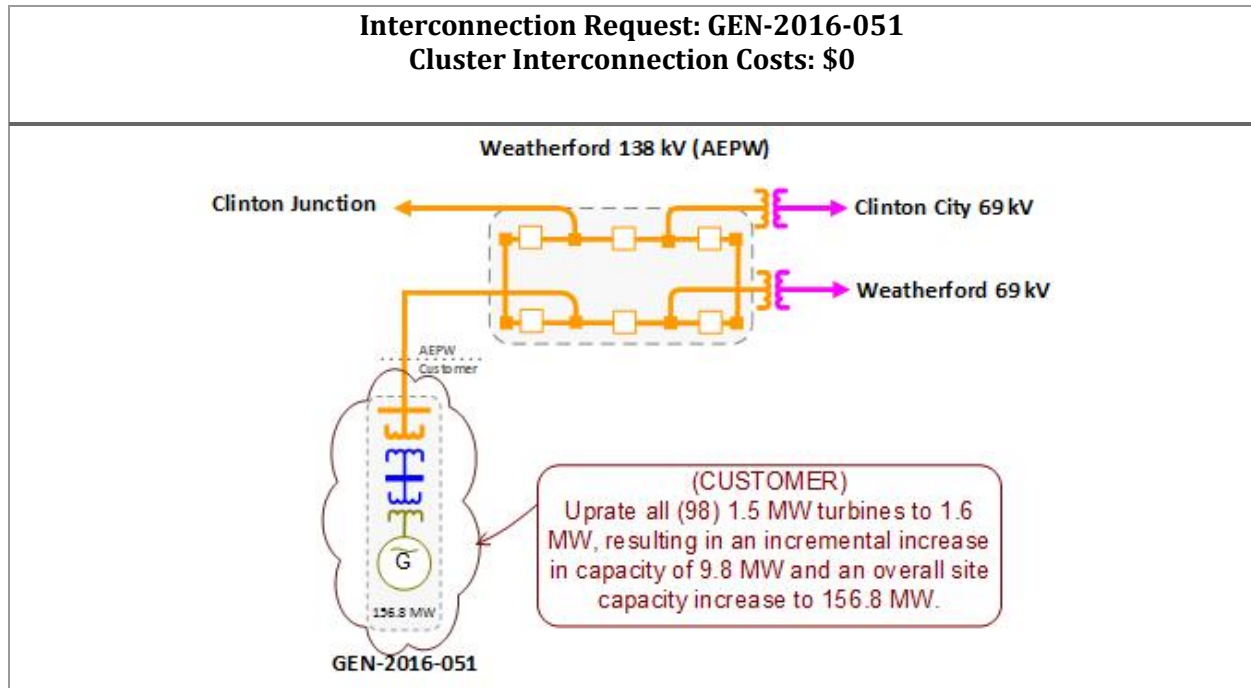


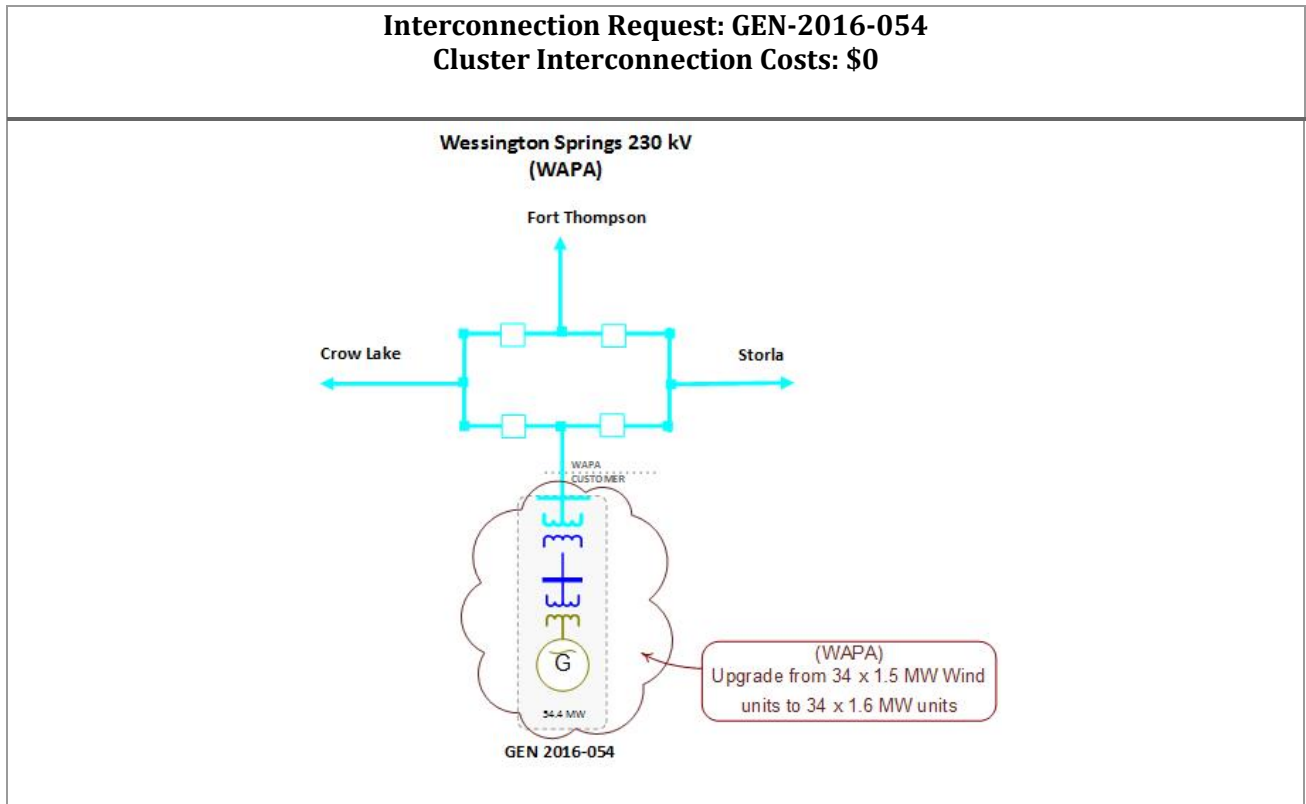
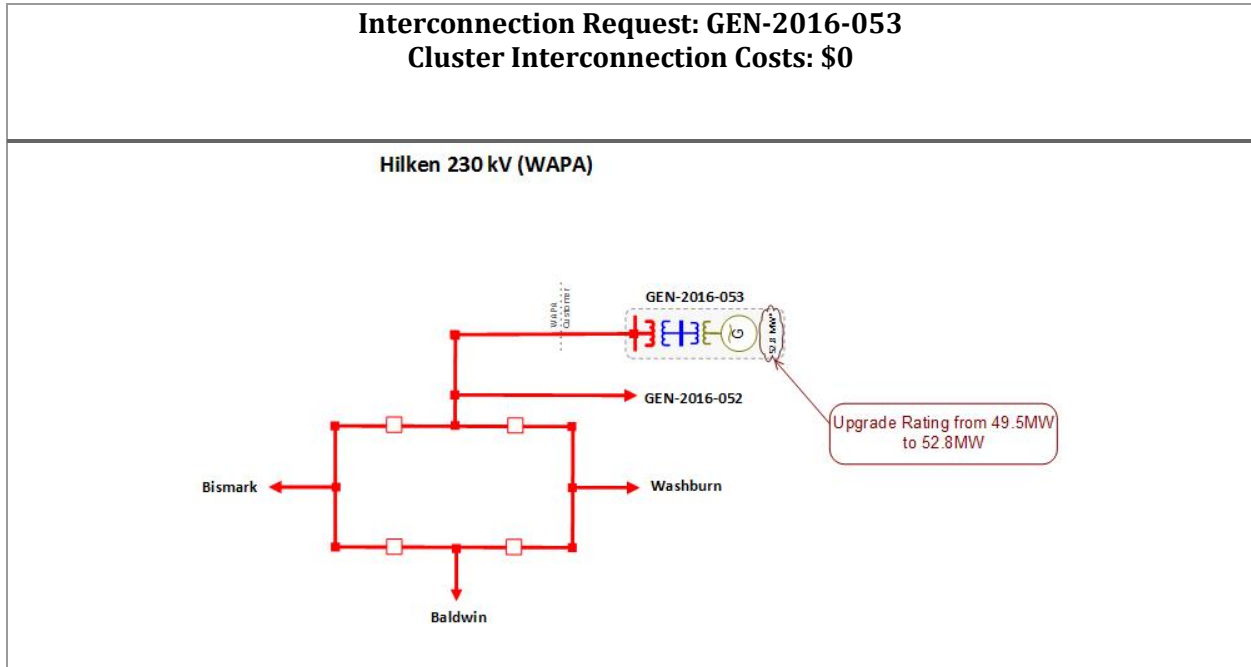
Interconnection Request: GEN-2016-047
Cluster Interconnection Costs: \$0

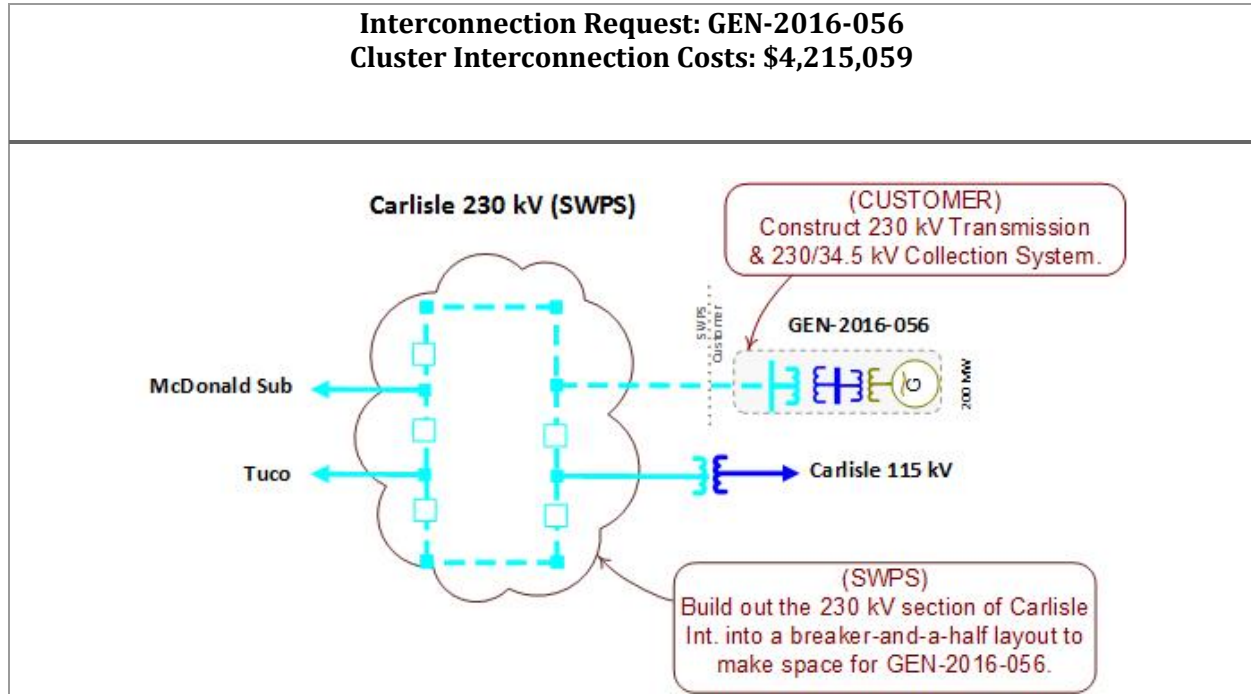


Interconnection Request: GEN-2016-050
Cluster Interconnection Costs: \$16,000,000

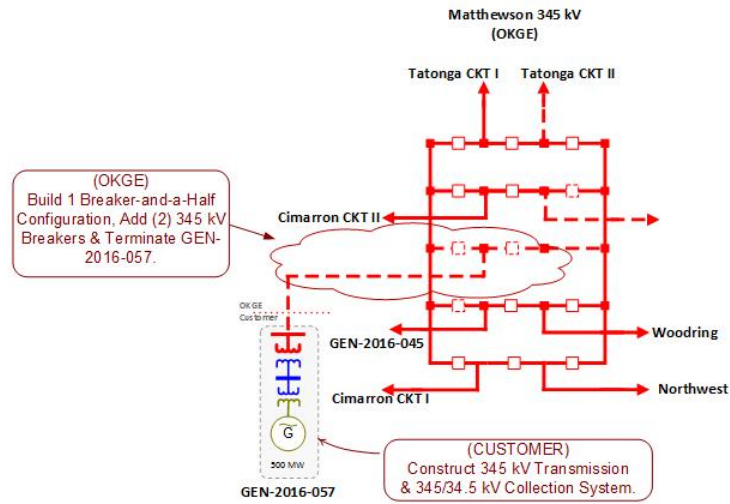


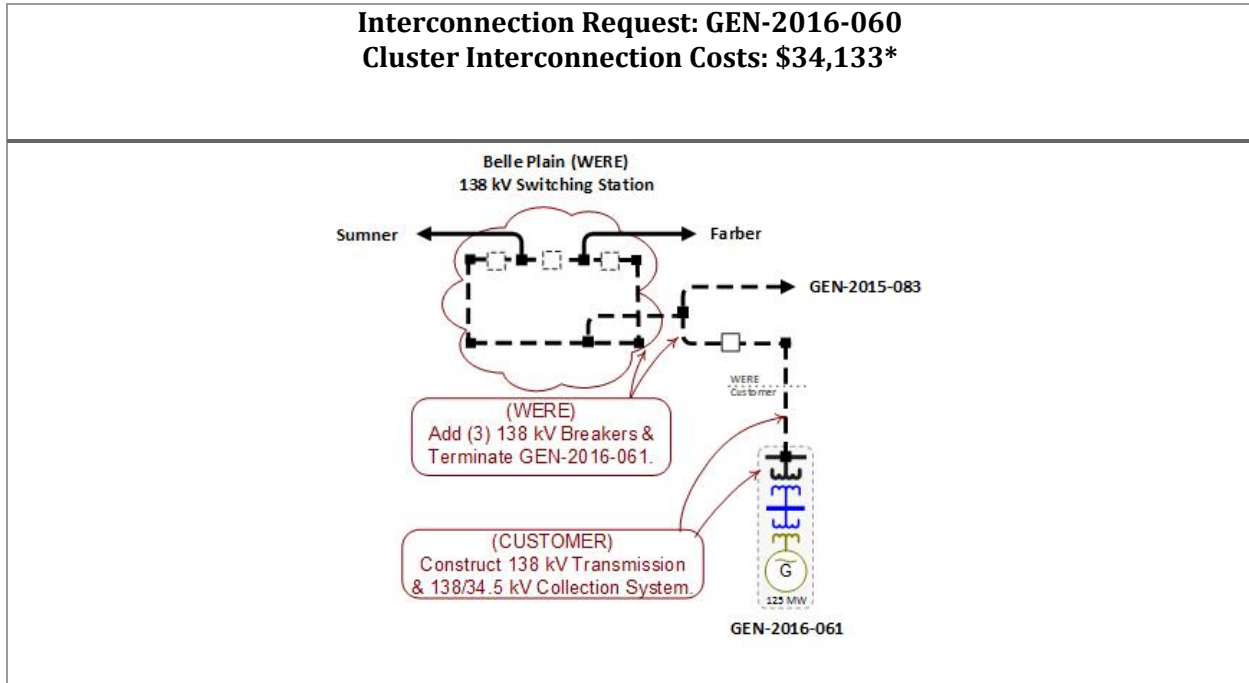




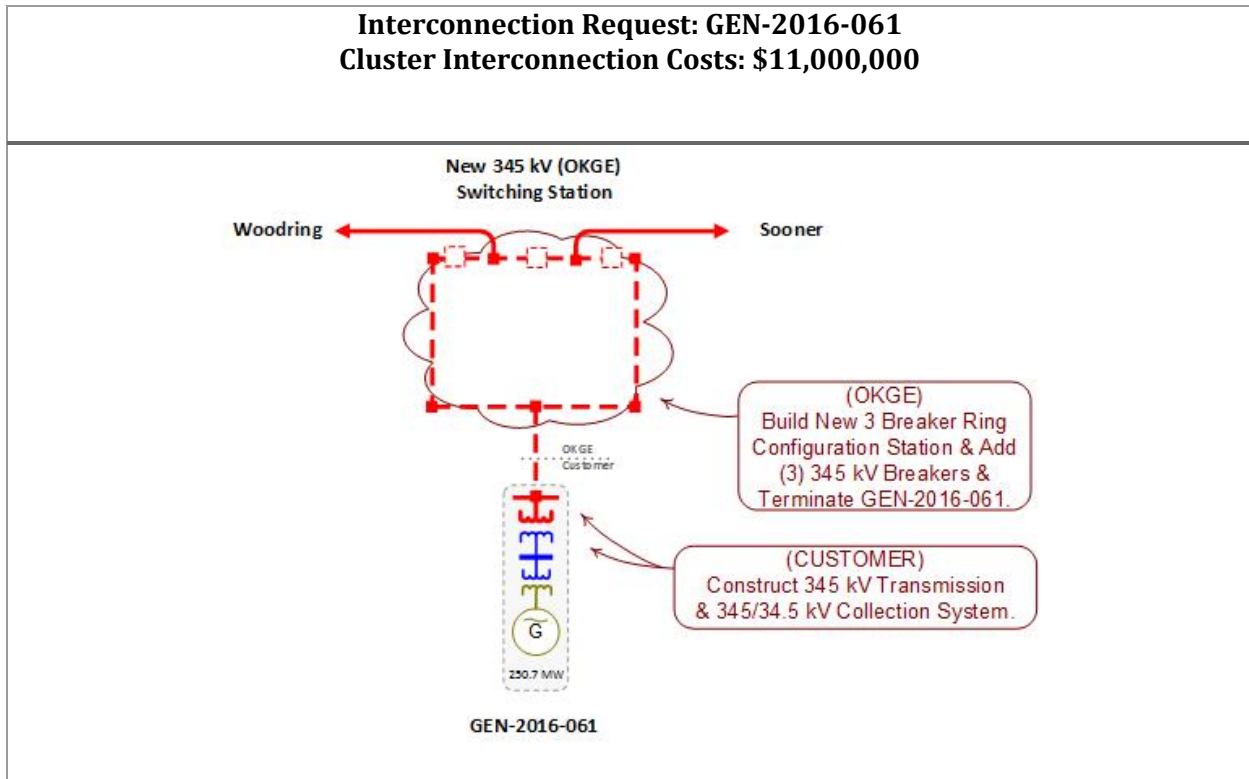


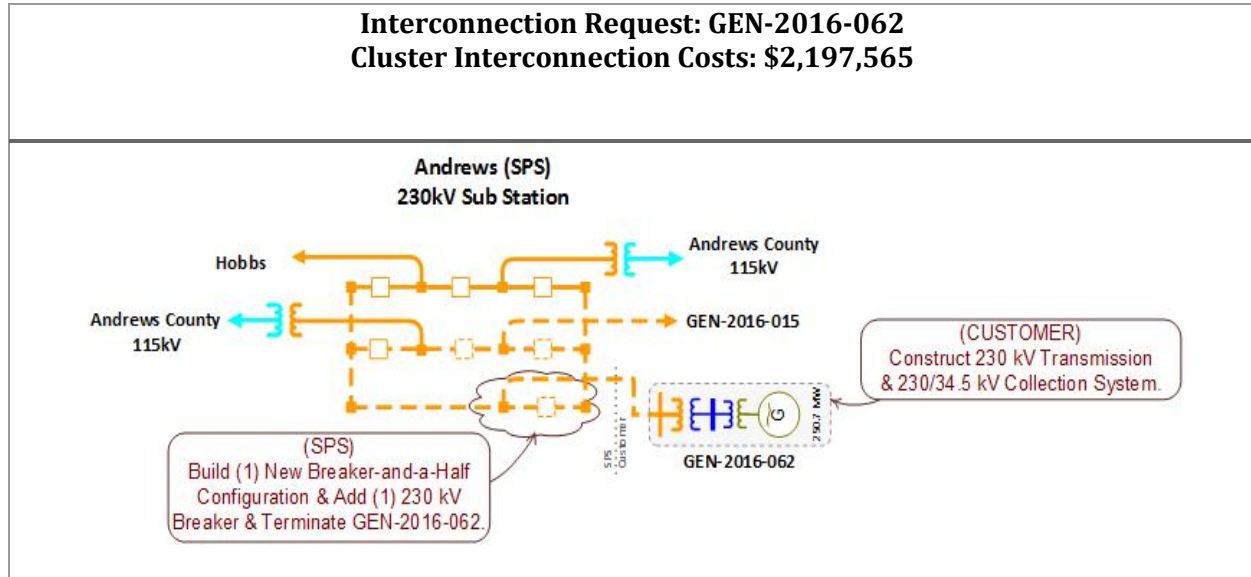
Interconnection Request: GEN-2016-057
Cluster Interconnection Costs: \$15,103,955
(Includes generator lead stability mitigation)

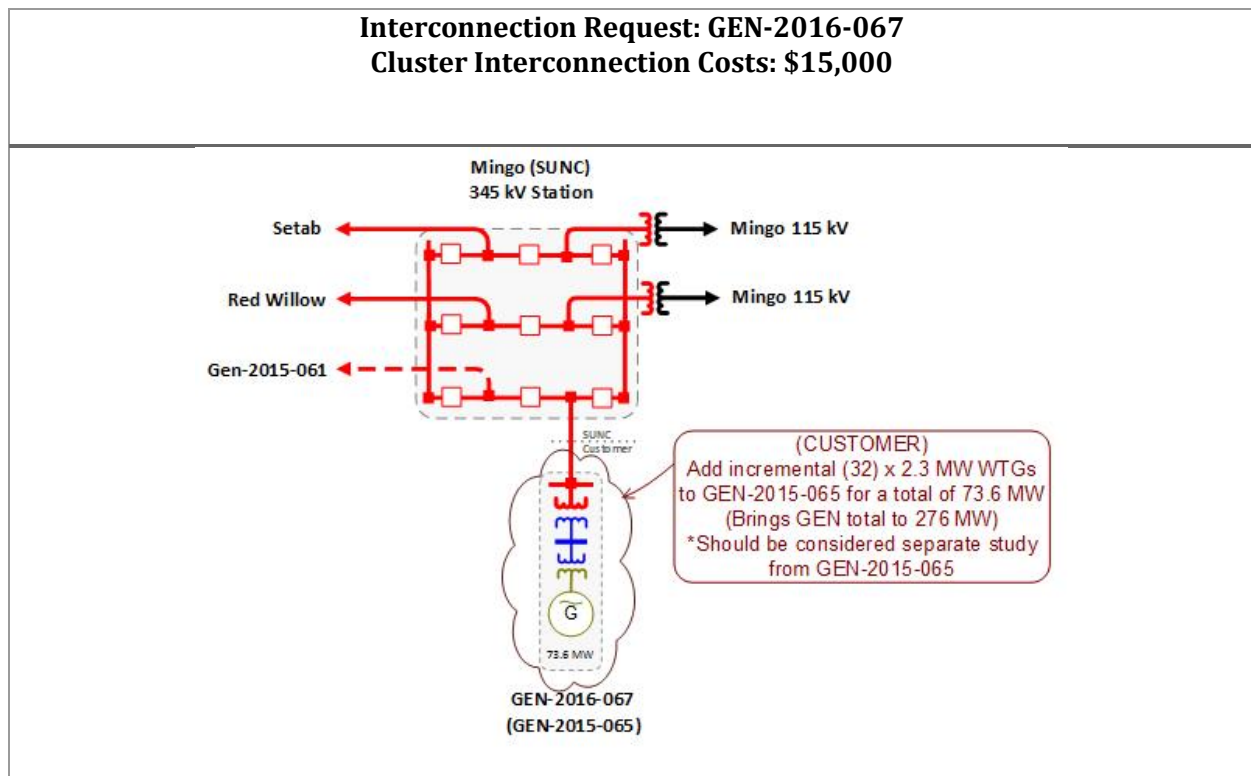
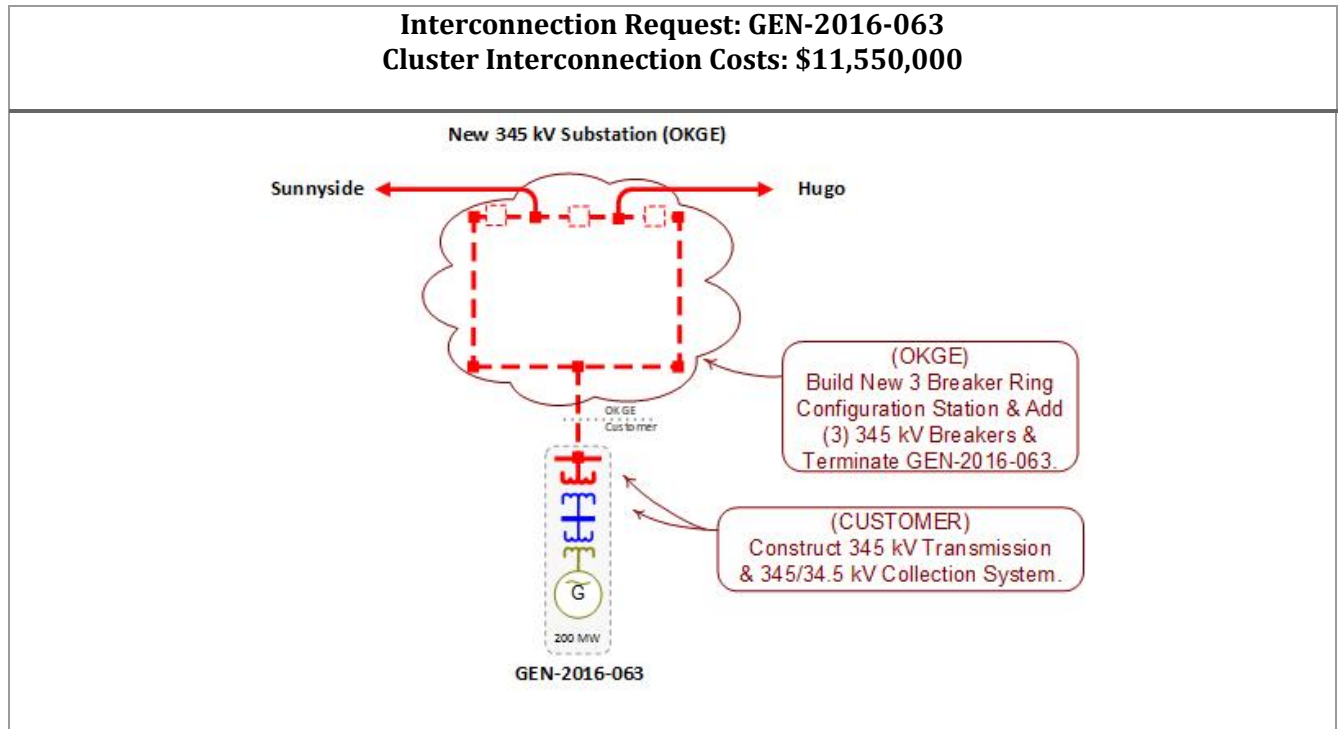




