

Preliminary Interconnection
System Impact Study for
Generator Interconnection
Requests
(PISIS-2014-002)

February 2015

Generator Interconnection

Revision History

Date	Author	Change Description
2/27/2015	SPP	Report Issued (PISIS-2014-002)

Executive Summary

Generator Interconnection customers have requested a Preliminary Interconnection System Impact Study (PISIS) under the Generator Interconnection Procedures (GIP) in the Southwest Power Pool Open Access Transmission Tariff (OATT). The Interconnection Customers' requests have been clustered together for the following System Impact Cluster Study window which closed September 30, 2015. The customers will be referred to in this study as the PISIS-2014-002 Interconnection Customers. This System Impact Study analyzes the interconnecting new generation totaling approximately 1,171 MW of new generation which would be located within the transmission system of Southwestern Public Service (SPS), and American Electric Power (AEPW). The generator interconnection requests have a requested in service dates of as listed in Appendix A¹. The generator interconnection requests included in this System Impact Cluster Study are listed in Appendix A by their queue number, amount, requested interconnection service, area, requested interconnection point, proposed interconnection point, and the requested in-service date.

Power flow analysis has indicated that for the power flow cases studied, 1,171 MW of nameplate generation may be interconnected with transmission system reinforcements within the SPP transmission system. Dynamic stability and power factor analysis has determined the need for reactive compensation in accordance with FERC Order #661A for wind farm interconnection requests and those requirements are listed for each interconnection request within the contents of this report. Dynamic stability analysis has determined that the transmission system will remain stable with the assigned Network Upgrades and necessary reactive compensation requirements. A short circuit analysis has been performed with available short circuit values given in the stability study for each group in the appendices of this report.

In no way does this study guarantee operation for all periods of time. This interconnection study identifies and assigns transmission reinforcements for Energy Resource (ER) interconnection injection constraints (defined as a 20% distribution factor impact for outage based constraints and 3% distribution factor for system intact constraints) and Network Resource (NR) constraints (defined as 3% distribution factor impact), if requested by the Customer. These constraints are listed in Appendix G. This interconnection study does not assign transmission reinforcements for all potential transmission constraints. 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.

¹ The generation interconnection requests in-service dates will 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 Facility Study's time for completion of the Network Upgrades necessary.

The total estimated minimum cost for interconnecting the PISIS-2014-002 Interconnection Customers is estimated at \$497,575,000. These costs are shown in Appendix E and F. Interconnection Service to PISIS-2014-002 Interconnection Customers is also contingent upon higher queued customers paying for certain required network upgrades. **The in-service date for the PISIS customers will be deferred until the construction of these network upgrades can be completed.**

These costs do not include the Interconnection Customer Interconnection Facilities as defined by the SPP Open Access Transmission Tariff (OATT). This cost does not include additional network constraints in the SPP transmission system identified and shown in Appendix H.

Additional network constraints listed in Appendix H are in the local area of the new generation when this generation is injected throughout the SPP footprint for Energy Resource Interconnection Service (ERIS) requests. Certain Interconnection Requests were also studied for Network Resource Interconnection Service (NRIS). Those constraints are also listed in Appendix H. Constraints listed in Appendix H