* If GEN-2015-083 withdraws, then GEN-2016-061 would be assigned \$7,603,433

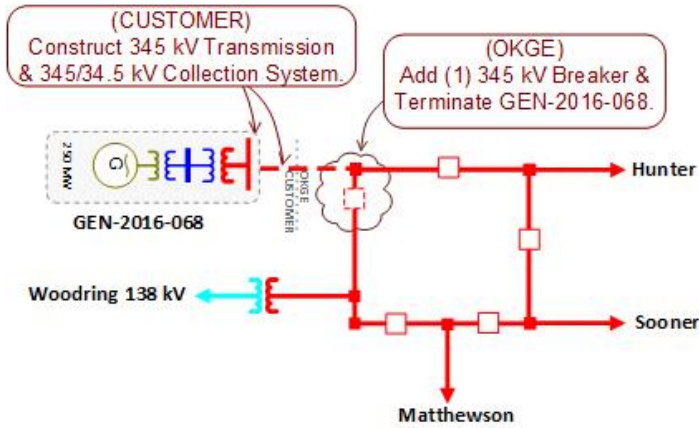




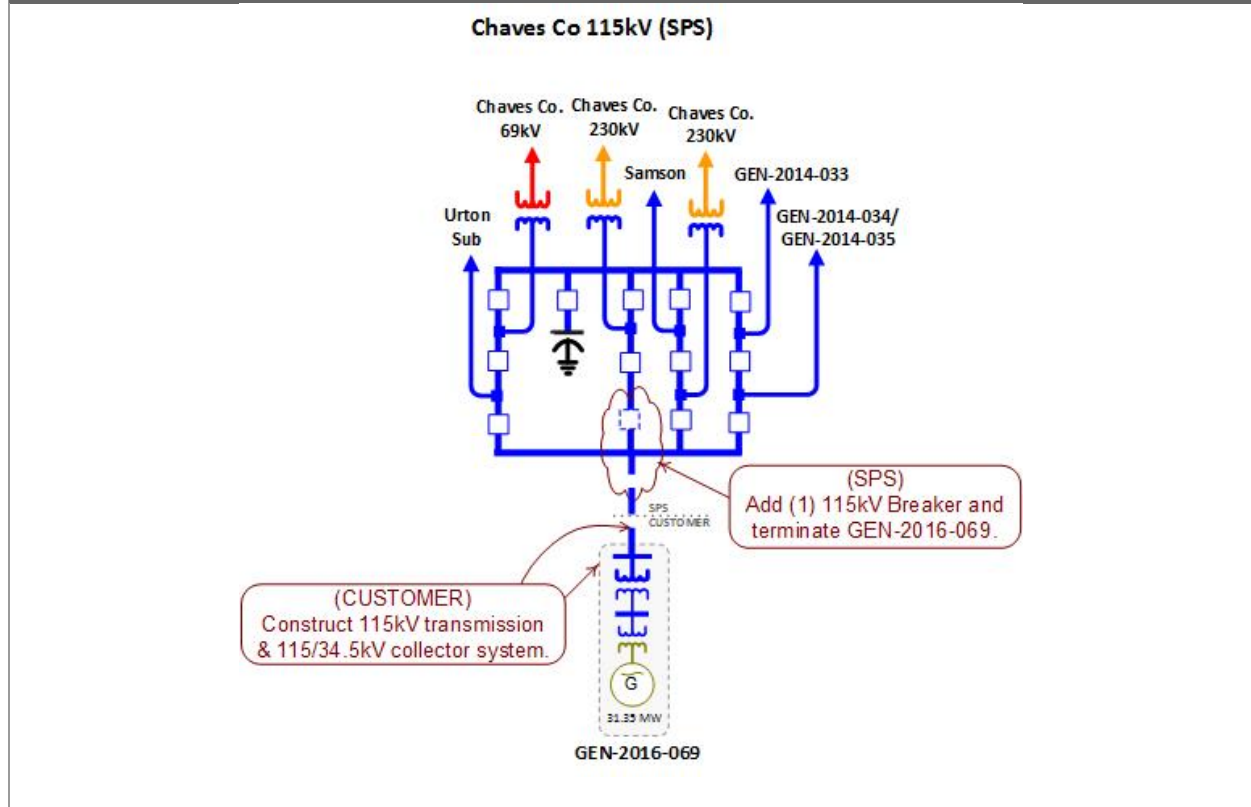


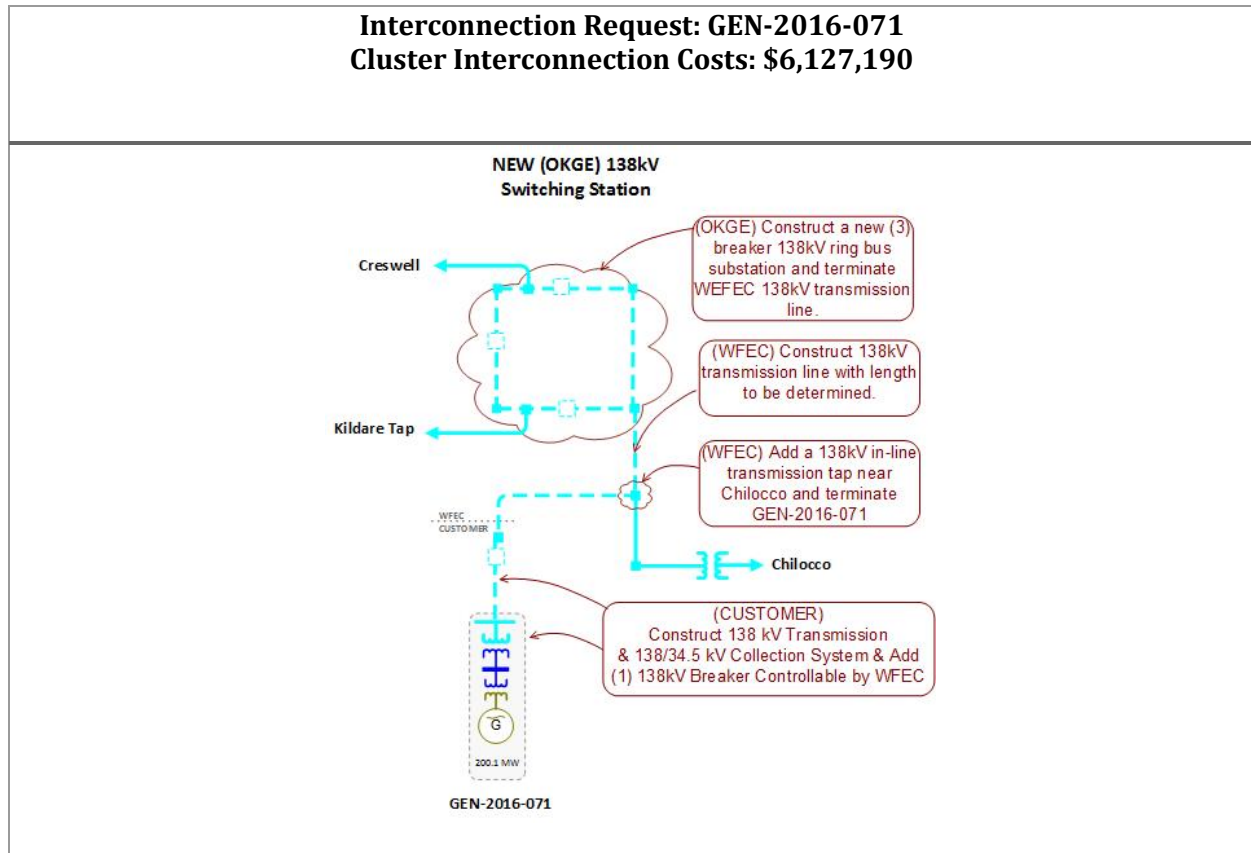
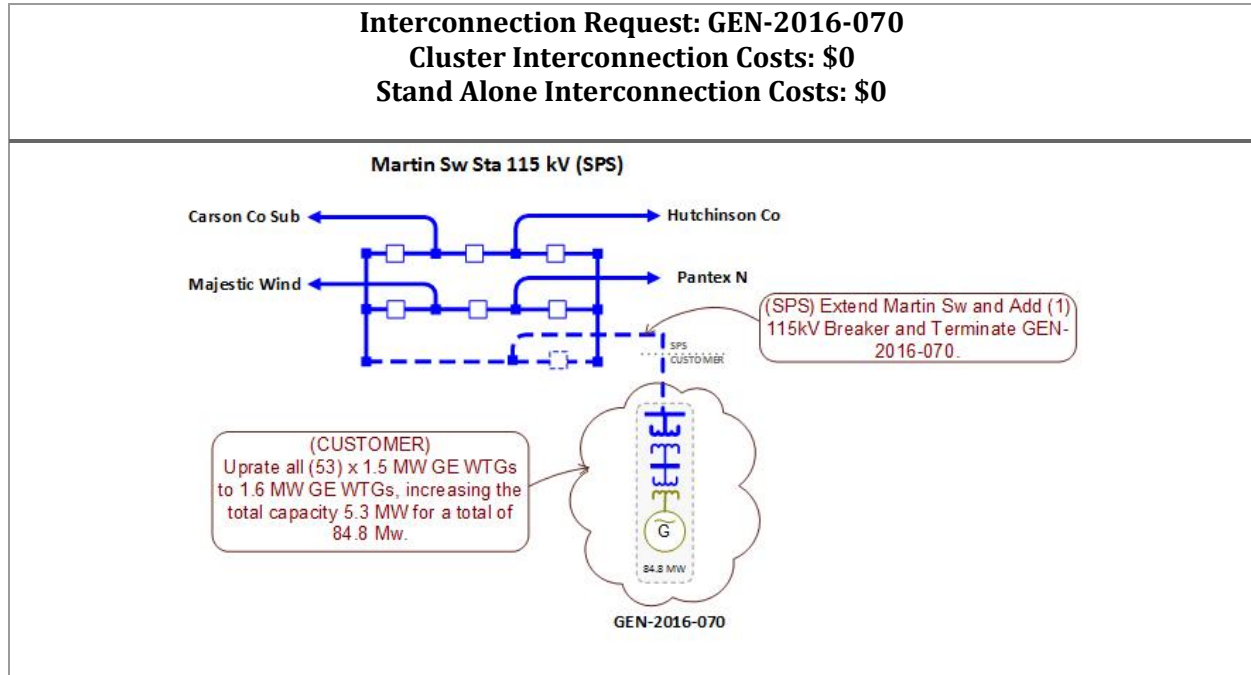
Interconnection Request: GEN-2016-068
Cluster Interconnection Costs: \$1,900,000

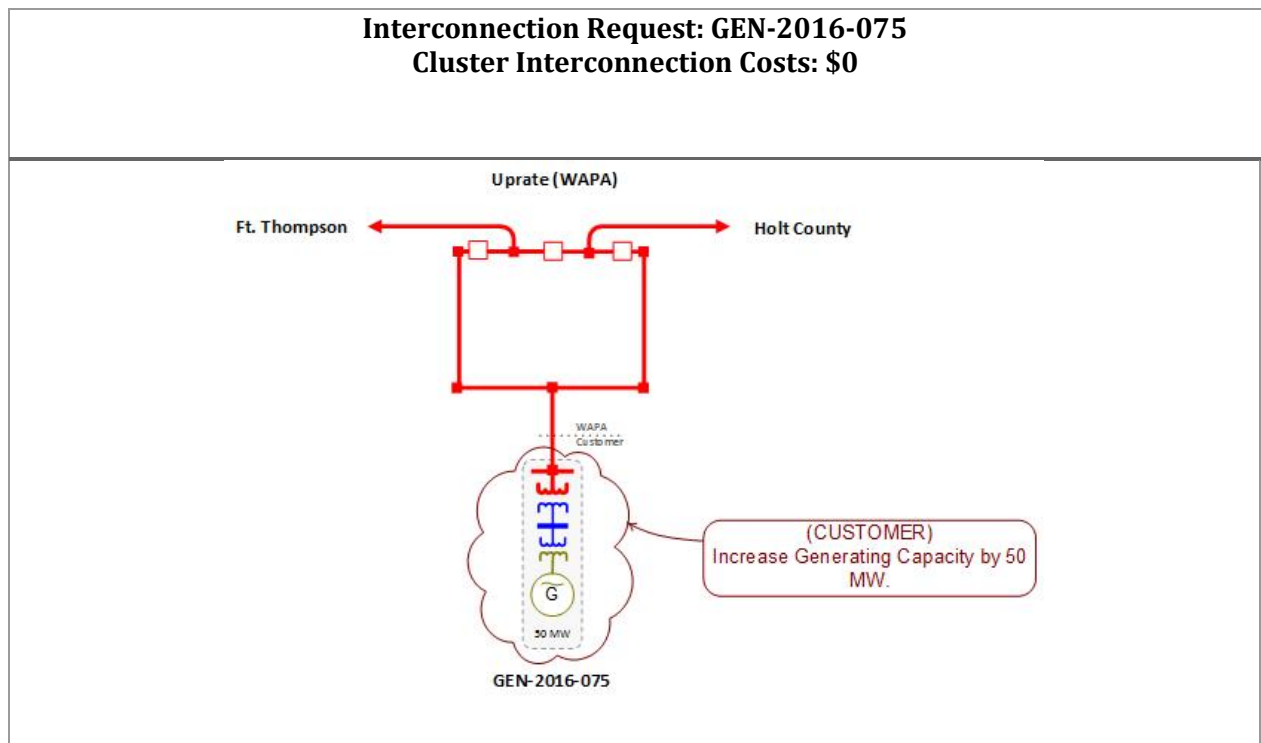
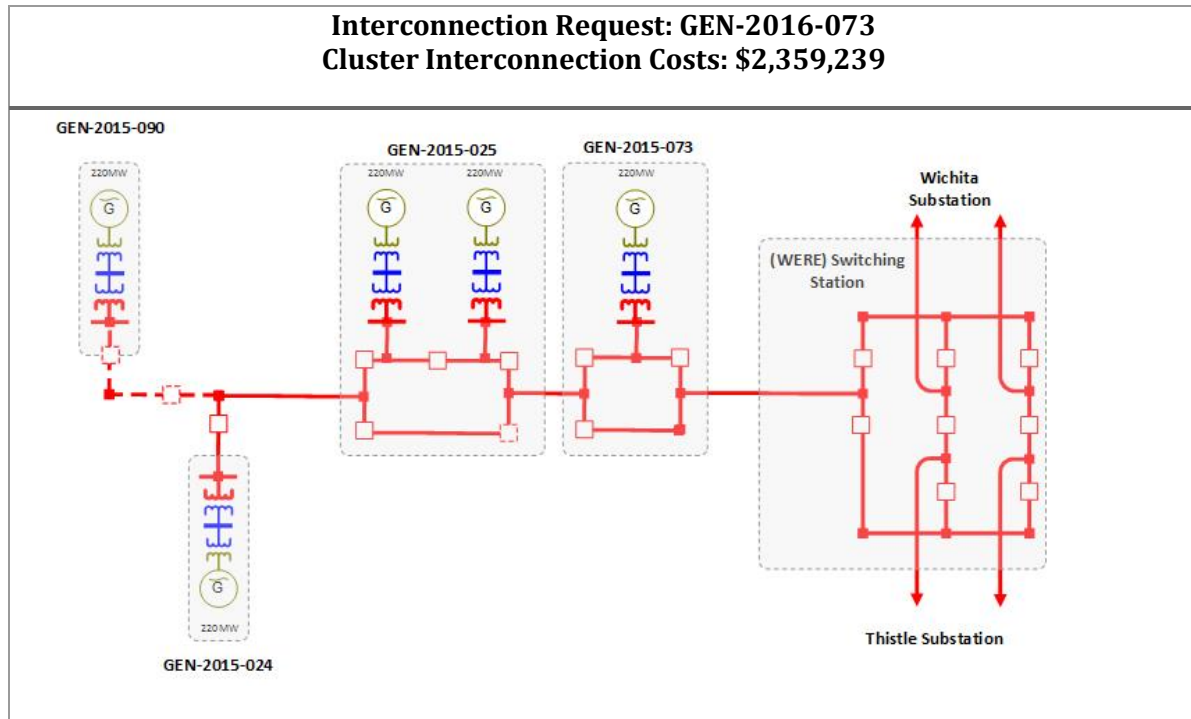
Woodring 345 kV (OKGE)



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







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

Appendix E. Cost Allocation Per Request

(Including Previously Allocated Network Upgrades*)

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
ASGI-2016-002			
ASGI-2016-002 Interconnection Costs See One-Line Diagram.	Current Study	\$21,750	\$21,750
Border 345kV Reactive Power Support			
Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Current Study	\$18,846	\$32,633,384
Elk City 230/138/13.8 kV Transformer Upgrade terminal equipment	Current Study	\$2,306	\$3,900,000
Oklaunion +/-100Mvar SVC			
Oklaunion +/-100Mvar SVC	Current Study	\$30,117	\$50,000,000
Potter - Chisholm 345kV CKT 1			
Build approximately 140 miles of new 345kV from Potter County - Chisholm	Current Study	\$108,206	\$194,910,000
Shamrock 115kV Capacitor Bank Add 20Mvar of Capacitor Bank(s) at Shamrock 115kV	Current Study	\$1,444	\$2,500,000
Tolk - Crawfish Draw 345kV CKT 1			
Build approximately 64 miles of 345kV from Tolk - Crawfish Draw	Current Study	\$46,226	\$88,170,000
Tolk - Potter County 345kV CKT 1			
Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	\$83,153	\$156,000,000
Tuco 345 kV Terminal Upgrades at Tuco 345 kV	Current Study	\$148	\$1,000,000
	Current Study Total	\$312,195	
ASGI-2016-004			
ASGI-2016-004 Interconnection Costs See One-Line Diagram.	Current Study	\$15,000	\$15,000
Border 345kV Reactive Power Support			
Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Current Study	\$163,232	\$32,633,384
Elk City 230/138/13.8 kV Transformer Upgrade terminal equipment	Current Study	\$69,039	\$3,900,000
Harrington Station East Bus - Potter County Int 230 kV Ckt 1 Upgrade terminal equipment	Current Study	\$2,500,000	\$2,500,000

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Oklaunion +/-100Mvar SVC Oklaunion +/-100Mvar SVC	Current Study	\$547,600	\$50,000,000
Potter - Chisholm 345kV CKT 1 Build approximately 140 miles of new 345kV from Potter County - Chisholm	Current Study	\$5,637,609	\$194,910,000
Shamrock 115kV Capacitor Bank Add 20Mvar of Capacitor Bank(s) at Shamrock 115kV	Current Study	\$12,505	\$2,500,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw	Current Study	\$1,688,915	\$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	\$251,547	\$156,000,000
	Current Study Total	\$10,885,446	
GEN-2015-041			
GEN-2015-041 Interconnection Costs See One-Line Diagram.	Current Study	\$0	\$0
Jones Station - Lubbock Power & Light (Holly) 230 kV NRIS only required upgrade: Rebuild 3.3 miles of 230 kV from Jones Station – Lubbock Power & Light (Holly Plant) Ckt 1	Current Study	\$12,000,000	\$12,000,000
	Current Study Total	\$12,000,000	
GEN-2016-005			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver - Clark	Current Study	\$44,414,535	\$150,000,000
GEN-2016-005 Interconnection Costs See One-Line Diagram.	Current Study	\$8,614,897	\$8,614,897
	Current Study Total	\$53,029,432	
GEN-2016-009			
GEN-2016-009 Interconnection Costs See One-Line Diagram.	Current Study	\$650,000	\$650,000
	Current Study Total	\$650,000	
GEN-2016-015			
Andrews 345/115/13kV Transformer CKT 1 Replace 230/115kV transformer CKT 1 with 345/115kV transformer	Current Study	\$2,281,152	\$8,000,000
Andrews 345/115/13kV Transformer CKT 2 Replace 230/115kV transformer CKT 2 with 345/115kV transformer	Current Study	\$2,281,152	\$8,000,000

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Andrews Substation Voltage Conversion Convert Andrews 230kV to 345kV	Current Study	\$2,851,440	\$10,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Current Study	\$5,804,033	\$32,633,384
Elk City 230/138/13.8 kV Transformer Upgrade terminal equipment	Current Study	\$657,815	\$3,900,000
G14_012 - Hobbs Interchange 345 kV Ckt 2 Build approximately 17.1 miles of 345 kV for Hobbs – G14_012T Ckt 2	Current Study	\$5,778,015	\$20,263,500
GEN-2016-015 Interconnection Costs See One-Line Diagram.	Current Study	\$6,625,863	\$6,625,863
GEN-2016-015 Interconnection Facilities Upgrade Mitigate frequency tripping (Refer to stability report for details)	Current Study	\$0	\$0
New Tap - Cochran - Lost Draw 115 kV Ckt 1 Reconductor Cochran – Lost Draw 115 kV Ckt 1	Current Study	\$1,297,239	\$4,691,172
Oklaunion +/-100Mvar SVC Oklaunion +/-100Mvar SVC	Current Study	\$8,424,065	\$50,000,000
Potter - Chisholm 345kV CKT 1 Build approximately 140 miles of new 345kV from Potter County - Chisholm	Current Study	\$33,460,468	\$194,910,000
Shamrock 115kV Capacitor Bank Add 20Mvar of Capacitor Bank(s) at Shamrock 115kV	Current Study	\$444,639	\$2,500,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw	Current Study	\$10,228,689	\$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	\$28,168,774	\$156,000,000
Tuco 345 kV Terminal Upgrades at Tuco 345 kV	Current Study	\$262,659	\$1,000,000
Hobbs - Yoakum 345 kV Ckt 1 Construct new 52-mile 345 kV line from Hobbs to Yoakum per NTC 200309	Previously Allocated		\$90,628,750
Hobbs 345/230 kV Ckt 1 Transformer Expand existing Hobbs substation to accommodate 345 kV terminals. Install 345/230 kV 644 MVA transformer at Hobbs per NTC 200309	Previously Allocated		\$14,027,120
NEF Sub -Targa 115kV CKT 1 Rebuild 3-mile 115 kV line from Cardinal to Targa per NTC 200360	Previously Allocated		\$4,704,602

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
NEF Tap - Targa 115 kV Rebuild 4.3-mile 115 kV line from National Enrichment Plant to Targa per NTC 200360	Previously Allocated		\$2,435,548
	Current Study Total	\$108,566,001	
GEN-2016-016			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver - Clark	Current Study	\$9,602,874	\$150,000,000
GEN-2016-016 Interconnection Costs See One-Line Diagram.	Current Study	\$4,761,014	\$4,761,014
Clearwater-Viola 138kV CKT 1 SPP 2013 ITP NT assigneg upgrade per SPP-NTC-200228 for 12/31/2018 in-service.	Previously Allocated		\$31,492,903
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service	Previously Allocated		\$18,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		\$49,070,637
Viola-Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service	Previously Allocated		\$51,513,963
	Current Study Total	\$14,363,888	
GEN-2016-022			
GEN-2016-022 Interconnection Costs See One-Line Diagram.	Current Study	\$10,000	\$10,000
Lacygne - Waverly 345 kV Upgrade terminal equipment.	Current Study	\$235,768	\$1,600,000
Ranch Road - Sooner 345 kV Ckt 1 Upgrade terminal equipment	Current Study	\$445,597	\$450,000
	Current Study Total	\$691,365	
GEN-2016-031			
GEN-2016-031 Interconnection Costs See One-Line Diagram.	Current Study	\$0	\$0
Lacygne - Waverly 345 kV Upgrade terminal equipment.	Current Study	\$2,330	\$1,600,000
Ranch Road - Sooner 345 kV Ckt 1 Upgrade terminal equipment	Current Study	\$4,403	\$450,000

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Current Study Total		\$6,733	
GEN-2016-032			
GEN-2016-032 Interconnection Costs See One-Line Diagram.	Current Study	\$3,288,799	\$3,288,799
Lacygne - Waverly 345 kV Upgrade terminal equipment.	Current Study	\$167,225	\$1,600,000
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace 89 structures	Previously Allocated		\$4,277,161
Current Study Total		\$3,456,024	
GEN-2016-046			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver - Clark	Current Study	\$95,982,591	\$150,000,000
GEN-2016-046 Interconnection Costs See One-Line Diagram.	Current Study	\$9,162,302	\$9,162,302
Current Study Total		\$105,144,893	
GEN-2016-056			
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Current Study	\$11,012,632	\$32,633,384
Elk City 230/138/13.8 kV Transformer Upgrade terminal equipment	Current Study	\$1,315,840	\$3,900,000
GEN-2016-056 Interconnection Costs See One-Line Diagram.	Current Study	\$4,215,059	\$4,215,059
Oklaunion +/-100Mvar SVC Oklaunion +/-100Mvar SVC	Current Study	\$17,401,376	\$50,000,000
Potter - Chisholm 345kV CKT 1 Build approximately 140 miles of new 345kV from Potter County - Chisholm	Current Study	\$59,574,768	\$194,910,000
Shamrock 115kV Capacitor Bank Add 20Mvar of Capacitor Bank(s) at Shamrock 115kV	Current Study	\$843,663	\$2,500,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw	Current Study	\$36,820,875	\$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	\$46,941,573	\$156,000,000

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Tuco 345 kV Terminal Upgrades at Tuco 345 kV	Current Study	\$39,661	\$1,000,000
	Current Study Total	\$178,165,447	
GEN-2016-060			
Farber - Belle Plains 138kV CKT 1 Rebuild approximately 10.3 miles of 138kV from Farber to Belle Plains	Current Study	\$2,324,387	\$9,000,000
GEN-2016-060 Interconnection Costs See One-Line Diagram.	Current Study	\$34,133	\$34,133
Lacygne - Waverly 345 kV Upgrade terminal equipment.	Current Study	\$50,880	\$1,600,000
	Current Study Total	\$2,409,400	
GEN-2016-061			
GEN-2015-063 Tap - Woodring 345kV CKT 1 Replace 53 structures	Current Study	\$1,116,803	\$2,700,000
GEN-2016-061 Interconnection Costs See One-Line Diagram.	Current Study	\$11,000,000	\$11,000,000
Lacygne - Waverly 345 kV Upgrade terminal equipment.	Current Study	\$262,064	\$1,600,000
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace 89 structures	Previously Allocated		\$4,277,161
	Current Study Total	\$12,378,866	
GEN-2016-062			
Andrews 345/115/13kV Transformer CKT 1 Replace 230/115kV transformer CKT 1 with 345/115kV transformer	Current Study	\$5,718,848	\$8,000,000
Andrews 345/115/13kV Transformer CKT 2 Replace 230/115kV transformer CKT 2 with 345/115kV transformer	Current Study	\$5,718,848	\$8,000,000
Andrews Substation Voltage Conversion Convert Andrews 230kV to 345kV	Current Study	\$7,148,560	\$10,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Current Study	\$14,550,710	\$32,633,384
Elk City 230/138/13.8 kV Transformer Upgrade terminal equipment	Current Study	\$1,649,141	\$3,900,000

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
G14_012 - Hobbs Interchange 345 kV Ckt 2 Build approximately 17.1 miles of 345 kV for Hobbs – G14_012T Ckt 2	Current Study	\$14,485,485	\$20,263,500
GEN-2016-062 Interconnection Costs See One-Line Diagram.	Current Study	\$2,197,565	\$2,197,565
New Tap - Cochran - Lost Draw 115 kV Ckt 1 Reconductor Cochran – Lost Draw 115 kV Ckt 1	Current Study	\$3,252,177	\$4,691,172
Oklaunion +/-100Mvar SVC Oklaunion +/-100Mvar SVC	Current Study	\$21,119,130	\$50,000,000
Potter - Chisholm 345kV CKT 1 Build approximately 140 miles of new 345kV from Potter County - Chisholm	Current Study	\$83,885,393	\$194,910,000
Shamrock 115kV Capacitor Bank Add 20Mvar of Capacitor Bank(s) at Shamrock 115kV	Current Study	\$1,114,710	\$2,500,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw	Current Study	\$25,643,323	\$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	\$70,619,116	\$156,000,000
Tuco 345 kV Terminal Upgrades at Tuco 345 kV	Current Study	\$658,486	\$1,000,000
Hobbs - Yoakum 345 kV Ckt 1 Construct new 52-mile 345 kV line from Hobbs to Yoakum per NTC 200309	Previously Allocated		\$90,628,750
Hobbs 345/230 kV Ckt 1 Transformer Expand existing Hobbs substation to accommodate 345 kV terminals. Install 345/230 kV 644 MVA transformer at Hobbs per NTC 200309	Previously Allocated		\$14,027,120
NEF Sub -Targa 115kV CKT 1 Rebuild 3-mile 115 kV line from Cardinal to Targa per NTC 200360	Previously Allocated		\$4,704,602
NEF Tap - Targa 115 kV Rebuild 4.3-mile 115 kV line from National Enrichment Plant to Targa per NTC 200360	Previously Allocated		\$2,435,548
	Current Study Total	\$257,761,492	

GEN-2016-068

GEN-2015-063 Tap - Woodring 345kV CKT 1 Replace 53 structures	Current Study	\$1,583,197	\$2,700,000
GEN-2016-068 Interconnection Costs See One-Line Diagram.	Current Study	\$1,900,000	\$1,900,000

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Lacygne - Waverly 345 kV Upgrade terminal equipment.	Current Study	\$256,930	\$1,600,000
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace 89 structures	Previously Allocated		\$4,277,161
	Current Study Total	\$3,740,128	
GEN-2016-069			
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Current Study	\$1,083,932	\$32,633,384
Elk City 230/138/13.8 kV Transformer Upgrade terminal equipment	Current Study	\$205,860	\$3,900,000
GEN-2016-069 Interconnection Costs See One-Line Diagram.	Current Study	\$2,309,814	\$2,309,814
New Tap - Cochran - Lost Draw 115 kV Ckt 1 Reconductor Cochran – Lost Draw 115 kV Ckt 1	Current Study	\$141,756	\$4,691,172
Oklaunion +/-100Mvar SVC Oklaunion +/-100Mvar SVC	Current Study	\$2,477,712	\$50,000,000
Potter - Chisholm 345kV CKT 1 Build approximately 140 miles of new 345kV from Potter County - Chisholm	Current Study	\$12,243,557	\$194,910,000
Shamrock 115kV Capacitor Bank Add 20Mvar of Capacitor Bank(s) at Shamrock 115kV	Current Study	\$83,039	\$2,500,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw	Current Study	\$13,741,972	\$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	\$9,935,838	\$156,000,000
Tuco 345 kV Terminal Upgrades at Tuco 345 kV	Current Study	\$39,046	\$1,000,000
Hobbs - Yoakum 345 kV Ckt 1 Construct new 52-mile 345 kV line from Hobbs to Yoakum per NTC 200309	Previously Allocated		\$90,628,750
Hobbs 345/230 kV Ckt 1 Transformer Expand existing Hobbs substation to accommodate 345 kV terminals. Install 345/230 kV 644 MVA transformer at Hobbs per NTC 200309	Previously Allocated		\$14,027,120
	Current Study Total	\$42,262,526	

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-071			
Farber - Belle Plains 138kV CKT 1 Rebuild approximately 10.3 miles of 138kV from Farber to Belle Plains	Current Study	\$6,675,613	\$9,000,000
GEN-2016-071 Interconnection Costs See One-Line Diagram.	Current Study	\$6,127,190	\$6,127,190
Lacygne - Waverly 345 kV Upgrade terminal equipment.	Current Study	\$289,681	\$1,600,000
Middleton Tap - Chilocco 138kV CKT 1 Rebuild approximately 3.45 miles of 138kV from Middleton to Chilocco	Current Study	\$2,000,000	\$2,000,000
	Current Study Total	\$15,092,484	
GEN-2016-073			
GEN-2016-073 Interconnection Costs See One-Line Diagram.	Current Study	\$2,359,239	\$2,359,239
Lacygne - Waverly 345 kV Upgrade terminal equipment.	Current Study	\$335,123	\$1,600,000
	Current Study Total	\$2,694,362	
TOTAL CURRENT STUDY COSTS:		\$823,610,681	

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

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

Please refer to Appendix E. Stand Alone cost allocation is cluster analysis cost allocation since all DISIS-2016-001-2 requests have executed Interconnection Facilities Study Agreements.

11.7 F: COST ALLOCATION PER PROPOSED STUDY NETWORK UPGRADE

Appendix F. Cost Allocation by Upgrade

Andrews 345/115/13kV Transformer CKT 1		\$8,000,000
Replace 230/115kV transformer CKT 1 with 345/115kV transformer		
GEN-2016-015	\$2,281,152	
GEN-2016-062	\$5,718,848	
Total Allocated Costs		\$8,000,000
Andrews 345/115/13kV Transformer CKT 2		\$8,000,000
Replace 230/115kV transformer CKT 2 with 345/115kV transformer		
GEN-2016-015	\$2,281,152	
GEN-2016-062	\$5,718,848	
Total Allocated Costs		\$8,000,000
Andrews Substation Voltage Conversion		\$10,000,000
Convert Andrews 230kV to 345kV		
GEN-2016-015	\$2,851,440	
GEN-2016-062	\$7,148,560	
Total Allocated Costs		\$10,000,000
ASGI-2016-002 Interconnection Costs		\$21,750
See One-Line Diagram.		
ASGI-2016-002	\$21,750	
Total Allocated Costs		\$21,750
ASGI-2016-004 Interconnection Costs		\$15,000
See One-Line Diagram.		
ASGI-2016-004	\$15,000	
Total Allocated Costs		\$15,000
Beaver County - Clark County 345kV CKT 1		\$150,000,000
Build approximately 125 miles of new 345kV from Beaver - Clark		
GEN-2016-005	\$44,414,535	
GEN-2016-016	\$9,602,874	
GEN-2016-046	\$95,982,591	
Total Allocated Costs		\$150,000,000

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

Border 345kV Reactive Power Support**\$32,633,384**

Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation

ASGI-2016-002	\$18,846
ASGI-2016-004	\$163,232
GEN-2016-015	\$5,804,033
GEN-2016-056	\$11,012,632
GEN-2016-062	\$14,550,710
GEN-2016-069	\$1,083,932
Total Allocated Costs	\$32,633,384

Elk City 230/138/13.8 kV Transformer**\$3,900,000**

Upgrade terminal equipment

ASGI-2016-002	\$2,306
ASGI-2016-004	\$69,039
GEN-2016-015	\$657,815
GEN-2016-056	\$1,315,840
GEN-2016-062	\$1,649,141
GEN-2016-069	\$205,860
Total Allocated Costs	\$3,900,000

Farber - Belle Plains 138kV CKT 1**\$9,000,000**

Rebuild approximately 10.3 miles of 138kV from Farber to Belle Plains

GEN-2016-060	\$2,324,387
GEN-2016-071	\$6,675,613
Total Allocated Costs	\$9,000,000

G14_012 - Hobbs Interchange 345 kV Ckt 2**\$20,263,500**

Build approximately 17.1 miles of 345 kV for Hobbs – G14_012T Ckt 2

GEN-2016-015	\$5,778,015
GEN-2016-062	\$14,485,485
Total Allocated Costs	\$20,263,500

GEN-2015-041 Interconnection Costs**\$0**

See One-Line Diagram.

GEN-2015-041	\$0
Total Allocated Costs	\$0

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

GEN-2015-063 Tap - Woodring 345kV CKT 1		\$2,700,000
Replace 53 structures		
	GEN-2016-061	\$1,116,803
	GEN-2016-068	\$1,583,197
	Total Allocated Costs	\$2,700,000
GEN-2016-005 Interconnection Costs		\$8,614,897
See One-Line Diagram.		
	GEN-2016-005	\$8,614,897
	Total Allocated Costs	\$8,614,897
GEN-2016-009 Interconnection Costs		\$650,000
See One-Line Diagram.		
	GEN-2016-009	\$650,000
	Total Allocated Costs	\$650,000
GEN-2016-015 Interconnection Costs		\$6,625,863
See One-Line Diagram.		
	GEN-2016-015	\$6,625,863
	Total Allocated Costs	\$6,625,863
GEN-2016-015 Interconnection Facilities Upgrade		\$0
Mitigate frequency tripping (Refer to stability report for details)		
	GEN-2016-015	\$0
	Total Allocated Costs	\$0
GEN-2016-016 Interconnection Costs		\$4,761,014
See One-Line Diagram.		
	GEN-2016-016	\$4,761,014
	Total Allocated Costs	\$4,761,014
GEN-2016-022 Interconnection Costs		\$10,000
See One-Line Diagram.		
	GEN-2016-022	\$10,000
	Total Allocated Costs	\$10,000
GEN-2016-031 Interconnection Costs		\$0
See One-Line Diagram.		
	GEN-2016-031	\$0
	Total Allocated Costs	\$0

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

GEN-2016-032 Interconnection Costs		\$3,288,799
See One-Line Diagram.		
	GEN-2016-032	\$3,288,799
	Total Allocated Costs	\$3,288,799
GEN-2016-046 Interconnection Costs		\$9,162,302
See One-Line Diagram.		
	GEN-2016-046	\$9,162,302
	Total Allocated Costs	\$9,162,302
GEN-2016-056 Interconnection Costs		\$4,215,059
See One-Line Diagram.		
	GEN-2016-056	\$4,215,059
	Total Allocated Costs	\$4,215,059
GEN-2016-060 Interconnection Costs		\$34,133
See One-Line Diagram.		
	GEN-2016-060	\$34,133
	Total Allocated Costs	\$34,133
GEN-2016-061 Interconnection Costs		\$11,000,000
See One-Line Diagram.		
	GEN-2016-061	\$11,000,000
	Total Allocated Costs	\$11,000,000
GEN-2016-062 Interconnection Costs		\$2,197,565
See One-Line Diagram.		
	GEN-2016-062	\$2,197,565
	Total Allocated Costs	\$2,197,565
GEN-2016-068 Interconnection Costs		\$1,900,000
See One-Line Diagram.		
	GEN-2016-068	\$1,900,000
	Total Allocated Costs	\$1,900,000
GEN-2016-069 Interconnection Costs		\$2,309,814
See One-Line Diagram.		
	GEN-2016-069	\$2,309,814
	Total Allocated Costs	\$2,309,814

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

GEN-2016-071 Interconnection Costs		\$6,127,190
See One-Line Diagram.		
	GEN-2016-071	\$6,127,190
	Total Allocated Costs	\$6,127,190
GEN-2016-073 Interconnection Costs		\$2,359,239
See One-Line Diagram.		
	GEN-2016-073	\$2,359,239
	Total Allocated Costs	\$2,359,239
Harrington Station East Bus - Potter County Int 230 kV Ckt 1		\$2,500,000
Upgrade terminal equipment		
	ASGI-2016-004	\$2,500,000
	Total Allocated Costs	\$2,500,000
Jones Station - Lubbock Power & Light (Holly) 230 kV		\$12,000,000
NRIS only required upgrade: Rebuild 3.3 miles of 230 kV from Jones Station – Lubbock Power & Light (Holly Plant) Ckt 1		
	GEN-2015-041	\$12,000,000
	Total Allocated Costs	\$12,000,000
Lacygne - Waverly 345 kV		\$1,600,000
Upgrade terminal equipment.		
	GEN-2016-022	\$235,768
	GEN-2016-031	\$2,330
	GEN-2016-032	\$167,225
	GEN-2016-060	\$50,880
	GEN-2016-061	\$262,064
	GEN-2016-068	\$256,930
	GEN-2016-071	\$289,681
	GEN-2016-073	\$335,123
	Total Allocated Costs	\$1,600,000
Middleton Tap - Chilocco 138kV CKT 1		\$2,000,000
Rebuild approximately 3.45 miles of 138kV from Middleton to Chilocco		
	GEN-2016-071	\$2,000,000
	Total Allocated Costs	\$2,000,000

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

New Tap - Cochran - Lost Draw 115 kV Ckt 1 **\$4,691,172**

Reconductor Cochran – Lost Draw 115 kV Ckt 1

GEN-2016-015	\$1,297,239
GEN-2016-062	\$3,252,177
GEN-2016-069	\$141,756

Total Allocated Costs **\$4,691,172**

Oklahoma +/-100Mvar SVC **\$50,000,000**

Oklahoma +/-100Mvar SVC

ASGI-2016-002	\$30,117
ASGI-2016-004	\$547,600
GEN-2016-015	\$8,424,065
GEN-2016-056	\$17,401,376
GEN-2016-062	\$21,119,130
GEN-2016-069	\$2,477,712

Total Allocated Costs **\$50,000,000**

Potter - Chisholm 345kV CKT 1 **\$194,910,000**

Build approximately 140 miles of new 345kV from Potter County - Chisholm

ASGI-2016-002	\$108,206
ASGI-2016-004	\$5,637,609
GEN-2016-015	\$33,460,468
GEN-2016-056	\$59,574,768
GEN-2016-062	\$83,885,393
GEN-2016-069	\$12,243,557

Total Allocated Costs **\$194,910,000**

Ranch Road - Sooner 345 kV Ckt 1 **\$450,000**

Upgrade terminal equipment

GEN-2016-022	\$445,597
GEN-2016-031	\$4,403

Total Allocated Costs **\$450,000**

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

Shamrock 115kV Capacitor Bank **\$2,500,000**

Add 20Mvar of Capacitor Bank(s) at Shamrock 115kV

ASGI-2016-002	\$1,444
ASGI-2016-004	\$12,505
GEN-2016-015	\$444,639
GEN-2016-056	\$843,663
GEN-2016-062	\$1,114,710
GEN-2016-069	\$83,039
<hr/>	
Total Allocated Costs	\$2,500,000

Tolk - Crawfish Draw 345kV CKT 1 **\$88,170,000**

Build approximately 64 miles of 345kV from Tolk - Crawfish Draw

ASGI-2016-002	\$46,226
ASGI-2016-004	\$1,688,915
GEN-2016-015	\$10,228,689
GEN-2016-056	\$36,820,875
GEN-2016-062	\$25,643,323
GEN-2016-069	\$13,741,972
<hr/>	
Total Allocated Costs	\$88,170,000

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

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

ASGI-2016-002	\$83,153
ASGI-2016-004	\$251,547
GEN-2016-015	\$28,168,774
GEN-2016-056	\$46,941,573
GEN-2016-062	\$70,619,116
GEN-2016-069	\$9,935,838
<hr/>	
Total Allocated Costs	\$156,000,000

Tuco 345 kV **\$1,000,000**

Terminal Upgrades at Tuco 345 kV

ASGI-2016-002	\$148
GEN-2016-015	\$262,659
GEN-2016-056	\$39,661
GEN-2016-062	\$658,486
GEN-2016-069	\$39,046
<hr/>	
Total Allocated Costs	\$1,000,000

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

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

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	06ALL	0	21SP	ASGI_16_002		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1'	1793	1793	0.16836	33.48977	System Intact
FDNSLock-Blown up	06ALL	0	21L	ASGI_16_002		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1'	1793	1793	0.15789	29.68449	System Intact
FDNSLock-Blown up	06ALL	0	21SP	ASGI_16_002		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2'	1792	1972	0.16836	33.50842	System Intact
FDNSLock-Blown up	06ALL	0	21L	ASGI_16_002		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2'	1792	1972	0.15789	29.70102	System Intact
FDNS	06ALL	0	21SP	ASGI_16_002	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.22282	104.2812	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	0	21WP	ASGI_16_002	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.22289	103.0481	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNSLock-Blown up	06ALL	0	21SP	ASGI_16_002		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	956	1042	0.20344	69.26968	System Intact
FDNSLock-Blown up	06ALL	0	21L	ASGI_16_002		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.18767	64.81081	System Intact
FDNSLock-Blown up	06ALL	0	18G	ASGI_16_002		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.20419	62.44732	System Intact
FDNSLock-Blown up	06ALL	0	21WP	ASGI_16_002		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.20496	60.73944	System Intact
FDNS	06ALL	0	21SP	ASGI_16_002	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.38618	150.6793	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21L	ASGI_16_002	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.35969	126.9526	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21WP	ASGI_16_002	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.39351	119.8386	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	18G	ASGI_16_002	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.35981	119.2235	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	18SP	ASGI_16_002	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.36143	117.5245	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	17WP	ASGI_16_002	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.3751	99.8	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21SP	ASGI_16_002	'TO->FROM'	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.0829	122.4462	System Intact
FDNS	06ALL	0	18SP	ASGI_16_002	'TO->FROM'	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.08945	103.4881	System Intact
FDNS	06ALL	0	21SP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05793	119.3691	System Intact
FDNS	06ALL	0	21SP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05793	119.0631	System Intact
FDNS	06ALL	0	18G	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0588	114.964	System Intact
FDNS	06ALL	0	18G	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0588	114.3127	System Intact
FDNS	06ALL	0	18SP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05884	113.898	System Intact
FDNS	06ALL	0	18SP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05884	113.6341	System Intact
FDNS	06ALL	0	21WP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0579	109.4935	System Intact
FDNS	06ALL	0	21WP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0579	109.0392	System Intact
FDNS	06ALL	0	17WP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0617	103.514	System Intact
FDNS	06ALL	0	21L	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0511	103.4641	System Intact
FDNS	06ALL	0	17WP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0617	103.4032	System Intact
FDNS	06ALL	0	21L	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0511	103.0336	System Intact
FDNSLock-Blown up	06ALL	0	21L	ASGI_16_002		'ELM CREEK - MRWYP16 230KV CKT 1'	300	300	0.03122	68.95638	System Intact
FDNSLock-Blown up	06ALL	0	21L	ASGI_16_002		'Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1'	956.09	956.09	0.12264	68.70612	System Intact
FDNS	06ALL	0	21SP	ASGI_16_002	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.06164	103.1448	System Intact
FDNS	06ALL	2	21WP	ASGI_16_002	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21982	105.4291	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21SP	ASGI_16_002	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.22004	104.3391	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21WP	ASGI_16_002	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21982	100	'LAWTON EASTSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21SP	ASGI_16_002	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.36445	120.2422	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	2	21SP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06134	123.817	System Intact
FDNS	06ALL	2	21SP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06134	123.3919	System Intact
FDNS	06ALL	2	18G	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06262	121.6555	System Intact
FDNS	06ALL	2	18G	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06262	120.8819	System Intact
FDNS	06ALL	2	18SP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06251	118.8225	System Intact
FDNS	06ALL	2	18SP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06251	118.4975	System Intact
FDNS	06ALL	2	21WP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06125	115.9986	System Intact
FDNS	06ALL	2	21WP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06125	115.4342	System Intact
FDNS	06ALL	2	21L	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05416	110.5034	System Intact
FDNS	06ALL	2	21L	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05416	109.9167	System Intact
FDNS	06ALL	2	17WP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06572	109.3197	System Intact
FDNS	06ALL	2	17WP	ASGI_16_002	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06572	109.187	System Intact
FDNSLock-Blown up	06ALL	0	21SP	ASGI_16_04		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1'	1793	1793	0.07966	33.48977	System Intact
FDNSLock-Blown up	06ALL	0	21L	ASGI_16_04		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1'	1793	1793	0.0692	29.68449	System Intact
FDNSLock-Blown up	06ALL	0	21SP	ASGI_16_04		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2'	1792	1972	0.07966	33.50842	System Intact
FDNSLock-Blown up	06ALL	0	21L	ASGI_16_04		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2'	1792	1972	0.0692	29.70102	System Intact
FDNSLock-Blown up	06ALL	0	21SP	ASGI_16_04		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	956	1042	0.12216	69.26968	System Intact
FDNSLock-Blown up	06ALL	0	21L	ASGI_16_04		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.10641	64.81081	System Intact
FDNSLock-Blown up	06ALL	0	18G	ASGI_16_04		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.12608	62.44732	System Intact
FDNSLock-Blown up	06ALL	0	21WP	ASGI_16_04		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.12368	60.73944	System Intact
FDNS	06ALL	0	21SP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05759	119.3691	System Intact
FDNS	06ALL	0	21SP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05759	119.0631	System Intact
FDNS	06ALL	0	18G	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05938	114.964	System Intact
FDNS	06ALL	0	18G	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05938	114.3127	System Intact
FDNS	06ALL	0	18SP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05881	113.898	System Intact
FDNS	06ALL	0	18SP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05881	113.6341	System Intact
FDNS	06ALL	0	21WP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05756	109.4935	System Intact
FDNS	06ALL	0	21WP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05756	109.0392	System Intact
FDNS	06ALL	0	17WP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0623	103.514	System Intact
FDNS	06ALL	0	21L	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05075	103.4641	System Intact
FDNS	06ALL	0	17WP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0623	103.4032	System Intact
FDNS	06ALL	0	21L	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05075	103.0336	System Intact
FDNS	06ALL	0	21SP	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20415	114.9838	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	0	21SP	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20415	114.9838	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	0	18SP	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20301	111.1103	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	0	18SP	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20301	111.1103	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	0	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.24405	110.1172	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.24405	110.1172	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21L	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.23376	106.0875	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21L	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.23376	106.0875	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.25512	100.5209	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.25512	100.5209	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNSLock-Blown up	06ALL	0	21L	ASGI_16_04		'Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1'	956.09	956.09	0.21319	68.70612	System Intact
FDNS	06ALL	0	17WP	ASGI_16_04	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.04625	107.2492	System Intact

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL	2	21SP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.0666	123.817	System Intact
FDNS	06ALL	2	21SP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.0666	123.3919	System Intact
FDNS	06ALL	2	18G	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0683	121.6555	System Intact
FDNS	06ALL	2	18G	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0683	120.8819	System Intact
FDNS	06ALL	2	18SP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06783	118.8225	System Intact
FDNS	06ALL	2	18SP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06783	118.4975	System Intact
FDNS	06ALL	2	21WP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06651	115.9986	System Intact
FDNS	06ALL	2	21WP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06651	115.4342	System Intact
FDNS	06ALL	2	21L	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05941	110.5034	System Intact
FDNS	06ALL	2	21L	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05941	109.9167	System Intact
FDNS	06ALL	2	17WP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.07144	109.3197	System Intact
FDNS	06ALL	2	17WP	ASGI_16_04	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.07144	109.187	System Intact
FDNS	06ALL	2	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.23434	118.2288	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	2	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.23434	118.2288	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	2	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.23434	118.2288	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	2	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.23434	118.2288	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	2	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.2877	113.5321	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.2877	113.5321	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.2877	113.5321	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.2877	113.5321	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.22089	110.3598	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	2	21L	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.22089	110.3598	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	2	21L	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.27363	108.6259	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.27363	108.6259	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	3	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.23434	118.227	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	3	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.23434	118.227	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	3	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.23434	118.227	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	3	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.23434	118.227	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	3	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.2877	113.5341	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	3	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.2877	113.5341	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	3	18G	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.2877	113.5341	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	3	21L	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.22087	110.4082	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	3	21L	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.22087	110.4082	'CHERRY1 - HARRINGTON STATION 230KV CKT 1'
FDNS	06ALL	3	21L	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.27361	108.6826	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	3	21L	ASGI_16_04	'FROM->TO'	'Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1'	318.69	318.69	0.27361	108.6826	'CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	00NR	0	26SP	G15_041	'FROM->TO'	'JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1'	191.22	191.22	0.03217	101.3357	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1'
FDNS	00NR	0	26SP	G15_041	'FROM->TO'	'JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1'	191.22	191.22	0.03217	101.3199	'P12:230:SPS:K66.1.SANJN.CHAVES'
FDNS	00NR	0	26SP	G15_041	'FROM->TO'	'JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1'	191.22	191.22	0.03164	99.7	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1'
FDNS	00NR	0	26SP	G15_041	'FROM->TO'	'JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1'	191.22	191.22	0.03164	99.7	'P12:230:SPS:K60.1.EDDY_S.SEVEN'
FDNS	00NR	0	26SP	G15_041	'FROM->TO'	'JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1'	191.22	191.22	0.03164	99.6	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1'
FDNS	00NR	0	26SP	G15_041	'FROM->TO'	'JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1'	191.22	191.22	0.03164	99.6	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1'
FDNS	00NR	0	17WP	G15_041	'TO->FROM'	'TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1'	119.51	119.51	0.08523	111.5896	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1'
FDNS	00NR	0	17WP	G15_041	'TO->FROM'	'TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1'	119.51	119.51	0.08523	111.5896	'SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1'
FDNS	00NR	0	17WP	G15_041	'TO->FROM'	'TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1'	119.51	119.51	0.06762	100	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1'
FDNS	00NR	0	17WP	G15_041	'TO->FROM'	'TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1'	119.51	119.51	0.06762	100	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1'
FDNS	00NR	3	26SP	G15_041	'FROM->TO'	'JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1'	191.22	191.22	0.03214	101.2884	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1'
FDNS	00NR	3	26SP	G15_041	'FROM->TO'	'JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1'	191.22	191.22	0.03214	101.2721	'P12:230:SPS:K66.1.SANJN.CHAVES'
FDNS	03ALL	0	18G	G16_005	'FROM->TO'	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20608	104.0226	'G13-010T 345.00 - POST ROCK 345KV CKT 1'
FDNS	03ALL	0	21L	G16_005	'FROM->TO'	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.21892	101.6052	'G13-010T 345.00 - POST ROCK 345KV CKT 1'
FDNS	03ALL	0	17WP	G16_005	'FROM->TO'	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20685	100.5529	'G13-010T 345.00 - POST ROCK 345KV CKT 1'
FDNSLock-Blown up	03ALL	0	21L	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.17681	71.70607	System Intact
FDNSLock-Blown up	03ALL	0	21L	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.17681	71.70607	System Intact
FDNSLock-Blown up	03ALL	0	18G	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.16291	69.20945	System Intact
FDNSLock-Blown up	03ALL	0	18G	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.16291	69.20945	System Intact
FDNSLock-Blown up	03ALL	0	17WP	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.16215	66.22205	System Intact
FDNSLock-Blown up	03ALL	0	17WP	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.16215	66.22205	System Intact
FDNSLock-Blown up	03ALL	0	18SP	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.16423	64.71618	System Intact
FDNSLock-Blown up	03ALL	0	18SP	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.16423	64.71618	System Intact
FDNSLock-Blown up	03ALL	0	21WP	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.16567	62.21948	System Intact
FDNSLock-Blown up	03ALL	0	21WP	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.16567	62.21948	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.16537	60.08236	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.16537	60.08236	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.1658	54.9772	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_005		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.1658	54.9772	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_005		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.07498	74.1107	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_005		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.07498	74.1107	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_005		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.07481	54.46769	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_005		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.07481	54.46769	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_005		'G13-010T 345.00 - POST ROCK 345KV CKT 1'	1505	1793	0.15035	46.12805	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_005		'G13-010T 345.00 - POST ROCK 345KV CKT 1'	1505	1793	0.15088	41.88033	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_005		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.08703	78.44759	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_005		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.08703	78.44759	System Intact
FDNSLock-Blown up	03ALL	0	21L	G16_005		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.08377	62.1529	System Intact
FDNSLock-Blown up	03ALL	0	21L	G16_005		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.08377	62.1529	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_005		'Hitchland Interchange - WALKEMEYER 7345.00 34					

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL	0	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.5564	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21L	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.3628	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21L	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.2026	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.1867	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.0388	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.0328	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.8908	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.8825	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.8001	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.5174	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.3803	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21L	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2937	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2209	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21L	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2027	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.1647	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.1626	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0861	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.085	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0823	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0183	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.23583	102.9465	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNSLock-Blown up	06ALL	0	21SP	G16_015		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1'	1793	1793	0.16141	33.48977	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_015		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1'	1793	1793	0.15094	29.68449	System Intact
FDNSLock-Blown up	06ALL	0	21SP	G16_015		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2'	1792	1972	0.16141	33.50842	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_015		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2'	1792	1972	0.15094	29.70102	System Intact
FDNS	06ALL	0	21SP	G16_015	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21734	104.2812	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	0	21WP	G16_015	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21742	103.0481	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'TO->FROM'	'COCHRAN INTERCHANGE - NEWTAP3 115.00 115KV CKT 1'	120.9	120.9	0.04821	120.5932	System Intact
FDNS	06ALL	0	18G	G16_015	'TO->FROM'	'COCHRAN INTERCHANGE - NEWTAP3 115.00 115KV CKT 1'	120.9	120.9	0.048	112.0955	System Intact
FDNSLock-Blown up	06ALL	0	21SP	G16_015		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	956	1042	0.19672	69.26968	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_015		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.18095	64.81081	System Intact
FDNSLock-Blown up	06ALL	0	18G	G16_015		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.18372	62.44732	System Intact
FDNSLock-Blown up	06ALL	0	21WP	G16_015		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.19823	60.73944	System Intact
FDNS	06ALL	0	21SP	G16_015	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.45471	150.6793	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21L	G16_015	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.42822	126.9526	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21WP	G16_015	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.46204	119.8386	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	18G	G16_015	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.30739	119.2235	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.30884	117.5245	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_015	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.32278	99.8	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21SP	G16_015	'TO->FROM'	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.10228	122.4462	System Intact
FDNS	06ALL	0	18SP	G16_015	'TO->FROM'	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.13054	103.4881	System Intact
FDNS	06ALL	0	21SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50133	217.2873	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50202	181.0347	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21L	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5059	122.6115	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21L	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5059	122.0746	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51288	117.9627	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51288	117.4505	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18G	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5209	116.0851	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.52067	108.3895	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50507	107.4528	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.50515	103.6431	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.50515	103.1285	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50465	101.5277	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_015	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50133	138.6666	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_015	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50202	119.7486	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_015	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50133	127.6548	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_015	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50202	104.9118	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05734	119.3691	System Intact
FDNS	06ALL	0	21SP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05734	119.0631	System Intact
FDNS	06ALL	0	18G	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0576	114.964	System Intact
FDNS	06ALL	0	18G	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0576	114.3127	System Intact
FDNS	06ALL	0	18SP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05751	113.898	System Intact
FDNS	06ALL	0	18SP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05751	113.6341	System Intact
FDNS	06ALL	0	21WP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05731	109.4935	System Intact
FDNS	06ALL	0	21WP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05731	109.0392	System Intact
FDNS	06ALL	0	17WP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06049	103.514	System Intact
FDNS	06ALL	0	21L	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0505	103.4641	System Intact
FDNS	06ALL	0	17WP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06049	103.4032	System Intact
FDNS	06ALL	0	21L	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0505	103.0336	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_015		'ELM CREEK - MRWYP16 230KV CKT 1'	300	300	0.03736	68.95638	System Intact
FDNS	06ALL	0	21SP	G16_015	'FROM->TO'	'G14_012T 230.0					

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL	0	18SP	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48712	149.9375	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48712	149.5365	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.47933	127.8054	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18G	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4791	143.5309	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48712	138.2088	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48712	137.7925	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.47933	117.8036	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.19772	128.4512	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.19675	116.6262	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_015	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.19647	107.2969	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_015	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.19747	104.6502	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_015	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.10584	103.1448	System Intact
FDNSLock-Blown up	06ALL	0	21SP	G16_015		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.0817	49.39169	System Intact
FDNSLock-Blown up	06ALL	0	18SP	G16_015		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.13134	46.88208	System Intact
FDNSLock-Blown up	06ALL	0	17WP	G16_015		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.13089	43.862	System Intact
FDNSLock-Blown up	06ALL	0	21WP	G16_015		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.08214	35.77219	System Intact
FDNSLock-Blown up	06ALL	0	26SP	G16_015		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.0787	32.05021	System Intact
FDNS	06ALL	0	21SP	G16_015	'TO->FROM'	'OXY_S_HOBBS3115.00 - SWITCH 4J44 115KV CKT 1'	120	141	0.20681	101.6069	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_015	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20215	126.7779	'NEWHART 230 - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_015	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.2356	123.8672	'SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_015	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20365	113.2866	'NEWHART 230 - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_015	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.16614	107.2492	System Intact
FDNS	06ALL	0	18SP	G16_015	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.23688	105.9899	'SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'	525	525	0.99264	107.174	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.49754	171.0902	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.49754	169.7714	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.49864	153.9093	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.49864	152.8842	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.20355	120.0146	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.20355	119.9441	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.20321	117.908	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.20321	117.215	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23689	107.1248	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23689	107.1248	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23689	105.8769	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23689	105.8769	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23688	105.4294	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23688	105.4294	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	105.0615	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	105.0615	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.8901	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21L	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.7286	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.6933	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.6933	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.5611	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.5423	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.4119	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.3913	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.3166	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.0271	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.884	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.884	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.8073	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23688	103.7825	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23688	103.7825	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.7257	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.7257	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.7153	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.6755	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.6687	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.5951	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.5945	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.5881	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.5247	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.4951	170.2528	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.4951	168.9398	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	16			

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL	2	21WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.049	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.0302	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.9006	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.8799	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.8056	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.23654	103.6348	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.5176	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.3759	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.3759	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2996	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2184	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2184	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2081	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.1684	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.1616	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0884	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0877	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0814	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0184	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_015	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21638	105.4291	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.2166	104.3391	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21WP	G16_015	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21638	100	'LAWTON EASTSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'TO->FROM'	'COCHRAN INTERCHANGE - NEWTAP3 115.00 115KV CKT 1'	120.9	120.9	0.0398	108.0962	System Intact
FDNS	06ALL	2	18G	G16_015	'TO->FROM'	'COCHRAN INTERCHANGE - NEWTAP3 115.00 115KV CKT 1'	120.9	120.9	0.03967	101.0357	System Intact
FDNS	06ALL	2	21SP	G16_015	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.36311	120.2422	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50087	216.1243	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50194	180.9111	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50549	121.5535	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21L	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50549	121.0143	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51132	115.3949	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51132	114.8792	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5186	112.573	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5186	112.573	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50462	106.2775	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.51836	104.7033	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.51836	104.7033	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.5047	102.6157	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.5047	102.0986	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50457	101.4062	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50087	137.9845	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_015	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50194	119.6759	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50087	126.8936	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50194	104.8312	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06125	123.817	System Intact
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06125	123.3919	System Intact
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06283	121.6555	System Intact
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06283	120.8819	System Intact
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06265	118.8225	System Intact
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06265	118.4975	System Intact
FDNS	06ALL	2	21WP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06116	115.9986	System Intact
FDNS	06ALL	2	21WP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06116	115.4342	System Intact
FDNS	06ALL	2	21L	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05406	110.5034	System Intact
FDNS	06ALL	2	21L	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05406	109.9167	System Intact
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06594	109.3197	System Intact
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06594	109.187	System Intact
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	421.88	421.9	0.99264	133.0154	'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'
FDNS	06ALL	2	26SP	G16_015	'FROM->TO'	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	421.88	421.9	0.99484	118.9129	'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	421.88	421.9	0.83636	101.5623	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.44317	108.9614	'P12:345:SPS:J18.1.HOBBS.YOAKUM'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.44265	108.0036	'CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL	2	21SP	G16_015	'FROM->TO'	'JAL SUB - WHITTEN SUB 115KV CKT 1'	119.51	119.9	0.26126	115.9659	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.19515	166.0757	'CUNNINGHAM_S 6230.00 - CUNNINGHAM STATION 230KV CKT *1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	158.2215	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	158.2215	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	152.1756	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	151.7751	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.48164	130.8767	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.48164	130.8767	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.19631	125.2578	'CUNNINGHAM_S 6230.00 - CUNNINGHAM STATION 230KV CKT *1'
FDNS	06ALL	2	18G	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.13796	101.2127	System Intact
FDNS	06ALL	2	18G	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.19515	154.2616	'CUNNINGHAM_S 6230.00 - CUNNINGHAM STATION 230KV CKT *1'
FDNS	06ALL	2	18G	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	146.6119	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	146.6119	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	140.441	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	140.0258	'G14_012T 230.0

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL	3	26SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50194	179.4288	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	21L	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50549	122.9512	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	21L	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50549	122.2678	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51132	117.9994	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	18SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51132	117.2796	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18G	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5186	114.0198	'ANDREWS 6345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18G	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5186	112.1437	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	3	21SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50451	111.5065	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	17WP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.51837	105.5439	'ANDREWS 6345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	17WP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.51837	104.2204	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	3	26SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50449	102.6274	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	21WP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.5047	102.5523	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	21WP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.5047	101.9305	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	21SP	G16_015	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50087	134.7735	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	26SP	G16_015	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50194	118.7447	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	21SP	G16_015	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50087	125.8461	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	26SP	G16_015	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50194	104.2751	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18G	G16_015	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.44414	109.0217	'P12:345:SPS:J18.1.HOBBS.YOAKUM'
FDNS	06ALL	3	18G	G16_015	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.4436	108.0615	'CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL	3	21SP	G16_015	'FROM->TO'	'JAL SUB - WHITTEN SUB 115KV CKT 1'	119.51	119.9	0.26126	114.8076	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18G	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	158.5639	'ANDREWS 6345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18G	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	157.2539	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	3	18SP	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	153.3545	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	18SP	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	152.9051	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	17WP	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.48163	132.4425	'ANDREWS 6345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	17WP	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.48163	131.2756	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	3	18G	G16_015	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.13391	101.828	System Intact
FDNS	06ALL	3	18G	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	146.9546	'ANDREWS 6345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18G	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	145.5916	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	3	18SP	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	141.6629	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	18SP	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	141.1905	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	17WP	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.48163	122.4763	'ANDREWS 6345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	17WP	G16_015	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.48163	121.2567	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	3	21SP	G16_015	'TO->FROM'	'OXY_S_HOBBS3115.00 - SWITCH 4J44 115KV CKT 1'	120	141	0.20612	100.2625	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	21SP	G16_015	'FROM->TO'	'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'	525	525	0.99264	105.5307	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	21SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	158.9	159.3	0.50088	137.7716	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	26SP	G16_015	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	158.9	159.3	0.50195	115.5446	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	21SP	G16_015	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50088	134.7766	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	26SP	G16_015	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50195	118.7473	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	21SP	G16_015	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50088	125.85	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	26SP	G16_015	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50195	104.2784	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	18G	G16_015	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.44417	109.0585	'P12:345:SPS:J18.1.HOBBS.YOAKUM'
FDNS	06ALL	4	18G	G16_015	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.44363	108.0991	'CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL	4	21SP	G16_015	'FROM->TO'	'JAL SUB - WHITTEN SUB 115KV CKT 1'	119.51	119.9	0.26126	114.8049	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	21SP	G16_015	'TO->FROM'	'OXY_S_HOBBS3115.00 - SWITCH 4J44 115KV CKT 1'	120	141	0.20613	100.2644	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNSLock-Blown up	03ALL	0	21L	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.08833	71.70607	System Intact
FDNSLock-Blown up	03ALL	0	21L	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.08833	71.70607	System Intact
FDNSLock-Blown up	03ALL	0	18G	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.07492	69.20945	System Intact
FDNSLock-Blown up	03ALL	0	18G	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.07492	69.20945	System Intact
FDNSLock-Blown up	03ALL	0	17WP	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.07416	66.22205	System Intact
FDNSLock-Blown up	03ALL	0	17WP	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.07416	66.22205	System Intact
FDNSLock-Blown up	03ALL	0	18SP	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.07558	64.71618	System Intact
FDNSLock-Blown up	03ALL	0	18SP	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.07558	64.71618	System Intact
FDNSLock-Blown up	03ALL	0	21WP	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.0774	62.21948	System Intact
FDNSLock-Blown up	03ALL	0	21WP	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.0774	62.21948	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.07695	60.08236	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.07695	60.08236	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.07753	54.9772	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_016		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.07753	54.9772	System Intact
FDNS	03ALL	0	18G	G16_016	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	110	0.03504	113.1659	System Intact
FDNS	03ALL	0	17WP	G16_016	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	110	0.03512	109.8492	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_016		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.05771	74.1107	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_016		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.05771	74.1107	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_016		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.05776	54.46769	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_016		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.05776	54.46769	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_016		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.07026	78.44759	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_016		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.07026	78.44759	System Intact
FDNSLock-Blown up	03ALL	0	21L	G16_016		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.06727	62.1529	System Intact
FDNSLock-Blown up	03ALL	0	21L	G16_016		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.06727	62.1529	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_016		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.07014	55.99113	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_016		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.07014	55.99113	System Intact
FDNSLock-Blown up	03ALL	0	18SP	G16_016		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.07107	55.34494	System Intact
FDNSLock-Blown up	03ALL	0	18SP	G16_016		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.07107	55.34494	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	03ALL	4	21SP	G16_016		"P12:115: MIDW: ST. JOHN-CITY OF LARNED"	0	0	3	9999	System Intact
FDNSLock-Blown up	03ALL	4	21WP	G16_016		"P12:115: MIDW: ST. JOHN-CITY OF LARNED"	0	0	3	9999	System Intact
FDNSLock-Blown up	03ALL	4	26SP	G16_016		"P12:115: MIDW: ST. JOHN-CITY OF LARNED"	0	0	3	9999	System Intact
FDNS	08ALL	0	21L	G16_022	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.10627	101.3822	System Intact
FDNS	08ALL	0	26SP	G16_022	'FROM->TO'	'RANCHRD7 345.00 - SOONER 345KV CKT 1'	1195	1195	0.9976	103.2281	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_022	'FROM->TO'	'RANCHRD7 345.00 - SOONER 345KV CKT 1'	1195	1195	0.99743	103.2272	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_022	'FROM->TO'	'RANCHRD7 345.00 - SOONER 345KV CKT 1'	1195	1195	0.99799	101.5504	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	2	21L	G16_022	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.10627	101.4075	System Intact
FDNS	08ALL	2	26SP	G16_022	'FROM->TO'	'RANCHRD7 345.00 - SOONER 345KV CKT 1'	1195	1195	0.9976	103.2266	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	2	21SP	G16_022	'FROM->TO'	'RANCHRD7 345.00 - SOONER 345KV CKT 1'	1195	1195	0.99743	103.2259	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	2	18SP	G16_022	'FROM->TO'	'RANCHRD7 345.00 - SOONER 345KV CKT 1'	1195	1195	0.99799	101.5494	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	21L	G16_031	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.10627	101.3822	System Intact
FDNS	08ALL	0	26SP	G16_031	'FROM->TO'	'RANCHRD7 345.00 - SOONER 345KV CKT 1'	1195	1195	0.9976	103.2281	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_031	'FROM->TO'	'RANCHRD7 345.00 - SOONER 345KV CKT 1'	1195	1195	0.99743	103.2272	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_031	'FROM->TO'	'RANCHRD7 345.00 - SOONER 345KV CKT 1'	1195	1195	0.99799	101.5504	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	2	21L	G16_031	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.10627	101.4075	System Intact
FDNS	08ALL	2	26SP	G16_031	'FROM->TO'	'RANCHRD7 345.00 - SOONER 345KV CKT 1'	1195	1195	0.9976	103.2266	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	2	21SP	G16_031	'FROM->TO'	'RANCHRD7 345.00 - SOONER 345KV CKT 1'	1195	1195	0.99743	103.2259	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	2	18SP	G16_031	'FROM->TO'	'RANCHRD7 345.00 - SOONER 345KV CKT 1'	1195	1195	0.99799	101.5494	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	21L	G16_032	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.21049	101.2501	'G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21L	G16_032	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.06533	101.3822	System Intact
FDNS	08ALL	2	21L	G16_032	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.06534	101.4075	System Intact
FDNS	03ALL	0	18G	G16_046	'FROM->TO'	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.25521	104.0226	'G13-010T 345.00 - POST ROCK 345KV CKT 1'
FDNS	03ALL	0	21L	G16_046	'FROM->TO'	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.26833	101.6052	'G13-010T 345.00 - POST ROCK 345KV CKT 1'
FDNS	03ALL	0	17WP	G16_046	'FROM->TO'	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.25599	100.5529	'G13-010T 345.00 - POST ROCK 345KV CKT 1'
FDNSLock-Blown up	03ALL	0	21L	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.21697	71.70607	System Intact
FDNSLock-Blown up	03ALL	0	21L	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.21697	71.70607	System Intact
FDNSLock-Blown up	03ALL	0	18G	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.2028	69.20945	System Intact
FDNSLock-Blown up	03ALL	0	18G	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.2028	69.20945	System Intact
FDNSLock-Blown up	03ALL	0	17WP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20205	66.22205	System Intact
FDNSLock-Blown up	03ALL	0	17WP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20205	66.22205	System Intact
FDNSLock-Blown up	03ALL	0	18SP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20406	64.71618	System Intact
FDNSLock-Blown up	03ALL	0	18SP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20406	64.71618	System Intact
FDNSLock-Blown up	03ALL	0	21WP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20582	62.21948	System Intact
FDNSLock-Blown up	03ALL	0	21WP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20582	62.21948	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20559	60.08236	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20559	60.08236	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20596	54.9772	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20596	54.9772	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_046		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.10341	74.1107	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_046		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.10341	74.1107	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_046		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.10314	54.46769	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_046		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.10314	54.46769	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_046		'G13-010T 345.00 - POST ROCK 345KV CKT 1'	1505	1793	0.18308	46.12805	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_046		'G13-010T 345.00 - POST ROCK 345KV CKT 1'	1505	1793	0.18359	41.88033	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.12031	78.44759	System Intact
FDNSLock-Blown up	03ALL	0	26SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.12031	78.44759	System Intact
FDNSLock-Blown up	03ALL	0	21L	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.11692	62.1529	System Intact
FDNSLock-Blown up	03ALL	0	21L	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.11692	62.1529	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.11982	55.99113	System Intact
FDNSLock-Blown up	03ALL	0	21SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.11982	55.99113	System Intact
FDNSLock-Blown up	03ALL	0	18SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.12118	55.34494	System Intact
FDNSLock-Blown up	03ALL	0	18SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.12118	55.34494	System Intact
FDNSLock-Blown up	03ALL	0	21WP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	987.2	1082.8	0.11657	49.05209	System Intact
FDNSLock-Blown up	03ALL	0	21WP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	987.2	1082.8	0.11657	49.05209	System Intact
FDNS	03ALL	2	18G	G16_046	'FROM->TO'	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.25462	103.0576	'G13-010T 345.00 - POST ROCK 345KV CKT 1'
FDNS	03ALL	2	21L	G16_046	'FROM->TO'	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.26833	101.6052	'G13-010T 345.00 - POST ROCK 345KV CKT 1'
FDNS	03ALL	2	17WP	G16_046	'FROM->TO'	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.25538	99.8	'G13-010T 345.00 - POST ROCK 345KV CKT 1'
FDNSLock-Blown up	03ALL	2	21L	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.21697	71.70607	System Intact
FDNSLock-Blown up	03ALL	2	21L	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.21697	71.70607	System Intact
FDNSLock-Blown up	03ALL	2	18G	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20237	69.02165	System Intact
FDNSLock-Blown up	03ALL	2	18G	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20237	69.02165	System Intact
FDNSLock-Blown up	03ALL	2	17WP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20161	65.98752	System Intact
FDNSLock-Blown up	03ALL	2	17WP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20161	65.98752	System Intact
FDNSLock-Blown up	03ALL	2	18SP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20397	64.73085	System Intact
FDNSLock-Blown up	03ALL	2	18SP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20397	64.73085	System Intact
FDNSLock-Blown up	03ALL	2	21WP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20582	62.21949	System Intact
FDNSLock-Blown up	03ALL	2	21WP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20582	62.21949	System Intact
FDNSLock-Blown up	03ALL	2	26SP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20559	60.08236	System Intact
FDNSLock-Blown up	03ALL	2	26SP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20559	60.08236	System Intact
FDNSLock-Blown up	03ALL	2	21SP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20596	54.9772	System Intact
FDNSLock-Blown up	03ALL	2	21SP	G16_046		'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'	726.6	726.6	0.20596	54.9772	System Intact
FDNSLock-Blown up	03ALL	2	26SP	G16_046		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.10341	74.1107	System Intact
FDNSLock-Blown up	03ALL	2	26SP	G16_046		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.10341	74.1107	System Intact
FDNSLock-Blown up	03ALL	2	18SP	G16_046		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.10374	56.61374	System Intact
FDNSLock-Blown up	03ALL	2	18SP	G16_046		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.10374	56.61374	System Intact
FDNSLock-Blown up	03ALL	2	21SP	G16_046		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.10314	54.46769	System Intact
FDNSLock-Blown up	03ALL	2	21SP	G16_046		'FINNEY SWITCHING STATION - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.10314	54.46769	System Intact
FDNSLock-Blown up	03ALL	2	21SP	G16_046		'G13-010T 345.00 - POST ROCK 345KV CKT 1'	1505	1793	0.18308	46.12805	System Intact
FDNSLock-Blown up	03ALL	2	26SP	G16_046		'G13-010T 345.00 - POST ROCK 345KV CKT 1'	1505	1793	0.18359	41.88033	System Intact
FDNSLock-Blown up	03ALL	2	26SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.12031	78.44759	System Intact

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA	RATEB(TC%LOADING		
							(MVA)	MVA)	TDF	(% MVA)	CONTINGENCY
FDNSLock-Blown up	03ALL	2	26SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.12031	78.44759	System Intact
FDNSLock-Blown up	03ALL	2	21L	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.11692	62.1529	System Intact
FDNSLock-Blown up	03ALL	2	21L	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.11692	62.1529	System Intact
FDNSLock-Blown up	03ALL	2	21SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.11982	55.99113	System Intact
FDNSLock-Blown up	03ALL	2	21SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.11982	55.99113	System Intact
FDNSLock-Blown up	03ALL	2	18SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.12113	55.38404	System Intact
FDNSLock-Blown up	03ALL	2	18SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.12113	55.38404	System Intact
FDNSLock-Blown up	03ALL	2	21WP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	987.2	1082.8	0.11657	49.05209	System Intact
FDNSLock-Blown up	03ALL	2	21WP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	987.2	1082.8	0.11657	49.05209	System Intact
FDNSLock-Blown up	03ALL	3	26SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.06883	66.94095	System Intact
FDNSLock-Blown up	03ALL	3	26SP	G16_046		'Hitchland Interchange - WALKEMEYER 7345.00 345KV CKT 1'	956.1	1051.7	0.06883	66.94095	System Intact
FDNSLock-Blown up	06ALL	0	21SP	G16_056		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1'	1793	1793	0.17115	33.48977	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_056		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1'	1793	1793	0.16068	29.68449	System Intact
FDNSLock-Blown up	06ALL	0	21SP	G16_056		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2'	1792	1972	0.17115	33.50842	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_056		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2'	1792	1972	0.16068	29.70102	System Intact
FDNS	06ALL	0	21SP	G16_056	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.2248	104.2812	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	0	21WP	G16_056	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.22488	103.0481	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNSLock-Blown up	06ALL	0	21SP	G16_056		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	956	1042	0.20607	69.26968	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_056		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.1903	64.81081	System Intact
FDNSLock-Blown up	06ALL	0	18G	G16_056		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.20835	62.44732	System Intact
FDNSLock-Blown up	06ALL	0	21WP	G16_056		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.20758	60.73944	System Intact
FDNS	06ALL	0	21SP	G16_056	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.38275	150.6793	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21L	G16_056	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.35627	126.9526	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21WP	G16_056	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.39008	119.8386	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	18G	G16_056	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.37093	119.2235	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	18SP	G16_056	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.3726	117.5245	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_056	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.38621	99.8	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21SP	G16_056	'TO->FROM'	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.07936	122.4462	System Intact
FDNS	06ALL	0	18SP	G16_056	'TO->FROM'	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.08331	103.4881	System Intact
FDNS	06ALL	0	21SP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05807	119.3691	System Intact
FDNS	06ALL	0	21SP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05807	119.0631	System Intact
FDNS	06ALL	0	18G	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05899	114.964	System Intact
FDNS	06ALL	0	18G	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05899	114.3127	System Intact
FDNS	06ALL	0	18SP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05905	113.898	System Intact
FDNS	06ALL	0	18SP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05905	113.6341	System Intact
FDNS	06ALL	0	21WP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05804	109.4935	System Intact
FDNS	06ALL	0	21WP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05804	109.0392	System Intact
FDNS	06ALL	0	17WP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06188	103.514	System Intact
FDNS	06ALL	0	21L	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05123	103.4641	System Intact
FDNS	06ALL	0	17WP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06188	103.4032	System Intact
FDNS	06ALL	0	21L	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05123	103.0336	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_056		'ELM CREEK - MRWYP16 230KV CKT 1'	300	300	0.03024	68.95638	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_056		'Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1'	956.09	956.09	0.11982	68.70612	System Intact
FDNS	06ALL	0	21SP	G16_056	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.05545	103.1448	System Intact
FDNS	06ALL	2	21WP	G16_056	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.221	105.4291	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21SP	G16_056	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.22121	104.3391	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21WP	G16_056	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.221	100	'LAWTON EASTSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21SP	G16_056	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.3728	120.2422	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	2	21SP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06128	123.817	System Intact
FDNS	06ALL	2	21SP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06128	123.3919	System Intact
FDNS	06ALL	2	18G	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06251	121.6555	System Intact
FDNS	06ALL	2	18G	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06251	120.8819	System Intact
FDNS	06ALL	2	18SP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06242	118.8225	System Intact
FDNS	06ALL	2	18SP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06242	118.4975	System Intact
FDNS	06ALL	2	21WP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0612	115.9986	System Intact
FDNS	06ALL	2	21WP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0612	115.4342	System Intact
FDNS	06ALL	2	21L	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0541	110.5034	System Intact
FDNS	06ALL	2	21L	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0541	109.9167	System Intact
FDNS	06ALL	2	17WP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06562	109.3197	System Intact
FDNS	06ALL	2	17WP	G16_056	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06562	109.187	System Intact
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.85127	166.8239	'MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.85127	165.2303	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.85127	163.7727	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.85116	163.1009	'MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.85116	161.9058	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.85127	160.8507	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.85116	159.5678	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.85116	157.7482	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.85029	153.5293	'MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69449	153.2013	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.6934	153.0319	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.85029	152.1358	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69867	151.6955	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69765	151.1591	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.85029	149.9967	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.85029	146.7688	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73641	144.0021	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69449	143.1522	'G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.6934	142.7618	'G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73596	142.4251	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.65121	140.8627	'MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.65121	140.285	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71256	140.0198	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73756	139.829	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71256	139.6679	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73681	139.6061	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71179	139.3086	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.65121	139.2395	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73652	139.1922	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71179	138.976	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.65121	138.5599	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73652	138.3472	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73567	138.1047	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73567	137.1331	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73652	137.1111	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57684	136.8923	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71041	136.6422	'MDFRDTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73756	136.3674	'TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73681	136.1624	'TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71256	136.1011	'CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69742	135.9123	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71169	135.9073	'CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73567	135.8555	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5768	135.835	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73652	135.4769	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70959	135.3452	'MDFRDTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	134.6782	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71041	134.5037	'MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.65073	133.9749	'MIDLNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70959	133.965	'MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73567	133.9465	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71256	133.4395	'BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	133.3394	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71169	132.9443	'BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69449	132.8184	'OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.65073	132.7734	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70209	132.5385	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.6934	132.4599	'OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71256	132.0291	'BELL - PECK 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70136	131.7215	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.65073	131.7206	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70205	131.5755	'MORISNT4 138.00 - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71169	131.4464	'BELL - PECK 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70368	131.0635	'OSAGE - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70128	130.703	'MORISNT4 138.00 - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70209	130.6052	'G15063_T 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70209	130.5734	'CLEVELAND - TULSA NORTH 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69867	130.4688	'RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57736	130.4171	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70191	130.3722	'CLEVELAND - G15066_T 345.00 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.68792	130.2555	'EL PASO - ROSE HILL 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70368	130.1401	'FAIRFAX TAP - SHIDLER 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70368	130.14	'FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.68718	130.0875	'EL PASO - ROSE HILL 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71256	130.0663	'GILL ENERGY CENTER WEST - HAYSVIS2 69.000 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71256	130.0658	'HAYSVIS2 69.000 - PECK 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69765	130.0237	'RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70136	129.9249	'G15063_T 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70289	129.7938	'OSAGE - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70131	129.7723	'CLEVELAND - TULSA NORTH 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.65073	129.5981	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70071	129.5575	'DELAWARE - NORTHEAST STATION 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70113	129.5218	'CLEVELAND - G15066_T 345.00 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70198	129.4417	'SHIDLER - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70198	129.3633	'PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.65017	129.3095	'MIDLNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71169	129.2463	'GILL ENERGY CENTER WEST - HAYSVIS2 69.000 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71169	129.2462	'HAYSVIS2 69.000 - PECK 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70191	129.2045	'G15066_T 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	129.1636	'GEN532651 1-JEFFREY ENERGY CENTER UNIT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	129.156	'GEN532652 1-JEFFREY ENERGY CENTER UNIT 2'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	129.1557	'GEN532653 1-JEFFREY ENERGY CENTER UNIT 3'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70198	129.1465	'DOMES - PAWHUSKA TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	129.1456	'GEN640009 1-COOPER NUCLEAR STATION'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70289	129.0606	'FAIRFAX TAP - SHIDLER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70289	129.0605	'FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70163	129.0233	'RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70163	128.9441	'RENFROW4 138.00 - WAKITA 138 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	128.897	'GEN542955 1-LACYGNE UNIT #1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70198		

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.64998	128.7127	'MIDLNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58655	128.6682	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	128.6572	'GEN542956 2-LACYGNE UNIT #2'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	128.6028	'GEN562902 1-G15052_3 0.6900'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70163	128.5557	'MORISNT4 138.00 - SOONER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.7012	128.5541	'SHIDLER - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	128.5415	'GEN635024 4-WALTER SCOTT UNIT 4'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70154	128.5327	'MCELROY - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	128.4883	'GEN542957 1-IATAN UNIT #1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.7012	128.4848	'PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70113	128.4071	'G15066_T 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69986	128.3994	'DELAWARE - NORTHEAST STATION 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	128.3261	'GEN532720 1-CANEYWF1 0.6900'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	128.276	'GEN532651 1-JEFFREY ENERGY CENTER UNIT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	128.2753	'GEN532652 1-JEFFREY ENERGY CENTER UNIT 2'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	128.2749	'GEN532653 1-JEFFREY ENERGY CENTER UNIT 3'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70265	128.24	'BUTLER COUNTY NO. 10 BENTON - WEAVER 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.65017	128.2185	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.7012	128.1987	'DOMES - PAWHUSKA TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70087	128.1821	'RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70087	128.0811	'RENFROW4 138.00 - WAKITA_138 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.7012	127.9744	'DOMES - MOUND ROAD 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	127.7595	'GEN542962 2-IATAN UNIT #2'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69936	127.6673	'WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70087	127.6302	'MORISNT4 138.00 - SOONER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69989	127.6053	'DELAWARE - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.64998	127.6006	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	127.5532	'GEN562902 1-G15052_3 0.6900'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70078	127.5522	'MCELROY - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70049	127.5302	'GRDA1 - GREC TAP5 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	127.4929	'GEN542956 2-LACYGNE UNIT #2'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70078	127.4567	'SANDY_CN_138138.00 - WAKITA_138 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58649	127.3542	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70077	127.3414	'SOONER - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.7019	127.326	'BUTLER COUNTY NO. 10 BENTON - WEAVER 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69794	127.2907	'ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70077	127.278	'NORTHWEST - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73818	127.0242	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57684	126.85	'G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73967	126.4607	'SUMNER 4 - TIMBICT4 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69742	126.4008	'G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	126.3476	System Intact
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.65017	126.3384	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5768	125.8079	'G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58708	125.752	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.64998	125.7054	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	125.4268	System Intact
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	124.3937	'GEN336153 1-WATERFORD UNIT#3'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70488	124.3039	'DMNCRKT4 - MILLER 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70075	124.2945	'BLACKBERRY - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	124.2794	'GEN587463 1-G16-068-GEN10.6900'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	124.2515	'GEN562992 1-G15063_3 0.6900'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69892	124.2223	'BOEING - BOEINGW4 138.00 138KV CKT Z1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	124.1907	'GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70488	124.1298	'MILLER - SOONER 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70373	124.1024	'OSAGE - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	124.0685	'GEN562882 1-G15047_3 0.6900'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70373	124.0246	'SOONER - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.65017	124.002	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	124.0006	'GEN336821 1-GRAND GULF UNIT'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	123.8787	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58147	123.8602	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69892	123.7171	'BOEING - STEARMAN 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71182	123.6822	'WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	123.6067	'GEN336153 1-WATERFORD UNIT#3'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69803	123.58	'LATHAM57 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69817	123.5757	'BOEINGW4 138.00 - CANAL 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	123.553	'GEN514806 1-SOONER UNIT 2'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	123.4457	'GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	123.3998	'GEN587413 1-G16-061-GEN10.6900'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	123.33	'GEN587463 1-G16-068-GEN10.6900'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.64998	123.3153	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	123.278	'GEN562992 1-G15063_3 0.6900'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	123.2691	'GEN336821 1-GRAND GULF UNIT'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	123.2338	'GEN301382 1-IOSAGEWINDG10.6900'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69733	123.1666	'LATHAM57 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	123.1559	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	123.1241	'GEN515483 1-BLKWLWD1 0.6900'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	123.1151	'GEN562882 1-G15047_3 0.6900'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	16				

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.59135	122.8484	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73967	122.7511	'TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70421	122.7459	'DMNCRKT4 - MILLER 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	122.6576	'GEN562611 1-G14_064_3 0.6900'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73862	122.62	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69817	122.6118	'BOEING - STEARMAN 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70421	122.6003	'MILLER - SOONER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70305	122.5933	'OSAGE - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70305	122.5192	'SOONER - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71505	122.5133	'CHIKASKIA - KILDARE4 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	122.296	'GEN301382 1-10SAGWINDG10.6900'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	122.2144	'GEN515483 1-BLKWLWD1 0.6900'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	122.1821	'GEN514806 1-SOONER UNIT 2'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71099	121.9719	'WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70702	121.8725	'SUMNER 4 - VIOLA 4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71424	121.8005	'CHIKASKIA - KILDARE4 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	121.7064	'GEN562611 1-G14_064_3 0.6900'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.63704	121.6503	'EL PASO - ELPASOE4 138.00 138KV CKT Z1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.63636	121.5957	'EL PASO - ELPASOE4 138.00 138KV CKT Z1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69344	121.5828	'59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73862	121.3121	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69344	121.2334	'59TH ST - EL PASO 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71485	120.9698	'CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71041	120.9026	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71041	120.9002	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69803	120.3255	'CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69268	120.2581	'59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57736	120.0942	'G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69733	119.9547	'CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71225	119.9332	'MDFRDT4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69268	119.9121	'59TH ST - EL PASO 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70654	119.6725	'RENFROW7 345.00 (RENFROW2) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70959	119.5878	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70959	119.5859	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73862	119.4816	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60056	119.214	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71531	119.1724	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60368	119.0848	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60196	118.8627	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71531	118.6884	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70577	118.6529	'RENFROW7 345.00 (RENFROW2) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	118.4786	'GEN562691 1-G15_015_3 0.6900'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.7035	118.4507	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69918	118.2666	'WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	118.1935	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69854	118.1413	'WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1'
FDNSLock	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60053	118.0035	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69952	117.7884	'RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60144	117.7222	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	117.5603	'GEN562691 1-G15_015_3 0.6900'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71225	117.5503	'MDFRDT4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70126	117.3858	'GEN514805 1-SOONER UNIT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	117.3506	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69803	117.134	'CANEYRV7 345.00 - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69742	117.1178	'OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71485	117.0999	'BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57684	116.9607	'OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.73862	116.8058	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69733	116.7865	'CANEYRV7 345.00 - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60003	116.7809	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	116.6608	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60056	116.6585	'TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	116.4143	'GILL 4 138.00 - VIOLA 4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.59994	116.2426	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60134	116.2065	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58761	116.1464	'CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	116.1403	'CLEARWATER - VIOLA 4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69918	116.1349	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70427	116.1019	'MORISNT4 138.00 - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69854	116.0075	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60003	115.7928	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5768	115.7868	'OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1'</

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70051	115.2301	'GEN514805 1-SOONER UNIT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.59994	115.1966	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71485	114.9661	'BELL - PECK 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58286	114.8973	'CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58792	114.8819	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	114.8805	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58783	114.8614	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.7033	114.8324	'SUMNER 4 - VIOLA 4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70418	114.6629	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60095	114.6256	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58792	114.5355	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58783	114.5009	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60003	114.4375	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70575	114.3512	'FAIRFAX TAP - SHIDLER 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70575	114.351	'FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5685	114.2819	'EL PASO - ROSE HILL 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.56857	114.1961	'EL PASO - ROSE HILL 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.7041	114.1552	'CLEVELAND - TULSA NORTH 345KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58597	113.9933	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70393	113.9777	'CLEVELAND - G15066_T 345.00 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.59994	113.7776	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	18G	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.6934	113.7262	'RANCHR7 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69449	113.6335	'RANCHR7 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69111	113.6152	'EL PASO - ROSE HILL 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5865	113.6092	'MDFRDTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58147	113.525	'G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	113.5125	'GEN532722 1-EVANS ENERGY CENTER UNIT 2'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70405	113.4405	'SHIDLER - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58819	113.4047	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70405	113.3561	'PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60052	113.3283	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.63786	113.2973	'EL PASO - ELPASOE4 138.00 138KV CKT 21'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58761	113.2623	'BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58642	113.2177	'MDFRDTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70418	113.1774	'G15063_T 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58819	113.1455	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	113.1333	'GEN532652 1-JEFFREY ENERGY CENTER UNIT 2'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	113.1332	'GEN532653 1-JEFFREY ENERGY CENTER UNIT 3'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	113.1308	'GEN532651 1-JEFFREY ENERGY CENTER UNIT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58397	113.0912	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.7029	113.0503	'DELAWARE - NORTHEAST STATION 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70405	113.0137	'DOMES - PAWHUSKA TAP 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	113.0078	'GEN542955 1-LACYGNE UNIT #1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70393	112.987	'G15066_T 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	112.8853	'GEN542962 2-IATAN UNIT #2'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70381	112.8393	'MORISNT4 138.00 - SOONER 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58389	112.8341	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.50618	112.7647	'EL PASO - ELPASOE4 138.00 138KV CKT 21'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.50624	112.7579	'EL PASO - ELPASOE4 138.00 138KV CKT 21'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70405	112.7328	'DOMES - MOUND ROAD 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60052	112.6997	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70375	112.6634	'RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	112.6474	'GEN542956 2-LACYGNE UNIT #2'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58753	112.6159	'BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58337	112.5637	'GILL 4 138.00 - VIOLA 4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70375	112.5568	'RENFROW4 138.00 - WAKITA_138 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	112.4813	'GEN562902 1-G15052_3 0.6900'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60003	112.4776	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	112.4766	'GEN542957 1-IATAN UNIT #1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70477	112.4604	'BUTLER COUNTY NO. 10 BENTON - WEAVER 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58348	112.382	'MORISNT4 138.00 - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70366	112.3694	'NORTHWEST - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58337	112.3126	'CLEARWATER - VIOLA 4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70477	112.257	'BUTLER COUNTY NO. 10 BENTON - MOBIL 69KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60095	112.1779	'TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58337	112.0281	'CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58761	111.8038	'BELL - PECK 69KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60052	111.7968	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5865	111.7784	'MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58338	111.737	'CLEVELAND - G15066_T 345.00 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58431	111.7301	'OSAGE - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.59994	111.7266	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58348	111.6226	'CLEVELAND - TULSA NORTH 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58691	111.6188	'MDFRDTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58341	111.4835	'MORISNT4 138.00 - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58642	111.3817	'MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58435	111.3457	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58397	111.3362	'G15063_T 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	111.1212	'GEN562902 1-G15052_3 0.6900'
FDNS	08ALL										

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(TDF)	TC%LOADING (% MVA)	CONTINGENCY	
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58431	111.0994	'FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58389	111.0582	'G15063_T 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58753	110.9921	'BELL - PECK 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57855	110.9867	'BENTON - WICHITA 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57998	110.8601	'ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57998	110.8596	'ROSE HILL (ROSE TX-3) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58001	110.8257	'ROSE HILL (ROSE TX-1) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58338	110.7763	'G15066_T 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	110.693	'GEN542956 2-LACYGNE UNIT #2'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58248	110.6874	'DELAWARE - NORTHEAST STATION 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58331	110.6561	'CLEVELAND - G15066_T 345.00 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60052	110.6202	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58342	110.5625	'CLEVELAND - TULSA NORTH 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	110.5496	'GEN542962 2-IATAN UNIT #2'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58819	110.5445	'CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58339	110.5211	'RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58334	110.5073	'SHIDLER - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	110.4902	'GEN542955 1-LACYGNE UNIT #1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58425	110.4844	'OSAGE - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	110.4544	'GEN532720 1-CANEYWF1 0.6900'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58546	110.4492	'HUNTERS7 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57991	110.4433	'ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57991	110.4426	'ROSE HILL (ROSE TX-3) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58334	110.441	'PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57994	110.4055	'ROSE HILL (ROSE TX-1) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58339	110.376	'RENFROW4 138.00 - WAKITA 138 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	110.3479	'GEN562902 1-G15052_3 0.6900'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58963	110.3437	'MDFRDTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	110.3356	'GEN532652 1-JEFFREY ENERGY CENTER UNIT 2'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	110.3353	'GEN532653 1-JEFFREY ENERGY CENTER UNIT 3'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	110.3047	'GEN532651 1-JEFFREY ENERGY CENTER UNIT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	110.2919	System Intact
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58114	110.2225	'ROSE HILL - STEARMAN 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58538	110.1716	'HUNTERS7 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58334	110.1663	'DOMES - PAWHUSKA TAP 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	110.1648	'GEN542957 1-IATAN UNIT #1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5819	110.1511	'EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5819	110.1509	'MAIZE - MAIZEW 4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58331	110.1476	'RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58672	110.0932	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	110.0654	'GEN542956 2-LACYGNE UNIT #2'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57736	110.0058	'OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58331	109.9896	'RENFROW4 138.00 - WAKITA 138 138.00 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58334	109.9463	'DOMES - MOUND ROAD 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58691	109.9427	'MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	109.9292	'GEN542962 2-IATAN UNIT #2'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58388	109.9149	'MORISNT4 138.00 - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58586	109.8367	'HUNTERS7 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58425	109.799	'FAIRFAX TAP - SHIDLER 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58425	109.7988	'FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60338	109.7798	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58331	109.7464	'G15066_T 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58435	109.7124	'G15063_T 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58107	109.6965	'ROSE HILL - STEARMAN 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	109.654	'GEN532720 1-CANEYWF1 0.6900'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	109.6014	'GEN532651 1-JEFFREY ENERGY CENTER UNIT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	109.6009	'GEN532652 1-JEFFREY ENERGY CENTER UNIT 2'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	109.6006	'GEN532653 1-JEFFREY ENERGY CENTER UNIT 3'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58963	109.5254	'MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	109.5001	'GEN542957 1-IATAN UNIT #1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60338	109.4974	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58327	109.4944	'SHIDLER - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58183	109.4292	'EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58183	109.4289	'MAIZE - MAIZEW 4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58327	109.4266	'PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58242	109.3285	'DELAWARE - NORTHEAST STATION 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58322	109.2705	'SANDY_CN 138138.00 - WAKITA 138 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	109.2421	'GEN542951 5-HAWTHORN UNIT #5'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58393	109.2227	'CLEVELAND - TULSA NORTH 345KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60338	109.1382	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58476	109.126	'OSAGE - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58382	109.0932	'CLEVELAND - G15066_T 345.00 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.56897	109.0621	'EL PASO - ROSE HILL 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60356	108.8093	'SUMNER 4 - TIMBRECT4 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	108.7229	'GEN562902 1-G15052_3 0.6900'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.59102	108.7093	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60338	108.6894	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.59102	108.6045	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58819	108.6009	'BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO-&						

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	108.4377	'GEN542955 1-LACYGNE UNIT #1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70299	108.409	'RENO COUNTY - WICHITA 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	108.397	'GEN501801 1-DOLET HILLS UNIT1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.7034	108.3663	'WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58793	108.3327	'HUNTERS7 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	108.301	'GEN562882 1-G15047 3 0.6900'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	108.2943	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	108.1605	'GEN336153 1-WATERFORD UNIT#3'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58382	108.1437	'G15066_T 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	108.0901	'GEN542956 2-LACYGNE UNIT #2'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70093	108.0644	'BOEING - BOEINGW4 138.00 138KV CKT Z1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	108.0351	System Intact
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58672	108.0275	'G15063_T 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	108.0181	'GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57906	107.9912	'BENTON - WICHITA 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70016	107.9721	'47TH ST4 138.00 - SIXTY-FOURTH (64TH) 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	107.9598	'GEN532720 1-CANEYWF1 0.6900'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	107.9592	'GEN542962 2-IATAN UNIT #2'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58381	107.8992	'RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58378	107.8453	'SHIDLER - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58381	107.8177	'RENFROW4 138.00 - WAKITA 138 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70047	107.8044	'LATHAMS7 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70016	107.7912	'47TH ST4 138.00 - ELPASOE4 138.00 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58378	107.7872	'PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	107.736	'DELAWARE - NORTHEAST STATION 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	107.7314	'GEN532651 1-JEFFREY ENERGY CENTER UNIT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	107.7291	'GEN532652 1-JEFFREY ENERGY CENTER UNIT 2'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	107.7287	'GEN532653 1-JEFFREY ENERGY CENTER UNIT 3'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	107.6863	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	107.6832	'GEN336821 1-GRAND GULF UNIT'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58378	107.6255	'DOMES - PAWHUSKA TAP 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70093	107.6028	'BOEING - STEARMAN 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58819	107.6024	'BELL - PECK 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71682	107.5926	'CHIKASKIA - KILDARE4 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	107.5926	'GEN542957 1-IATAN UNIT #1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	107.5346	'GEN514806 1-SOONER UNIT 2'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58378	107.4356	'DOMES - MOUND ROAD 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5804	107.4239	'ROSE HILL (ROSE TX-3) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5804	107.4219	'ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58043	107.4012	'ROSE HILL (ROSE TX-1) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	107.3815	'GEN300003 1-THOMAS HILL UNIT 3'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70696	107.3691	'DMNCRKT4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	107.309	'GEN301382 1-10SAGWINDG10.6900'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.59102	107.3076	'CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	107.2453	System Intact
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58616	107.1574	'GILL 4 138.00 - VIOLA 4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	107.1458	'GEN515483 1-BLKWLWD1 0.6900'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70696	106.9747	'DMNCRKT4 - MILLER 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58615	106.9643	'CLEARWATER - VIOLA 4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70673	106.9597	'SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	106.9143	'GEN562611 1-G14_064 3 0.6900'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70582	106.9008	'OSAGE - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58647	106.8603	'CLEVELAND - TULSA NORTH 345KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58639	106.8597	'MORISNT4 138.00 - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58615	106.8436	'CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70582	106.7871	'SOONER - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70696	106.753	'MILLER - SOONER 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.60356	106.5806	'TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58724	106.3925	'OSAGE - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.59102	106.3642	'BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58636	106.2711	'CLEVELAND - G15066_T 345.00 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	106.0727	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58242	106.0525	'BLACKBERRY - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	106.0463	'GEN336821 1-GRAND GULF UNIT'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.59102	105.9857	'BELL - PECK 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	105.9635	'GEN301382 1-10SAGWINDG10.6900'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58875	105.8439	'CHIKASKIA - KILDARE4 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58488	105.7667	'DMNCRKT4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58641	105.7576	'RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58724	105.7081	'FAIRFAX TAP - SHIDLER 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58724	105.708	'FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	105.7032	'GEN515483 1-BLKWLWD1 0.6900'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58641	105.6379	'RENFROW4 138.00 - WAKITA_138 138.00 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	105.5532	System Intact
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58636	105.5398	'G15066_T 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58597	105.5329	'GEN562902 1-G15052_3 0.6900'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58426	105.4837	'OSAGE - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58488	105.482	'DMNCRKT4 - MILLER 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.59102	105.437	'HAYSVSJ2 69.000 - PECK 69KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.59102	105.4357	'GILL ENERGY CENTER WEST - HAYSVSJ2 69.000 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160</				

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57968	105.3958	'LATHAMS7 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5845	105.3947	'SOONER (SOONERS) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5827	105.3785	'LACYGNE - STILWELL 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	105.37	'GEN562611 1-G14_064_3 0.6900'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58488	105.3217	'MILLER - SOONER 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5817	105.277	'ELPASOE4 138.00 (ELPA TX-1) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58637	105.2675	'SHIDLER - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	105.2498	'GEN514806 1-SOONER UNIT 2'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58637	105.2322	'PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	105.1727	'GEN301382 1-10SAGEWINDG10.6900'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57938	105.1702	'47TH ST4 138.00 - SIXTY-FOURTH (64TH) 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58637	105.0724	'DOMES - PAWHUSKA TAP 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58637	104.9615	'DOMES - MOUND ROAD 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58633	104.953	'SANDY_CN 138138.00 - WAKITA_138 138.00 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57938	104.9427	'47TH ST4 138.00 - ELPASOE4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	104.9353	'GEN515483 1-BLKWLWD1 0.6900'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58597	104.9231	'GEN532720 1-CANEYWF1 0.6900'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71392	104.8756	'WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58262	104.8542	'LACYGNE - STILWELL 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5848	104.8127	'DMNCRKT4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70047	104.7693	'CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58834	104.6943	'FLATRDG3 - HARPER 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58444	104.6757	'SOONER (SOONERS) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57161	104.6345	'59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57988	104.6277	'BOEINGW4 138.00 - CANAL 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58193	104.5968	'BENTON - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	104.5934	'GEN562611 1-G14_064_3 0.6900'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58419	104.5562	'OSAGE - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5848	104.5272	'DMNCRKT4 - MILLER 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58419	104.4863	'SOONER - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58793	104.4477	'HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57931	104.4109	'47TH ST4 138.00 - SIXTY-FOURTH (64TH) 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5848	104.362	'MILLER - SOONER 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58163	104.3266	'ELPASOE4 138.00 (ELPA TX-1) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57931	104.1825	'47TH ST4 138.00 - ELPASOE4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	104.1683	'GEN533561 1-CITY OF WINFIELD'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71225	104.1666	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.71225	104.163	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5865	103.7712	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5865	103.7703	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57988	103.7552	'BOEING - BOEINGW4 138.00 138KV CKT Z1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58801	103.7045	'WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57161	103.6518	'59TH ST - EL PASO 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58401	103.5189	'RENFROW7 345.00 (RENFROW2) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	103.492	'GEN301382 1-10SAGEWINDG10.6900'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5798	103.4209	'47TH ST4 138.00 - SIXTY-FOURTH (64TH) 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57981	103.3694	'BOEINGW4 138.00 - CANAL 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58642	103.3686	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58642	103.368	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.5798	103.2813	'47TH ST4 138.00 - ELPASOE4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58186	103.2278	'BENTON - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	103.2173	'GEN515483 1-BLKWLWD1 0.6900'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58031	103.2145	'BOEINGW4 138.00 - CANAL 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70149	103.1519	'WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58283	103.0864	'BLACKBERRY - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58915	103.0703	'CHIKASKIA - KILDARE4 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58237	102.9902	'BENTON - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57988	102.9574	'BOEING - STEARMAN 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	102.8965	'GEN562611 1-G14_064_3 0.6900'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58848	102.8769	'WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57155	102.8555	'59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58313	102.7685	'LACYGNE - STILWELL 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57208	102.7097	'59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	102.6913	'GEN562691 1-G15_015_3 0.6900'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58597	102.6546	System Intact
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57981	102.5925	'BOEING - BOEINGW4 138.00 138KV CKT Z1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58793	102.5355	'WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58031	102.4215	'BOEING - BOEINGW4 138.00 138KV CKT Z1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58395	102.3313	'RENFROW7 345.00 (RENFROW2) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	102.2431	'GEN562691 1-G15_015_3 0.6900'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58445	102.2379	'RENFROW7 345.00 (RENFROW2) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57959	102.1862	'CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57208	102.1135	'59TH ST - EL PASO 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57968	101.831	'CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57981	101.8269	'BOEING - STEARMAN 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57155	101.8266	'59TH ST - EL PASO 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70047	101.747	'CANEYRV7 345.00 - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58691	101.6748	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	21WP								

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA	RATEB	TC%LOADING	CONTINGENCY	
								(MVA)			(% MVA)
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	101.4585	'GEN562691 1-G15_015_3 0.6900'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70823	101.2394	'RENFROW7 345.00 (RENFROW2) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70149	101.1338	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58292	101.0558	'GEN514805 1-SOONER UNIT 1'
FDNS	08ALL	0	18SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.70338	100.9051	'GEN514805 1-SOONER UNIT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58551	100.7292	'BLACKBERRY - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57839	100.6768	'EL PASO - STEARMAN 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58597	100.6179	'GEN562992 1-G15063_3 0.6900'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58597	100.5921	'GEN514806 1-SOONER UNIT 2'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58597	100.57	'GEN587463 1-G16-068-GEN10.6900'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	100.5608	'BOEING - BOEINGW4 138.00 138KV CKT Z1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58597	100.469	'GEN301382 1-10SAGEWINDG10.6900'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58054	100.3581	'WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58597	100.2967	'GEN515483 1-BLKWLWD1 0.6900'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58963	100.1517	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58963	100.1451	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	100.1012	'GEN514805 1-SOONER UNIT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58721	100.0637	'RENFROW7 345.00 (RENFROW2) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21SP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58062	100	'WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58285	99.8	'BOEING - STEARMAN 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58335	99.8	'GEN562691 1-G15_015_3 0.6900'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58597	99.7	'GEN562611 1-G14_064_3 0.6900'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.58455	99.6	'BENTON - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.57462	99.57143	'59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1'
FDNS	08ALL	0	21L	G16_060	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.12752	101.3822	System Intact
FDNS	08ALL	2	21L	G16_060	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.12761	101.4075	System Intact
FDNS	08ALL	0	21L	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.27033	117.8292	'SOONER - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	21L	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.27033	117.7239	'NORTHWEST - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	21L	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.26377	109.6459	'CLEVELAND - G15066_T 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.30143	109.2463	'SOONER - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	18G	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.30143	109.1576	'NORTHWEST - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	18G	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.30549	108.5011	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.29773	108.2198	'SOONER - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.29773	108.1179	'NORTHWEST - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.30397	107.5479	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	21L	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.26377	106.1687	'G15066_T 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	21L	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.25306	104.3701	'CLEVELAND - TULSA NORTH 345KV CKT 1'
FDNS	08ALL	0	21L	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.26135	103.6146	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	21L	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.23805	101.2501	'G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21L	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.23733	100.3042	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.29165	99.9	'CLEVELAND - G15066_T 345.00 345KV CKT 1'
FDNS	08ALL	0	21L	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.23782	99.7	'MORISNT4 138.00 - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	21L	G16_061	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.23733	99.6	'WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1'
FDNS	08ALL	0	21L	G16_061	'TO->FROM'	'G15063_T 345.00 - WOODRING 345KV CKT 1'	1016	1016	0.27033	109.2602	'SOONER - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	21L	G16_061	'TO->FROM'	'G15063_T 345.00 - WOODRING 345KV CKT 1'	1016	1016	0.27033	109.1209	'NORTHWEST - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	21L	G16_061	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.07778	101.3822	System Intact
FDNS	08ALL	2	21L	G16_061	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.07778	101.4075	System Intact
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'	525	525	0.99266	107.1778	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.49755	171.0934	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.49755	169.7691	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.49864	153.9094	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.49864	152.8841	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.20352	119.9842	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.20352	119.9133	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.20313	117.8264	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.20313	117.1435	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23618	106.3077	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	105.071	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23618	105.0609	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.8764	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23617	104.7388	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.7155	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.6996	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.5509	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.5449	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.4022	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.3938	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.3111	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/					

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(TDF) (MVA)	TC%LOADING (% MVA)	CONTINGENCY	
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49511	168.9375	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.4962	153.1562	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.4962	152.1353	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.20321	119.8046	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.20321	119.7303	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.20282	117.6489	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.20282	116.968	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	0	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.23585	106.157	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	0	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.23585	104.9105	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.23583	104.5926	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.5564	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.3628	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.2026	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.1867	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.0388	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.0328	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.8908	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.8825	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.8001	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.5174	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.3803	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2937	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2209	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2027	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.1647	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.1626	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0861	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.085	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0823	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0183	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.23583	102.9465	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNSLock-Blown up	06ALL	0	21SP	G16_062		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1'	1793	1793	0.16141	33.48977	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_062		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1'	1793	1793	0.15094	29.68449	System Intact
FDNSLock-Blown up	06ALL	0	21SP	G16_062		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2'	1792	1972	0.16141	33.50842	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_062		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2'	1792	1972	0.15094	29.70102	System Intact
FDNS	06ALL	0	21SP	G16_062	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21734	104.2812	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	0	21WP	G16_062	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21742	103.0481	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'TO->FROM'	'COCHRAN INTERCHANGE - NEWTAP3 115.00 115KV CKT 1'	120.9	120.9	0.04821	120.5932	System Intact
FDNS	06ALL	0	18G	G16_062	'TO->FROM'	'COCHRAN INTERCHANGE - NEWTAP3 115.00 115KV CKT 1'	120.9	120.9	0.048	112.0955	System Intact
FDNSLock-Blown up	06ALL	0	21SP	G16_062		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	956	1042	0.19672	69.26968	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_062		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.18095	64.81081	System Intact
FDNSLock-Blown up	06ALL	0	18G	G16_062		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.18372	62.44732	System Intact
FDNSLock-Blown up	06ALL	0	21WP	G16_062		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.19823	60.73944	System Intact
FDNS	06ALL	0	21SP	G16_062	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.45471	150.6793	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21L	G16_062	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.42822	126.9526	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21WP	G16_062	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.46204	119.8386	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	18G	G16_062	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.30739	119.2235	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.30884	117.5245	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.32278	99.8	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'TO->FROM'	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.10228	122.4462	System Intact
FDNS	06ALL	0	18SP	G16_062	'TO->FROM'	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.13054	103.4881	System Intact
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50133	217.2873	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50202	181.0347	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21L	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5059	122.6115	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21L	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5059	122.0746	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51288	117.9627	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51288	117.4505	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5209	116.0851	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.52067	108.3895	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50507	107.4528	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.50515	103.6431	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21WP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.50515	103.1285	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50465	101.5277	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50133	138.6666	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50202	119.7486	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50133	127.6548	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50202	104.9118	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05734	119.3691	System Intact
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05734	119.0631	System Intact
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0576	114.964	System Intact
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.0576	114.3127	System Intact
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05751	113.898	System Intact
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05751	113.6341	System Intact
FDNS	06ALL	0	21WP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05731	109.4935	System Intact
FDNS	06ALL	0	21WP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05731	109.0392	System Intact

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL	0	26SP	G16_062	'FROM->TO'	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	421.88	421.9	0.99484	118.9129	'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	421.88	421.9	0.83615	101.3813	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'G15079_T 230.00 - INK BASIN 6230.00 230KV CKT 1'	377.65	377.65	0.30997	104.7776	HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.44458	109.0287	'TOLK STATION (ABBXLN844501) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.44458	109.0277	'CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.42305	101.9691	'CUNNINGHAM_S 6230.00 - CUNNINGHAM STATION 230KV CKT *1'
FDNSLock-Blown up	06ALL	0	21L	G16_062		'Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1'	956.09	956.09	0.12844	68.70612	System Intact
FDNS	06ALL	0	21SP	G16_062	'FROM->TO'	'JAL SUB - WHITTEN SUB 115KV CKT 1'	119.51	119.9	0.26138	116.2721	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18G	G16_062	'TO->FROM'	'JOHNSON DRAW - TAYLOR SWITCHING STATION 115KV CKT 1'	158.95	172.29	0.21669	106.0149	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18G	G16_062	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4791	155.1247	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48712	149.9375	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48712	149.5365	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.47933	127.8054	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18G	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4791	143.5309	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48712	138.2088	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48712	137.7925	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.47933	117.8036	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.19772	128.4512	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.19675	116.6262	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.19647	107.2969	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.19747	104.6502	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_062	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.10584	103.1448	System Intact
FDNSLock-Blown up	06ALL	0	21SP	G16_062		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.0817	49.39169	System Intact
FDNSLock-Blown up	06ALL	0	18SP	G16_062		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.13134	46.88208	System Intact
FDNSLock-Blown up	06ALL	0	17WP	G16_062		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.13089	43.862	System Intact
FDNSLock-Blown up	06ALL	0	21WP	G16_062		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.08214	35.77219	System Intact
FDNSLock-Blown up	06ALL	0	26SP	G16_062		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.0787	32.05021	System Intact
FDNS	06ALL	0	21SP	G16_062	'TO->FROM'	'OXY_S_HOBBS3115.00 - SWITCH 4J44 115KV CKT 1'	120	141	0.20681	101.6069	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20215	126.7779	'NEWHART 230 - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.2356	123.8672	'SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20365	113.2866	'NEWHART 230 - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_062	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.16614	107.2492	System Intact
FDNS	06ALL	0	18SP	G16_062	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.23688	105.9899	'SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'	525	525	0.99264	107.174	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.49754	171.0902	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.49754	169.7714	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.49864	153.9093	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.49864	152.8842	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.20355	120.0146	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.20355	119.9441	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.20321	117.908	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.20321	117.215	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23689	107.1248	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23689	107.1248	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23689	105.8769	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23689	105.8769	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23688	105.4294	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23688	105.4294	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	105.0615	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	105.0615	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.8901	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.7286	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.6933	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.6933	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.5611	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.5423	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.4119	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.3913	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.3166	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	104.0271	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.884	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.884	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.8073	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23688	103.7825	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.23688	103.7825	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.7257	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'	168	168	0.50123	103.7257	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L								

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA	RATEB	TC%LOADING	CONTINGENCY	
							(MVA)	(MVA)			TDF
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.20291	117.0394	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.23656	106.9729	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.23656	105.7254	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.23654	105.2822	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.5469	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.5469	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.3764	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.2157	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.1805	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.1805	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.049	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	104.0302	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.9006	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.8799	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.8056	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.23654	103.6348	'ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	2	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.5176	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.3759	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.3759	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2996	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2184	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2184	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.2081	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.1684	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.1616	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0884	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0877	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0814	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_062	'FROM->TO'	'ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1'	168	168	0.49877	103.0184	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_062	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21638	105.4291	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21SP	G16_062	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.2166	104.3391	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21WP	G16_062	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21638	100	'LAWTON EASTSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	18SP	G16_062	'TO->FROM'	'COCHRAN INTERCHANGE - NEWTAP3 115.00 115KV CKT 1'	120.9	120.9	0.0398	108.0962	System Intact
FDNS	06ALL	2	18G	G16_062	'TO->FROM'	'COCHRAN INTERCHANGE - NEWTAP3 115.00 115KV CKT 1'	120.9	120.9	0.03967	101.0357	System Intact
FDNS	06ALL	2	21SP	G16_062	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.36311	120.2422	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50087	216.1243	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50194	180.9111	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21L	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50549	121.5535	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21L	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50549	121.0143	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51132	115.3949	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51132	115.3949	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51132	114.8792	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5186	112.573	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5186	112.573	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50462	106.2775	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.51836	104.7033	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.51836	104.7033	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.5047	102.6157	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21WP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.5047	102.0986	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50457	101.4062	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_062	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50087	137.9845	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_062	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50194	119.6759	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50087	126.8936	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	26SP	G16_062	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50194	104.8312	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06125	123.817	System Intact
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06125	123.3919	System Intact
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06283	121.6555	System Intact
FDNS	06ALL	2	18G	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06283	120.8819	System Intact
FDNS	06ALL	2	18SP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06265	118.8225	System Intact
FDNS	06ALL	2	18SP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06265	118.4975	System Intact
FDNS	06ALL	2	21WP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06116	115.9986	System Intact
FDNS	06ALL	2	21WP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06116	115.4342	System Intact
FDNS	06ALL	2	21L	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05406	110.5034	System Intact
FDNS	06ALL	2	21L	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05406	109.9167	System Intact
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06594	109.3197	System Intact
FDNS	06ALL	2	17WP	G16_062	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06594	109.187	System Intact
FDNS	06ALL	2	21SP	G16_062	'FROM->TO'	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	421.88	421.9	0.99264	133.0154	'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'
FDNS	06ALL	2	26SP	G16_062	'FROM->TO'	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'	421.88	421.9	0.99484	118.9129	'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'
FDNS	06										

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL	2	18G	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.19515	154.2616	'CUNNINGHAM_S 6230.00 - CUNNINGHAM STATION 230KV CKT *1'
FDNS	06ALL	2	18G	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	146.6119	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18G	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	146.6119	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	140.441	'ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1'
FDNS	06ALL	2	18SP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	140.0258	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.48164	120.8635	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.48164	120.8635	'ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	2	17WP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.19631	115.1104	'CUNNINGHAM_S 6230.00 - CUNNINGHAM STATION 230KV CKT *1'
FDNS	06ALL	2	21SP	G16_062	'TO->FROM'	'OXY_S_HOBBS3115.00 - SWITCH 4J44 115KV CKT 1'	120	141	0.20612	100.2224	'G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	3	21SP	G16_062	'FROM->TO'	'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'	525	525	0.99264	105.5307	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	21SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50087	213.9449	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	26SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50194	179.4288	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	21L	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50549	122.9512	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	21L	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50549	122.2678	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51132	117.9994	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	18SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.51132	117.2796	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18G	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5186	114.0198	'ANDREWS 6345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18G	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.5186	112.1437	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	3	21SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50451	111.5065	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	17WP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.51837	105.5439	'ANDREWS 6345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	17WP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.51837	104.2204	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	3	26SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	93.21	102.58	0.50449	102.6274	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	21WP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.5047	102.5523	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	21WP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	103.37	113.73	0.5047	101.9305	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	21SP	G16_062	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50087	134.7735	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	26SP	G16_062	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50194	118.7447	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	21SP	G16_062	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50087	125.8461	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	26SP	G16_062	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50194	104.2751	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18G	G16_062	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.44414	109.0217	'P12:345:SPS:J18.1.HOBBS.YOAKUM'
FDNS	06ALL	3	18G	G16_062	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.4436	108.0615	'CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL	3	21SP	G16_062	'FROM->TO'	'JAL SUB - WHITTEN SUB 115KV CKT 1'	119.51	119.9	0.26126	114.8076	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18G	G16_062	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	158.5639	'ANDREWS 6345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18G	G16_062	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	157.2539	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	3	18SP	G16_062	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	153.3545	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	18SP	G16_062	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	152.9051	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	17WP	G16_062	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.48163	132.4425	'ANDREWS 6345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	17WP	G16_062	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.48163	131.2756	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	3	18G	G16_062	'FROM->TO'	'National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.13391	101.828	System Intact
FDNS	06ALL	3	18G	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	146.9546	'ANDREWS 6345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	18G	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.4814	145.5916	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	3	18SP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	141.6629	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	18SP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	141.6629	'ANDREWS 6345.00 - G14_012T 345.00 345KV CKT 1'
FDNS	06ALL	3	18SP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	119.9	119.9	0.48868	141.1905	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	17WP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.48163	122.4763	'ANDREWS 6345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	3	17WP	G16_062	'TO->FROM'	'National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1'	139.03	139.03	0.48163	121.2567	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	3	21SP	G16_062	'TO->FROM'	'OXY_S_HOBBS3115.00 - SWITCH 4J44 115KV CKT 1'	120	141	0.20612	100.2625	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	21SP	G16_062	'FROM->TO'	'ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1'	525	525	0.99264	105.5307	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	21SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	158.9	159.3	0.50088	137.7716	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	26SP	G16_062	'FROM->TO'	'DRINKARD SUB - DRINKARD TAP 115KV CKT 1'	158.9	159.3	0.50195	115.5446	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	21SP	G16_062	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50088	134.7766	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	26SP	G16_062	'TO->FROM'	'DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1'	158.95	174.88	0.50195	118.7473	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	21SP	G16_062	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50088	125.85	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	26SP	G16_062	'FROM->TO'	'DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1'	158.95	159.34	0.50195	104.2784	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	18G	G16_062	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.44417	109.0585	'P12:345:SPS:J18.1.HOBBS.YOAKUM'
FDNS	06ALL	4	18G	G16_062	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.44363	108.0991	'CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL	4	21SP	G16_062	'FROM->TO'	'JAL SUB - WHITTEN SUB 115KV CKT 1'	119.51	119.9	0.26126	114.8049	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	06ALL	4	21SP	G16_062	'TO->FROM'	'OXY_S_HOBBS3115.00 - SWITCH 4J44 115KV CKT 1'	120	141	0.20613	100.2644	'G14_012T 345.00 - HOBBS 345KV CKT 1'
FDNS	08ALL	0	21L	G16_068	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.35032	117.8292	'SOONER - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	21L	G16_068	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.35032	117.7239	'NORTHWEST - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	21L	G16_068	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.36378	109.6459	'CLEVELAND - G15066_T 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_068	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.38069	109.2463	'SOONER - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	18G	G16_068	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.38069	109.1576	'NORTHWEST - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	18G	G16_068	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.43009	108.5011	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_068	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.37699	108.2198	'SOONER - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_068	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.37699	108.1179	'NORTHWEST - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_068	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.42858	107.5479	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	21L	G16_068	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.36378	106.1687	'G15066_T 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	21L	G16_068	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'	1192	1192	0.35657	104.3701	'CLEVELAND - TULSA NORTH 345KV CKT 1'
FDNS	08ALL	0	21L	G16_068	'FROM->TO'	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'					

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	06ALL	0	21L	G16_069		'BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2'	1792	1972	0.13911	29.70102	System Intact
FDNS	06ALL	0	21SP	G16_069	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.20798	104.2812	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	0	21WP	G16_069	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.20806	103.0481	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	0	18SP	G16_069	'TO->FROM'	'COCHRAN INTERCHANGE - NEWTAP3 115.00 115KV CKT 1'	120.9	120.9	0.03141	120.5932	System Intact
FDNS	06ALL	0	18G	G16_069	'TO->FROM'	'COCHRAN INTERCHANGE - NEWTAP3 115.00 115KV CKT 1'	120.9	120.9	0.03074	112.0955	System Intact
FDNSLock-Blown up	06ALL	0	21SP	G16_069		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	956	1042	0.18526	69.26968	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_069		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.16949	64.81081	System Intact
FDNSLock-Blown up	06ALL	0	18G	G16_069		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.17778	62.44732	System Intact
FDNSLock-Blown up	06ALL	0	21WP	G16_069		'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'	1022	1143	0.18677	60.73944	System Intact
FDNS	06ALL	0	21SP	G16_069	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.39205	150.6793	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21L	G16_069	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.36557	126.9526	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21WP	G16_069	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.39938	119.8386	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	18G	G16_069	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.29339	119.2235	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	18SP	G16_069	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.29511	117.5245	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.30882	99.8	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	21SP	G16_069	'FROM->TO'	'CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1'	89.63	89.63	0.04019	103.1464	System Intact
FDNS	06ALL	0	21SP	G16_069	'TO->FROM'	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.11008	122.4462	System Intact
FDNS	06ALL	0	18SP	G16_069	'TO->FROM'	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.12932	103.4881	System Intact
FDNS	06ALL	0	21SP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05632	119.3691	System Intact
FDNS	06ALL	0	21SP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05632	119.0631	System Intact
FDNS	06ALL	0	18G	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05692	114.964	System Intact
FDNS	06ALL	0	18G	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05692	114.3127	System Intact
FDNS	06ALL	0	18SP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05682	113.898	System Intact
FDNS	06ALL	0	18SP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.05682	113.6341	System Intact
FDNS	06ALL	0	21WP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05629	109.4935	System Intact
FDNS	06ALL	0	21WP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05629	109.0392	System Intact
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05981	103.514	System Intact
FDNS	06ALL	0	21L	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.04949	103.4641	System Intact
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05981	103.4032	System Intact
FDNS	06ALL	0	21L	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.04949	103.0336	System Intact
FDNSLock-Blown up	06ALL	0	21L	G16_069		'ELM CREEK - MRWYP16 230KV CKT 1'	300	300	0.04893	68.95638	System Intact
FDNS	06ALL	0	18G	G16_069	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.28412	109.0287	'TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	18G	G16_069	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.28412	109.0277	'CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL	0	21L	G16_069		'Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1'	956.09	956.09	0.1374	68.70612	System Intact
FDNS	06ALL	0	18SP	G16_069	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.20766	128.4512	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_069	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.21627	116.6262	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_069	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.20231	112.083	'BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.21663	107.2969	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.20778	104.6502	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	21SP	G16_069	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.1321	103.1448	System Intact
FDNS	06ALL	0	18SP	G16_069	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.19598	100.2458	'SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'TO->FROM'	'NEWHART 230 - PLANT X STATION 230KV CKT 1'	318.69	318.69	0.20406	99.9	'BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1'
FDNSLock-Blown up	06ALL	0	21SP	G16_069		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.35579	49.39169	System Intact
FDNSLock-Blown up	06ALL	0	18SP	G16_069		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.38784	46.88208	System Intact
FDNSLock-Blown up	06ALL	0	17WP	G16_069		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.39003	43.862	System Intact
FDNSLock-Blown up	06ALL	0	21WP	G16_069		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.35623	35.77219	System Intact
FDNSLock-Blown up	06ALL	0	26SP	G16_069		'OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1'	318.69	318.69	0.35203	32.05021	System Intact
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.24244	126.7779	'NEWHART 230 - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21892	125.1604	'ELM CREEK - MRWYP16 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.25849	123.8672	'SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.22862	123.1483	'BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.22496	122.2747	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21475	121.1127	'Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21892	120.3181	'ASGI13_03_1 69.000 69/34.5KV TRANSFORMER CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21892	120.301	'MRWYP16 - MRWYP26 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21892	120.3009	'MRWYP26 (MERDWP2) 230/34.5/13.8KV TRANSFORMER CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21912	117.9649	'PLANT X STATION - TOLK STATION EAST 230KV CKT 2'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21895	117.9649	'PLANT X STATION - TOLK STATION WEST 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21684	116.6558	'BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	115.5219	'GEN562270 1-G12-020-GEN 0.6900'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20982	115.4299	'CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	115.1483	'GEN525951 1-HALE_WND1 10.6900'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.2027	115.1479	'PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21892	114.9545	'FARMERS ELECTRIC REC-CLOVIS INTERCHANGE 115/69KV TRANSFORMER CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20742	113.6762	'GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.24284	113.2866	'NEWHART 230 - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20952	112.5595	'NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20804	112.4921	'CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21911	112.4659	'CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.2182	112.3473	'AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21639	112.1556	'NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21285	111.9526	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	111.8461	'GEN563043 1-G15068_4 0.6900'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.19688	111.7903	'NEEDMORE 230.00 - NEWTAP6 230.00

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL	0	21WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.1966	110.5877	'TUCO INTERCHANGE - YOAKUM 345 345.00 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20779	110.5115	'FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1'
FDNS	06ALL	0	18SP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.22575	110.4925	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20696	109.9116	'DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21752	109.8179	'TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20596	109.7928	'COCHRAN INTERCHANGE - NEWTAP3 115.00 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	109.7652	'GEN587373 1-G16-056-GEN10.6900'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20696	109.6677	'DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20813	109.6021	'HALE CO INTERCHANGE - PLANT X STATION 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20534	109.5896	'MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20251	109.5881	'MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20696	109.5168	'CANYON WEST SUB - DAWN SUB 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.208	109.4905	'PLANT X STATION - RKYFORD_TP 3115.00 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21407	109.4628	'JONES STATION - TUCO INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20764	109.3735	'PLANT X STATION (WH_ALM20171) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	109.3488	'GEN526332 1-JONES GEN #2 21 KV'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20907	109.302	'CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20838	109.2701	'WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	109.2624	'GEN526331 1-JONES GEN #1 22 KV'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.19911	109.1862	'NEWTAP6 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.208	109.1825	'LAMB COUNTY REC-SOUTH OLTON - RKYFORD_TP 3115.00 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20612	109.1628	'HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.208	109.1508	'LAMB COUNTY REC-SOUTH OLTON - LAMTON INTERCHANGE 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20907	109.1379	'DEAF SMITH REC-#20 - PARKER COUNTY SUB 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20596	109.0304	'COCHRAN INTERCHANGE - PACIFIC SUB 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20907	108.9851	'DEAF SMITH REC-#24 - PARKER COUNTY SUB 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20907	108.8981	'CARGILL SUB - DEAF SMITH REC-#24 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.8616	'GEN509416 1-TURK GENERATION'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.8481	'GEN509403 1-PIRKEY GENERATION'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20251	108.7938	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.205	108.7746	'G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.205	108.7746	'G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20596	108.7698	'PACIFIC SUB - SUNDOWN INTERCHANGE 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.2032	108.7311	'HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.6949	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20657	108.6753	'HALE CO INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20696	108.6409	'CANYON E_TP3115.00 - CANYON WEST SUB 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.5373	'GEN509404 1-WELSH #1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.5337	'GEN509406 1-WELSH #3'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20582	108.4783	'HALE CO INTERCHANGE - LAMTON INTERCHANGE 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20486	108.4779	'BADGER 345.00 - G16-003-TAP 345.00 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20486	108.4779	'BADGER 345.00 - G16-003-TAP 345.00 345KV CKT 2'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.4758	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20838	108.4738	'SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.4702	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20418	108.4188	'CHAN+TASCOS6230.00 - POTTER COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20907	108.4171	'CARGILL SUB - FRIONA SUB 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.398	'GEN300003 1-THOMAS HILL UNIT 3'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.3328	'GEN515226 1-MUSKOGEE 6G'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.3273	'GEN514806 1-SOONER UNIT 2'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.313	'GEN514805 1-SOONER UNIT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20467	108.2854	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20447	108.2681	'CONWAY SUB - NICHOLS STATION 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.2592	'GEN509394 1-FLINT CREEK'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.2503	'GEN520947 1-HUGO1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20453	108.2477	'BUSHLAND INTERCHANGE - HILLSIDE 115KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20453	108.2409	'BUSHLAND INTERCHANGE (WH_7001795) 230/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.2277	'GEN511843 1-RIVERSIDE STATION #2'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.2234	'GEN515225 1-MUSKOGEE 5G'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	108.2233	'GEN515223 1-MUSKOGEE 4G'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20982	107.2492	'STATELINE INTERCHANGE - SWEETWATER 230KV CKT &1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	107.2492	System Intact
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	106.91	'TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	106.8161	'GEN525820 1-TUCO Interchange SVC Bus'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	106.3105	'OKLAUN HVDC7345.00 345KV SWITCHED SHUNT'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	106.3102	'OKLAUN HVDC7345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20587	106.2822	'CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20229	106.2609	'CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	106.1512	'GEN524295 1-SPNSPUR_WND10.6900'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20407	106.1432	'P12:115:SPS:V04A.1EPLANT.RNDALL'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	106.1299	'GEN560759 1-ASGI13_02_3 0.6900'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20229	106.1226	'G16-037-TAP

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20402	105.8053	"P12:115:SPS:T38A.1.POTJCT.WIPP"
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	105.7377	'GEN524491 1-TUCUMCARI GEN'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	105.6621	'GEN524892 1-SNJN-WTG13 10.6000'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	105.6578	'GEN524890 1-SNJN-WTG1 10.6000'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20838	105.6041	"P12:115:SPS:T73.1.S_GORG.AMASTH"
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	105.5996	'GEN524896 1-SNJN-WTG21 10.6000'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	105.5969	'GEN524898 1-SNJN-WTG22 10.6000'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	105.5913	'GEN524894 1-SNJN-WTG15 10.6000'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21009	105.5646	'CUNNIGHM_S 6230.00 - HOBBS INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	105.5124	'GEN524902 1-SNJN-WTG12 10.6000'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	105.3483	'GEN562538 1-G14_035_3 0.3420'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20118	105.3064	'GRACEMONT - MINCO 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	105.2574	'GEN587473 1-G16-069-GEN10.5500'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20196	105.1243	'LAWTON EASTSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20067	105.0228	'TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20067	105.0228	'TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	104.9278	'GEN524285 1-WILDORADO WIND GEN'
FDNS	06ALL	0	18SP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21908	104.9256	'ELM CREEK - MRWYP16 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20118	104.8602	'CIMARRON - MINCO 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20196	104.8149	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	104.3584	'GEN562559 1-G14_047_3 0.4800'
FDNS	06ALL	0	18SP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.22834	104.2468	'BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	104.1626	'GEN562962 1-G15058_3 0.4180'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.19688	104.1044	'NEEDMORE 230.00 - TOLK STATION WEST 230KV CKT 1'
FDNS	06ALL	0	18SP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21549	104.0577	'Hitcland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21725	103.8453	'CUNNIGHM_S 6230.00 - CUNNINGHAM STATION 230KV CKT *1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	103.6491	'GEN528361 1-MADDOX GEN #1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	103.6219	'GEN527651 1-RSVLT_WIND110.6900'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20709	103.29	'TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	102.9871	'GEN527882 1-CUNNINGHAM GEN #2 20 KV'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	102.7883	'GEN527461 1-CHVS_SOLAR110.3420'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	102.784	'GEN527451 1-RSWL_SOLAR110.3420'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.19619	102.7815	'BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	102.7056	'GEN527162 1-MUSTANG GEN #2'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	102.7053	'GEN527161 1-MUSTANG GEN #1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	102.2124	'GEN527163 1-MUSTANG GEN #3 22 KV'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	102.1966	'GEN523973 1-HARRINGTON GEN #3 24 KV'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	102.195	'GEN523971 1-HARRINGTON GEN #1 24 KV'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	102.1927	'GEN523972 1-HARRINGTON GEN #2 24 KV'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	102.1409	'GEN587113 1-G16-015-GEN10.4180'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	102.1379	'GEN524485 1-CAPROCK WIND GEN'
FDNS	06ALL	0	18SP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21908	101.5927	'ASG13_03_1 69.000 69/34.5KV TRANSFORMER CKT 1'
FDNS	06ALL	0	18SP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21908	101.5613	'MRWYP26 (MERDWP2) 230/34.5/13.8KV TRANSFORMER CKT 1'
FDNS	06ALL	0	18SP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21908	101.5607	'MRWYP16 - MRWYP26 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	101.1299	'GEN527901 1-HOBBS PLANT #1 (CT)'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	101.1299	'GEN527902 1-HOBBS PLANT #2 (CT)'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	101.025	'GEN563142 1-G15079_3 0.5500'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	101.025	'GEN563151 1-G15080_2 0.5500'
FDNS	06ALL	0	18SP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21991	100.4453	'PLANT X STATION - TOLK STATION EAST 230KV CKT 2'
FDNS	06ALL	0	18SP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.21973	100.4453	'PLANT X STATION - TOLK STATION WEST 230KV CKT 1'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	100.2217	'GEN562704 1-G15_020_3 0.3550'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	100.1882	'GEN562688 1-G15_014_3 0.6900'
FDNS	06ALL	0	17WP	G16_069	'FROM->TO'	'TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1'	318.69	318.69	0.20394	100	'GEN562942 1-G15056_3 0.6900'
FDNS	06ALL	2	21WP	G16_069	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21011	105.4291	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21SP	G16_069	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21033	104.3391	'SUNNYSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21WP	G16_069	'TO->FROM'	'CIMARRON - MINCO 345KV CKT 1'	956	956	0.21011	100	'LAWTON EASTSIDE - TERRYRD7 345.00 345KV CKT 1'
FDNS	06ALL	2	21SP	G16_069	'TO->FROM'	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 2'	956	1042	0.24116	120.2422	'CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1'
FDNS	06ALL	2	21SP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06094	123.817	System Intact
FDNS	06ALL	2	21SP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06094	123.3919	System Intact
FDNS	06ALL	2	18G	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06243	121.6555	System Intact
FDNS	06ALL	2	18G	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06243	120.8819	System Intact
FDNS	06ALL	2	18SP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06225	118.8225	System Intact
FDNS	06ALL	2	18SP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	272	316	0.06225	118.4975	System Intact
FDNS	06ALL	2	21WP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06086	115.9986	System Intact
FDNS	06ALL	2	21WP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06086	115.4342	System Intact
FDNS	06ALL	2	21L	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05376	110.5034	System Intact
FDNS	06ALL	2	21L	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.05376	109.9167	System Intact
FDNS	06ALL	2	17WP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06553	109.3197	System Intact
FDNS	06ALL	2	17WP	G16_069	'FROM->TO'	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'	287	316	0.06553	109.187	System Intact
FDNS	06ALL	2	18G	G16_069	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.28299	108.9614	"P12:345:SPS:J18.1.HOBBS.YOAKUM"
FDNS	06ALL	2	18G	G16_069	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.2819	108.0036	'CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL	3	18G	G16_069	'FROM->TO'	'G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	377.65	377.65	0.28309	109.0217	"P12:345:SPS:J18.1.HOBBS.YOAKUM"
FDNS	06ALL	3									

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL	0	21WP	G16_071	'FROM->TO'	'CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1'	106	130	1	181.0642	System Intact
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69873	166.8239	'MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69873	165.2303	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69873	163.7727	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69862	163.1009	'MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69862	161.9058	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69873	160.8507	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69862	159.5678	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69862	157.7482	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69773	153.5293	'MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2548	153.2013	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25371	153.0319	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69773	152.1358	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25975	151.6955	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25874	151.1591	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69773	149.9967	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.69773	146.7688	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.35465	144.0021	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2548	143.1522	'G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25371	142.7618	'G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.35419	142.4251	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.4384	140.8627	'MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.4384	140.285	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27936	140.0198	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25901	139.829	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27936	139.6679	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25826	139.6061	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27859	139.3086	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.4384	139.2395	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28826	139.1922	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27859	138.976	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.4384	138.5599	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28826	138.3472	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28742	138.1047	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28742	137.1331	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28826	137.1111	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28554	136.6422	'MDFRTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25901	136.3674	'TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25826	136.1624	'TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27936	136.1011	'CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25493	135.9123	'G15052_T 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27849	135.9073	'CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28742	135.8555	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28826	135.4769	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28473	135.3452	'MDFRTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	134.6782	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28554	134.5037	'MDFRTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.43792	133.9749	'MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28473	133.965	'MDFRTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28742	133.9465	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27936	133.4395	'BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	133.3394	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27849	132.9443	'BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2548	132.8184	'OPENSKY7 345.00 - RANCHRDT 345.00 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.43792	132.7734	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25628	132.5385	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25371	132.4599	'OPENSKY7 345.00 - RANCHRDT 345.00 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27936	132.0291	'BELL - PECK 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25556	131.7215	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.43792	131.7206	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25678	131.5755	'MORISNT4 138.00 - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27849	131.4464	'BELL - PECK 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26127	131.0635	'OSAGE - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25601	130.703	'MORISNT4 138.00 - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25628	130.6052	'G15063_T 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25632	130.5734	'CLEVELAND - TULSA NORTH 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25975	130.4688	'RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25596	130.3722	'CLEVELAND - G15066_T 345.00 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.24984	130.2555	'EL PASO - ROSE HILL 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26127	130.1401	'FAIRFAX TAP - SHIDLER 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26127	130.14	'FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2491	130.0875	'EL PASO - ROSE HILL 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25697	129.4417	'SHIDLER - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25697	129.3633	'PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.43735	129.3095	'MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27849	129.2463	'GILL ENERGY CENTER WEST - HAYSVJS2 69.000 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27849	129.2462	'HAYSVJS2 69.000 - PECK 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25596	129.2045	'G15066_T 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	129.1636	'GEN532651 1-JEFFREY ENERGY CENTER UNIT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	129.1556	'GEN532652 1-JEFFREY ENERGY CENTER UNIT 2'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	129.1557	'GEN532653 1-JEFFREY ENERGY CENTER UNIT 3'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25697	129.1465	'DOMES - PAWHUSKA TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	129.1456	'GEN640009 1-COOPER NUCLEAR STATION'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26048	129.0606	'FAIRFAX TAP - SHIDLER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26048	129.0605	'FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2559	129.0233	'RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2559	128.9441	'RENFROW4 138.00 - WAKITA_138 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	128.897	'GEN542955 1-LACYGNE UNIT #1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25697	128.8908	'DOMES - MOUND ROAD 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	128.8864	'GEN542962 2-IATAN UNIT #2'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25514	128.8421	'DELAWARE - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.43717	128.7127	'MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	128.6572	'GEN542956 2-LACYGNE UNIT #2'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	128.6028	'GEN562902 1-G15052_3 0.6900'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25599	128.5557	'MORISNT4 138.00 - SOONER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25619	128.5541	'SHIDLER - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	128.5415	'GEN635024 4-WALTER SCOTT UNIT 4'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25579	128.5327	'MCELROY - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	128.4883	'GEN542957 1-IATAN UNIT #1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25619	128.4848	'PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25519	128.4071	'G15066_T 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25423	128.3994	'DELAWARE - NORTHEAST STATION 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	128.3261	'GEN532720 1-CANEYWF1 0.6900'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	128.276	'GEN532651 1-JEFFREY ENERGY CENTER UNIT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	128.2753	'GEN532652 1-JEFFREY ENERGY CENTER UNIT 2'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	128.2749	'GEN532653 1-JEFFREY ENERGY CENTER UNIT 3'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25622	128.24	'BUTLER COUNTY NO. 10 BENTON - WEAVER 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.43735	128.2185	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25619	128.1987	'DOMES - PAWHUSKA TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25514	128.1821	'RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25514	128.0811	'RENFROW4 138.00 - WAKITA_138 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25619	127.9744	'DOMES - MOUND ROAD 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	127.7595	'GEN542962 2-IATAN UNIT #2'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25387	127.6673	'WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25522	127.6302	'MORISNT4 138.00 - SOONER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25429	127.6053	'DELAWARE - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.43717	127.6006	'NEWKIRK4 - PECKHAM TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	127.5532	'GEN562902 1-G15052_3 0.6900'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25503	127.5522	'MCELROY - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25448	127.5302	'GRDA1 - GREC TAP5 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	127.4929	'GEN542956 2-LACYGNE UNIT #2'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25496	127.4567	'SANDY_CN 138138.00 - WAKITA_138 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25473	127.3414	'SOONER - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25547	127.326	'BUTLER COUNTY NO. 10 BENTON - WEAVER 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25331	127.2907	'ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25473	127.278	'NORTHWEST - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.35481	127.0242	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25913	126.4607	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25493	126.4008	'G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	126.3476	System Intact
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.43735	126.3384	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.43717	125.7054	'NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	125.4268	System Intact
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	124.3937	'GEN336153 1-WATERFORD UNIT#3'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26553	124.3039	'DMNCRKT4 - MILLER 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25482	124.2945	'BLACKBERRY - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	124.2794	'GEN587463 1-G16-068-GEN10.6900'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	124.2515	'GEN562992 1-G15063_3 0.6900'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25435	124.2223	'BOEING - BOEINGW4 138.00 138KV CKT 21'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	124.1907	'GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26553	124.1298	'MILLER - SOONER 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26228	124.1024	'OSAGE - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	124.0685	'GEN562882 1-G15047_3 0.6900'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26228	124.0246	'SOONER - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.43735	124.002	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	124.0006	'GEN336821 1-GRAND GULF UNIT'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	123.8787	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25435	123.7171	'BOEING - STEARMAN 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26591	123.6822	'WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	123.6067	'GEN336153 1-WATERFORD UNIT#3'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25316	123.58	'LATHAM57 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2536	123.5757	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	123.4457	'GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	123.3998	'GEN587413 1-G16-061-GEN10.6900'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	123.33	'GEN587463 1-G16-068-GEN10.6900'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.43717	123.3153	'KILDARE4 - NWKRKAT4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	123.278	'GEN562992 1-G15063_3 0.6900'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	123.2691	'GEN336821 1-GRAND GULF UNIT'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	123.2338	'GEN301382 1-10SAGEWINDG10.6900'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25246	123.1666	'LATHAMS7 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	123.1559	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	123.1241	'GEN515483 1-BLKWLWD1 0.6900'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	123.1151	'GEN562882 1-G15047_3 0.6900'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2536	123.0868	'BOEING - BOEINGW4 138.00 138KV CKT Z1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26486	122.9866	'DMNCRKT4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25913	122.7511	'TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26486	122.7459	'DMNCRKT4 - MILLER 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	122.6576	'GEN562611 1-G14_064_3 0.6900'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28828	122.62	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2536	122.6118	'BOEING - STEARMAN 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26486	122.6003	'MILLER - SOONER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2616	122.5933	'OSAGE - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2616	122.5192	'SOONER - SOONER PUMP TAP 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.29919	122.5133	'CHIKASKIA - KILDARE4 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	122.296	'GEN301382 1-10SAGEWINDG10.6900'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	122.2144	'GEN515483 1-BLKWLWD1 0.6900'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	122.1821	'GEN514806 1-SOONER UNIT 2'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26509	121.9719	'WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2584	121.8725	'SUMNER 4 - VIOLA 4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.29839	121.8005	'CHIKASKIA - KILDARE4 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	121.7064	'GEN562611 1-G14_064_3 0.6900'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.23129	121.6503	'EL PASO - ELPASOE4 138.00 138KV CKT Z1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.23061	121.5957	'EL PASO - ELPASOE4 138.00 138KV CKT Z1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25281	121.5828	'59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28828	121.3121	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25281	121.2334	'59TH ST - EL PASO 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27896	120.9698	'CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28554	120.9026	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28554	120.9002	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25316	120.3255	'CANERYV7 345.00 - LATHAMS7 345.00 345KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25205	120.2581	'59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25246	119.9547	'CANERYV7 345.00 - LATHAMS7 345.00 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28595	119.9332	'MDFRDTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25205	119.9121	'59TH ST - EL PASO 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2753	119.6725	'RENFROW7 345.00 (RENFROW2) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28473	119.5878	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28473	119.5859	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28828	119.4816	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27943	119.1724	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.24531	119.0848	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.24359	118.8627	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27943	118.6884	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27454	118.6529	'RENFROW7 345.00 (RENFROW2) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	118.4786	'GEN562691 1-G15_015_3 0.6900'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25753	118.4507	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25363	118.2666	'WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	118.1935	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25299	118.1413	'WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25969	117.7884	'RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.24307	117.7222	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	117.5603	'GEN562691 1-G15_015_3 0.6900'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28595	117.5503	'MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25517	117.3858	'GEN514805 1-SOONER UNIT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25316	117.134	'CANERYV7 345.00 - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25493	117.1178	'OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27896	117.0999	'BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28828	116.8058	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25246	116.7865	'CANERYV7 345.00 - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19645	116.7809	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19636	116.2426	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.24297	116.2065	'KILDARE4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25363	116.1349	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25705	116.1019	'MORISNT4 138.00 - STILLWATER 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25299	116.0075	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19645	115.7928	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25488	115.6374	'VIOLA 7 345.00 (VIOLA TX-1) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25453	115.6131	'SUMNER 4 - VIOLA 4 138.00 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25515	115.4814	'SUMNER 4 - VIOLA 4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26129	115.3003	'OSAGE - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	115.2301	'GEN514805 1-SOONER UNIT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19636	115.1966	'RICHLAND - UDALL

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25628	114.6629	'G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19645	114.4375	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26129	114.3512	'FAIRFAX TAP - SHIDLER 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26129	114.351	'FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25626	114.1552	'CLEVELAND - TULSA NORTH 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25594	113.9777	'CLEVELAND - G15066_T 345.00 345KV CKT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19636	113.7776	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	18G	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25371	113.7262	'RANCHR7 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	17WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2548	113.6335	'RANCHR7 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25028	113.6152	'EL PASO - ROSE HILL 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19627	113.6092	'MDFRTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	113.5125	'GEN532722 1-EVANS ENERGY CENTER UNIT 2'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25698	113.4405	'SHIDLER - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25698	113.3561	'PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19694	113.3283	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.23107	113.2973	'EL PASO - ELPASOE4 138.00 138KV CKT 21'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19619	113.2177	'MDFRTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25628	113.1774	'G15063_T 345.00 - WOODRING 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	113.1333	'GEN532652 1-JEFFREY ENERGY CENTER UNIT 2'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	113.1332	'GEN532653 1-JEFFREY ENERGY CENTER UNIT 3'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	113.1308	'GEN532651 1-JEFFREY ENERGY CENTER UNIT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2552	113.0503	'DELAWARE - NORTHEAST STATION 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25698	113.0137	'DOMES - PAWHUSKA TAP 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	113.0078	'GEN542955 1-LACYGNE UNIT #1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25594	112.987	'G15066_T 345.00 - SOONER 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	112.8853	'GEN542962 2-IATAN UNIT #2'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25618	112.8393	'MORISNT4 138.00 - SOONER 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25698	112.7328	'DOMES - MOUND ROAD 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19694	112.6997	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25593	112.6634	'RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	112.6474	'GEN542956 2-LACYGNE UNIT #2'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25593	112.5568	'RENFROW4 138.00 - WAKITA_138 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	112.4813	'GEN562902 1-G15052_3 0.6900'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19645	112.4776	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	112.4766	'GEN542957 1-IATAN UNIT #1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25632	112.4604	'BUTLER COUNTY NO. 10 BENTON - WEAVER 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2556	112.3694	'NORTHWEST - SPRING CREEK 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25632	112.257	'BUTLER COUNTY NO. 10 BENTON - MOBIL 69KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19694	111.7968	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19627	111.7784	'MDFRTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19636	111.7266	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19668	111.6188	'MDFRTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19619	111.3817	'MDFRTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19694	110.6202	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.1994	110.3437	'MDFRTP4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	110.2919	System Intact
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19668	109.9427	'MDFRTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.1998	109.7798	'TIMBER JUNCTION - UDALL 69KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.1994	109.5254	'MDFRTP4 138.00 - RENFROW4 138.00 138KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.1998	109.4974	'RICHLAND - UDALL 69KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.1998	109.1382	'RICHLAND - ROSE HILL JUNCTION 69KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19563	108.7093	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.1998	108.6894	'ROSE HILL JUNCTION - WEAVER 69KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19563	108.6045	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25492	108.409	'RENO COUNTY - WICHITA 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	108.397	'GEN501801 1-DOLET HILLS UNIT1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.256	108.3663	'WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	108.301	'GEN562882 1-G15047_3 0.6900'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	108.2943	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	108.1605	'GEN336153 1-WATERFORD UNIT#3'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	108.0644	'BOEING - BOEINGW4 138.00 138KV CKT 21'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.17804	108.0351	System Intact
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	108.0181	'GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2541	107.9721	'47TH ST4 138.00 - SIXTY-FOURTH (64TH) 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25345	107.8044	'LATHAMS7 345.00 - ROSE HILL 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.2541	107.7912	'47TH ST4 138.00 - ELPASOE4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	107.6863	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	107.6832	'GEN336821 1-GRAND GULF UNIT'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25441	107.6028	'BOEING - STEARMAN 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.29965	107.5926	'CHIKASKIA - KILDARE4 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	107.5346	'GEN514806 1-SOONER UNIT 2'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26564	107.3691	'DMNCRKT4 - WHITE EAGLE 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	107.309	'GEN301382 1-10SAGEWINDG10.6900'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19563	107.3076	'CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.17797	107.2453	System Intact
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	107.1458	'GEN515483 1-BLKWLDW1 0.6900'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26564	106.9747	'DMNCRKT4 - MILLER 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26885	106.9597	'SOONER (SOONERS) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	106.9143	'GEN562611 1-G14_064_3 0.6900'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26239	106	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26564	106.753	'MILLER - SOONER 138KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19563	106.3642	'BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19563	105.9857	'BELL - PECK 69KV CKT 1'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.20494	105.8439	'CHIKASKIA - KILDARE4 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.17847	105.5532	System Intact
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19563	105.437	'HAYSVJS2 69.000 - PECK 69KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19563	105.4357	'GILL ENERGY CENTER WEST - HAYSVJS2 69.000 69KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.26592	104.8756	'WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25345	104.7693	'CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28595	104.1666	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.28595	104.163	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19627	103.7712	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	21SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19627	103.7703	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19619	103.3686	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	26SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19619	103.368	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25386	103.1519	'WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.20534	103.0703	'CHIKASKIA - KILDARE4 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	102.6913	'GEN562691 1-G15_015_3 0.6900'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.18109	102.6546	System Intact
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25345	101.747	'CANEYRV7 345.00 - NEOSHO 345KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19668	101.6748	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	21WP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.19668	101.6734	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.27573	101.2394	'RENFROW7 345.00 (RENFROW2) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25386	101.1338	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'
FDNS	08ALL	0	18SP	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.25525	100.9051	'GEN514805 1-SOONER UNIT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.1994	100.1517	'CHIKASKIA - COYOTE 4 138.00 138KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1'	160	160	0.1994	100.1451	'COYOTE 4 138.00 - RDRUNNR 138.00 138KV CKT 1'
FDNS	08ALL	0	21L	G16_071	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.09765	101.3822	System Intact
FDNS	08ALL	2	21L	G16_071	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.09768	101.4075	System Intact
FDNS	08ALL	0	21L	G16_073	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.1044	101.3822	System Intact
FDNS	08ALL	2	21L	G16_073	'TO->FROM'	'LACYGNE - WAVERLY7 345.00 345KV CKT 1'	1141	1254	0.1044	101.4075	System Intact

11.9 G-V: VOLTAGE POWER FLOW ANALYSIS (CONSTRAINTS REQUIRING TRANSMISSION REINFORCEMENT)

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	MONITORED ELEMENT	BC Voltage (PU)	TC Voltage (PU)	Voltage Differ (PU)	VINIT (PU)	VMIN (PU)	VMAX(PU)	TDF	CONTINGENCY	
FDNS	06ALL		5	18G	ASGI_16_002	'ASGI13_03_1 69.000 69KV'	0.952642	0.899929	0.0527125	0.94386	0.9	1.05	0.18944	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	18G	ASGI_16_002	'ASGI13_03_1 69.000 69KV'	0.976763	0.943862	0.0329016	0.94386	0.95	1.05	0.03179	System Intact
FDNS	06ALL		5	18SP	ASGI_16_002	'ASGI13_03_1 69.000 69KV'	0.974881	0.947139	0.0277422	0.94714	0.95	1.05	0.03174	System Intact
FDNS	06ALL		5	21L	ASGI_16_002	'ASGI13_03_1 69.000 69KV'	1	0.8817	0.1183	0.93386	0.9	1.05	0.17127	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21SP	ASGI_16_002	'ASGI13_03_1 69.000 69KV'	0.932531	0.886763	0.0457684	0.92708	0.9	1.05	0.21322	'P12:345:SPS:J18.1.HOBBS.YOAKUM"
FDNS	06ALL		5	21SP	ASGI_16_002	'ASGI13_03_1 69.000 69KV'	0.931836	0.878634	0.0532026	0.92708	0.9	1.05	0.18514	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21SP	ASGI_16_002	'ASGI13_03_1 69.000 69KV'	0.960678	0.927075	0.0336028	0.92708	0.95	1.05	0.03156	System Intact
FDNS	06ALL		5	21WP	ASGI_16_002	'ASGI13_03_1 69.000 69KV'	0.944752	0.899826	0.044926	0.93911	0.9	1.05	0.18648	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21WP	ASGI_16_002	'ASGI13_03_1 69.000 69KV'	0.968848	0.939108	0.02974	0.93911	0.95	1.05	0.03176	System Intact
FDNS	06ALL		5	21L	ASGI_16_002	'G16-045-SUB2345.00 345KV'	1	1.068996	0.068996	1.07585	0.9	1.05	0.17127	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	18G	ASGI_16_04	'ASGI13_03_1 69.000 69KV'	0.952642	0.899929	0.0527125	0.94386	0.9	1.05	0.12558	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21L	ASGI_16_04	'ASGI13_03_1 69.000 69KV'	1	0.8817	0.1183	0.93386	0.9	1.05	0.10674	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21SP	ASGI_16_04	'ASGI13_03_1 69.000 69KV'	0.931836	0.878634	0.0532026	0.92708	0.9	1.05	0.1206	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21SP	ASGI_16_04	'ASGI13_03_1 69.000 69KV'	0.932531	0.886763	0.0457684	0.92708	0.9	1.05	0.08373	'P12:345:SPS:J18.1.HOBBS.YOAKUM"
FDNS	06ALL		5	21WP	ASGI_16_04	'ASGI13_03_1 69.000 69KV'	0.944752	0.899826	0.044926	0.93911	0.9	1.05	0.12193	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21L	ASGI_16_04	'G16-045-SUB2345.00 345KV'	1	1.068996	0.068996	1.07585	0.9	1.05	0.10674	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21WP	ASGI_16_04	'SHAMROCK 115KV'	1	1.07557	0.0755701	0.99663	0.9	1.05	0.03824	'P12:115:SPS:T56.2.DC_S.MUSTG"
FDNS	06ALL		5	21WP	ASGI_16_04	'SHAMROCK 115KV'	1	1.07557	0.0755701	0.99663	0.92	1.05	0.03824	'P12:115:SPS:T56.2.DC_S.MUSTG"
FDNS		0	4	21SP	G16_005	'G16-045-SUB2345.00 345KV'	1.026723	1.079083		0.0523599	1.07283	0.9	1.05	SINGLE
FDNS		0	4	21WP	G16_005	'G16-045-SUB2345.00 345KV'	1.021635	1.079811		0.0581765	1.07341	0.9	1.05	SINGLE
FDNS		0	4	26SP	G16_005	'G16-045-SUB2345.00 345KV'	1.024451	1.078735		0.0542835	1.07283	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_005	'GREENSBURG 115KV'	0.915281	0.889648		0.0256326	0.95112	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_005	'GREENSBURG 115KV'	0.915281	0.889648		0.0256326	0.95112	0.9	1.05	SINGLE
FDNS	03NR		4	21L	G16_005	'RENO COUNTY 345KV'	0.981668	0.947261	0.0344077	0.9866	0.95	1.05	0.04034	'RENO COUNTY - WICHITA 345KV CKT 1'
FDNS	03ALL		4	26SP	G16_005	'SUN CITY 115KV'	0.914661	0.893559		0.0211022	0.95157	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_005	'SUN CITY 115KV'	0.914661	0.893559		0.0211022	0.95157	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_005	'WOLF CREEK 345KV'	1	1.030266		0.0302656	1.015	0.985	1.03	GENOUT
FDNS	06ALL		5	18G	G16_015	'ASGI13_03_1 69.000 69KV'	0.952642	0.899929	0.0527125	0.94386	0.9	1.05	0.18546	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	18G	G16_015	'ASGI13_03_1 69.000 69KV'	0.976763	0.943862	0.0329016	0.94386	0.95	1.05	0.03463	System Intact
FDNS	06ALL		5	18SP	G16_015	'ASGI13_03_1 69.000 69KV'	0.974881	0.947139	0.0277422	0.94714	0.95	1.05	0.03471	System Intact
FDNS	06ALL		5	21L	G16_015	'ASGI13_03_1 69.000 69KV'	1	0.8817	0.1183	0.93386	0.9	1.05	0.16697	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21L	G16_015	'ASGI13_03_1 69.000 69KV'	0.960595	0.933861	0.0267338	0.93386	0.95	1.05	0.03139	System Intact
FDNS	06ALL		5	21SP	G16_015	'ASGI13_03_1 69.000 69KV'	0.932531	0.886763	0.0457684	0.92708	0.9	1.05	0.55538	'P12:345:SPS:J18.1.HOBBS.YOAKUM"
FDNS	06ALL		5	21SP	G16_015	'ASGI13_03_1 69.000 69KV'	0.931836	0.878634	0.0532026	0.92708	0.9	1.05	0.18084	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21SP	G16_015	'ASGI13_03_1 69.000 69KV'	0.960678	0.927075	0.0336028	0.92708	0.95	1.05	0.03452	System Intact
FDNS	06ALL		5	21WP	G16_015	'ASGI13_03_1 69.000 69KV'	0.944752	0.899826	0.044926	0.93911	0.9	1.05	0.18218	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21WP	G16_015	'ASGI13_03_1 69.000 69KV'	0.968848	0.939108	0.02974	0.93911	0.95	1.05	0.03472	System Intact
FDNS	06ALL		5	21L	G16_015	'G16-045-SUB2345.00 345KV'	1	1.068996	0.068996	1.07585	0.9	1.05	0.16697	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNSLock	03ALL		4	21SP	G16_016	'COLBY2 69KV'	0.908664	0.874327		0.0343374	0.9952	0.9	1.05	NONSINGLE
FDNS		0	4	21SP	G16_016	'G16-045-SUB2345.00 345KV'	1.026723	1.079083		0.0523599	1.07283	0.9	1.05	SINGLE
FDNS		0	4	21WP	G16_016	'G16-045-SUB2345.00 345KV'	1.021635	1.079811		0.0581765	1.07341	0.9	1.05	SINGLE
FDNS		0	4	26SP	G16_016	'G16-045-SUB2345.00 345KV'	1.024451	1.078735		0.0542835	1.07283	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_016	'GREENSBURG 115KV'	0.915281	0.889648		0.0256326	0.95112	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_016	'GREENSBURG 115KV'	0.915281	0.889648		0.0256326	0.95112	0.9	1.05	SINGLE
FDNS	03ALL		4	17WP	G16_016	'SEWRDMW3 115KV'	1.023702	1.117841		0.0941386	1.01504	0.9	1.05	SINGLE
FDNS	03ALL		4	21WP	G16_016	'SEWRDMW3 115KV'	1.010866	1.116245		0.105379	1.01315	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_016	'SUN CITY 115KV'	0.914661	0.893559		0.0211022	0.95157	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_016	'SUN CITY 115KV'	0.914661	0.893559		0.0211022	0.95157	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_016	'WOLF CREEK 345KV'	1	1.030266		0.0302656	1.015	0.985	1.03	GENOUT
FDNS	08ALL		3	17WP	G16_022	'WOLF CREEK 345KV'	1.005976	0.984572	0.0214044	1.015	0.985	1.03	0.3788	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	08ALL		3	17WP	G16_031	'WOLF CREEK 345KV'	1.005976	0.984572	0.0214044	1.015	0.985	1.03	0.3788	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	08ALL		3	17WP	G16_032	'WOLF CREEK 345KV'	1.005976	0.984572	0.0214044	1.015	0.985	1.03	0.07117	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS		0	4	21SP	G16_046	'G16-045-SUB2345.00 345KV'	1.026723	1.079083		0.0523599	1.07283	0.9	1.05	SINGLE
FDNS		0	4	21WP	G16_046	'G16-045-SUB2345.00 345KV'	1.021635	1.079811		0.0581765	1.07341	0.9	1.05	SINGLE
FDNS		0	4	26SP	G16_046	'G16-045-SUB2345.00 345KV'	1.024451	1.078735		0.0542835	1.07283	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_046	'GREENSBURG 115KV'	0.915281	0.889648		0.0256326	0.95112	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_046	'GREENSBURG 115KV'	0.915281	0.889648		0.0256326	0.95112	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_046	'SUN CITY 115KV'	0.914661	0.893559		0.0211022	0.95157	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_046	'SUN CITY 115KV'	0.914661	0.893559		0.0211022	0.95157	0.9	1.05	SINGLE
FDNS	03ALL		4	26SP	G16_046	'WOLF CREEK 345KV'	1	1.030266		0.0302656	1.015	0.985	1.03	GENOUT
FDNS	06ALL		5	18G	G16_056	'ASGI13_03_1 69.000 69KV'	0.952642	0.899929	0.0527125	0.94386	0.9	1.05	0.19155	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	18G	G16_056	'ASGI13_03_1 69.000 69KV'	0.976763	0.943862	0.0329016	0.94386	0.95	1.05	0.03121	System Intact
FDNS	06ALL		5	18SP	G16_056	'ASGI13_03_1 69.000 69KV'	0.974881	0.947139	0.0277422	0.94714	0.95	1.05	0.03116	System Intact
FDNS	06ALL		5	21L	G16_056	'ASGI13_03_1 69.000 69KV'	1	0.8817	0.1183	0.93386	0.9	1.05	0.17341	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21SP	G16_056	'ASGI13_03_1 69.000 69KV'	0.931836	0.878634	0.0532026	0.92708	0.9	1.05	0.18729	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21SP	G16_056	'ASGI13_03_1 69.000 69KV'	0.932531	0.886763	0.0457684	0.92708	0.9	1.05	0.14061	'P12:345:SPS:J18.1.HOBBS.YOAKUM"
FDNS	06ALL		5	21SP	G16_056	'ASGI13_03_1 69.000 69KV'	0.960678	0.927075	0.0336028	0.92708	0.95	1.05	0.03097	System Intact
FDNS	06ALL		5	21WP	G16_056	'ASGI13_03_1 69.00								

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	MONITORED ELEMENT	BC Voltage (PU)	TC Voltage (PU)	Voltage Differ (PU)	VINIT (PU)	VMIN (PU)	VMAX(PU)	TDF	CONTINGENCY	
FDNS		0	3	26SP	G16_060	'G16-045-SUB2345.00 345KV'	1.024921	1.078581	0.0536604	1.07279	0.9	1.05	0.03589	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'
FDNS	08ALL		3	17WP	G16_060	'TC-ROCK 138KV'	1	0.892157	0.107843	0.98652	0.9	1.05	0.07656	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL		3	17WP	G16_060	'TC-ROCK 138KV'	1	0.892157	0.107843	0.98652	0.93	1.05	0.07656	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL		3	21L	G16_060	'TC-ROCK 138KV'	0.890423	0.914834	0.024411	0.98947	0.93	1.05	0.05315	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS		0	3	26SP	G16_060	'TC-ROCK 138KV'	0.979128	0.888617	0.0905108	1.00845	0.9	1.05	0.05344	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS		0	3	26SP	G16_060	'TC-ROCK 138KV'	0.979128	0.888617	0.0905108	1.00845	0.93	1.05	0.05344	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL		3	17WP	G16_060	'TIMBJCT4 138KV'	1	0.892641	0.107359	0.98695	0.9	1.05	0.07656	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL		3	17WP	G16_060	'TIMBJCT4 138KV'	1	0.892641	0.107359	0.98695	0.93	1.05	0.07656	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS	08ALL		3	21L	G16_060	'TIMBJCT4 138KV'	0.890827	0.915227	0.0243998	0.98983	0.93	1.05	0.05315	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS		0	3	26SP	G16_060	'TIMBJCT4 138KV'	0.979494	0.889022	0.0904726	1.0088	0.9	1.05	0.05344	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS		0	3	26SP	G16_060	'TIMBJCT4 138KV'	0.979494	0.889022	0.0904726	1.0088	0.93	1.05	0.05344	'SUMNER 4 - TIMBJCT4 138KV CKT 1'
FDNS		0	3	18SP	G16_061	'G16-045-SUB2345.00 345KV'	1.026332	1.078876	0.052545	1.07286	0.9	1.05	0.045	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'
FDNS		0	3	21SP	G16_061	'G16-045-SUB2345.00 345KV'	1.026633	1.078862	0.0522295	1.07279	0.9	1.05	0.04312	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'
FDNS		0	3	21WP	G16_061	'G16-045-SUB2345.00 345KV'	1.021056	1.079295	0.058239	1.07331	0.9	1.05	0.04172	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'
FDNS		0	3	26SP	G16_061	'G16-045-SUB2345.00 345KV'	1.024921	1.078581	0.0536604	1.07279	0.9	1.05	0.04414	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'
FDNS	08ALL		3	17WP	G16_061	'WOLF CREEK 345KV'	1.005976	0.984572	0.0214044	1.015	0.985	1.03	0.12515	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	06ALL		5	18G	G16_062	'ASGI13_03_1 69.000 69KV'	0.952642	0.899929	0.0527125	0.94386	0.9	1.05	0.18546	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	18G	G16_062	'ASGI13_03_1 69.000 69KV'	0.976763	0.943862	0.0329016	0.94386	0.95	1.05	0.03463	System Intact
FDNS	06ALL		5	18SP	G16_062	'ASGI13_03_1 69.000 69KV'	0.974881	0.947139	0.0277422	0.94714	0.95	1.05	0.03471	System Intact
FDNS	06ALL		5	21L	G16_062	'ASGI13_03_1 69.000 69KV'	1	0.8817	0.1183	0.93386	0.9	1.05	0.16697	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21L	G16_062	'ASGI13_03_1 69.000 69KV'	0.960595	0.933861	0.0267338	0.93386	0.95	1.05	0.03139	System Intact
FDNS	06ALL		5	21SP	G16_062	'ASGI13_03_1 69.000 69KV'	0.932531	0.886763	0.0457684	0.92708	0.9	1.05	0.55538	'P12:345:SPS:J18.1.HOBBS.YOAKUM'
FDNS	06ALL		5	21SP	G16_062	'ASGI13_03_1 69.000 69KV'	0.931836	0.878634	0.0532026	0.92708	0.9	1.05	0.18084	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21SP	G16_062	'ASGI13_03_1 69.000 69KV'	0.960678	0.927075	0.0336028	0.92708	0.95	1.05	0.03452	System Intact
FDNS	06ALL		5	21WP	G16_062	'ASGI13_03_1 69.000 69KV'	0.944752	0.899826	0.044926	0.93911	0.9	1.05	0.18218	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21WP	G16_062	'ASGI13_03_1 69.000 69KV'	0.968848	0.939108	0.02974	0.93911	0.95	1.05	0.03472	System Intact
FDNS	06ALL		5	21L	G16_062	'G16-045-SUB2345.00 345KV'	1	1.068996	0.068996	1.07585	0.9	1.05	0.16697	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS		0	3	26SP	G16_068	'G16-045-SUB2345.00 345KV'	1.024921	1.078581	0.0536604	1.07279	0.9	1.05	0.10402	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'
FDNS		0	3	18SP	G16_068	'G16-045-SUB2345.00 345KV'	1.026332	1.078876	0.052545	1.07286	0.9	1.05	0.10482	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'
FDNS		0	3	21SP	G16_068	'G16-045-SUB2345.00 345KV'	1.026633	1.078862	0.0522295	1.07279	0.9	1.05	0.10299	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'
FDNS		0	3	21WP	G16_068	'G16-045-SUB2345.00 345KV'	1.021056	1.079295	0.058239	1.07331	0.9	1.05	0.10159	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'
FDNS	08ALL		3	17WP	G16_068	'WOLF CREEK 345KV'	1.005976	0.984572	0.0214044	1.015	0.985	1.03	0.08396	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	06ALL		5	18G	G16_069	'ASGI13_03_1 69.000 69KV'	0.952642	0.899929	0.0527125	0.94386	0.9	1.05	0.17372	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	18G	G16_069	'ASGI13_03_1 69.000 69KV'	0.976763	0.943862	0.0329016	0.94386	0.95	1.05	0.04505	System Intact
FDNS	06ALL		5	18SP	G16_069	'ASGI13_03_1 69.000 69KV'	0.974881	0.947139	0.0277422	0.94714	0.95	1.05	0.04479	System Intact
FDNS	06ALL		5	21L	G16_069	'ASGI13_03_1 69.000 69KV'	1	0.8817	0.1183	0.93386	0.9	1.05	0.15599	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21L	G16_069	'ASGI13_03_1 69.000 69KV'	0.960595	0.933861	0.0267338	0.93386	0.95	1.05	0.04137	System Intact
FDNS	06ALL		5	21SP	G16_069	'ASGI13_03_1 69.000 69KV'	0.932531	0.886763	0.0457684	0.92708	0.9	1.05	0.75045	'P12:345:SPS:J18.1.HOBBS.YOAKUM'
FDNS	06ALL		5	21SP	G16_069	'ASGI13_03_1 69.000 69KV'	0.931836	0.878634	0.0532026	0.92708	0.9	1.05	0.16986	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21SP	G16_069	'ASGI13_03_1 69.000 69KV'	0.960678	0.927075	0.0336028	0.92708	0.95	1.05	0.0445	System Intact
FDNS	06ALL		5	21WP	G16_069	'ASGI13_03_1 69.000 69KV'	0.944752	0.899826	0.044926	0.93911	0.9	1.05	0.17119	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	06ALL		5	21WP	G16_069	'ASGI13_03_1 69.000 69KV'	0.968848	0.939108	0.02974	0.93911	0.95	1.05	0.0447	System Intact
FDNS	06ALL		5	21L	G16_069	'G16-045-SUB2345.00 345KV'	1	1.068996	0.068996	1.07585	0.9	1.05	0.15599	'CRAWFISH_DR 345.00 - OKLAUNION 345KV CKT 1'
FDNS	08ALL		3	17WP	G16_071	'CITY OF WELLINGTON 69KV'	0.929258	0.922981	0.0927989	0.97145	0.93	1.05	0.0554	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL		3	17WP	G16_071	'CITY OF WELLINGTON 69KV'	0.927464	0.921138	0.0927989	0.97145	0.93	1.05	0.0554	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL		3	21L	G16_071	'CRESWLS2 69.000 69KV'	1.088765	1.088965	0.0243998	1.01316	0.9	1.05	0.03639	'CRESWELL - CRESWLS2 69.000 69KV CKT Z1'
FDNS	08ALL		3	21L	G16_071	'CRESWLS2 69.000 69KV'	1.088765	1.088965	0.0243998	1.01316	0.93	1.05	0.03639	'CRESWELL - CRESWLS2 69.000 69KV CKT Z1'
FDNS	08ALL		3	21L	G16_071	'PARIS 69KV'	1.05761	1.057606	0.0243998	1.0083	0.9	1.05	0.03639	'CRESWELL - CRESWLS2 69.000 69KV CKT Z1'
FDNS	08ALL		3	21L	G16_071	'PARIS 69KV'	1.05761	1.057606	0.0243998	1.0083	0.93	1.05	0.03639	'CRESWELL - CRESWLS2 69.000 69KV CKT Z1'
FDNS	08ALL		3	17WP	G16_071	'SUMNER COUNTY NO. 3 MILLER 69KV'	0.93081	0.924543	0.0927989	0.9699	0.93	1.05	0.0554	'CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL		3	17WP	G16_071	'SUMNER COUNTY NO. 3 MILLER 69KV'	0.929085	0.922771	0.0927989	0.9699	0.93	1.05	0.0554	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS	08ALL		3	17WP	G16_071	'SUMNER COUNTY NO. 4 ROME 69KV'	0.927024	0.920693	0.0927989	0.98686	0.93	1.05	0.0554	'CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1'
FDNS		0	3	18SP	G16_073	'G16-045-SUB2345.00 345KV'	1.026332	1.078876	0.052545	1.07286	0.9	1.05	0.05777	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'
FDNS		0	3	21SP	G16_073	'G16-045-SUB2345.00 345KV'	1.026633	1.078862	0.0522295	1.07279	0.9	1.05	0.05385	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'
FDNS		0	3	21WP	G16_073	'G16-045-SUB2345.00 345KV'	1.021056	1.079295	0.058239	1.07331	0.9	1.05	0.05245	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'
FDNS		0	3	26SP	G16_073	'G16-045-SUB2345.00 345KV'	1.024921	1.078581	0.0536604	1.07279	0.9	1.05	0.0548	'MATHWSN7 345.00 - NORTHWEST 345KV CKT 1'

*11.10 H-T: THERMAL POWER FLOW ANALYSIS (OTHER CONSTRAINTS NOT
REQUIRING TRANSMISSION REINFORCEMENT)*

Available upon request

*11.11 H-T-AS: AFFECTED SYSTEM THERMAL POWER FLOW ANALYSIS
(CONSTRAINTS FOR POTENTIAL UPGRADES)*

SPP analysis results available upon request

*11.12 H-V-AS: AFFECTED SYSTEM VOLTAGE POWER FLOW ANALYSIS
(CONSTRAINTS FOR POTENTIAL UPGRADES)*

SPP analysis results available upon request

11.13 I: POWER FLOW ANALYSIS (CONSTRAINTS FROM MULTI-CONTINGENCIES)

SPP analysis results available upon request

11.14 J: DYNAMIC STABILITY ANALYSIS REPORTS

11.14.1 J1: GROUP 1 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.2 J2: GROUP 2 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.3 J3: GROUP 3 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.4 J4: GROUP 4 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.5 J6: GROUP 6 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.6 J7: GROUP 7 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.7 J8: GROUP 8 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.8 J9: GROUP 9 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.9 J12: GROUP 12 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.10 J13: GROUP 13 DYNAMIC STABILITY ANALYSIS REPORT

No remaining current study requests in this group

11.14.11 J14: GROUP 14 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.12 J15: GROUP 15 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.13 J16: GROUP 16 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.14 J17: GROUP 17 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.

11.14.15 J18: GROUP 18 DYNAMIC STABILITY ANALYSIS REPORT

Previous stability analysis is still valid.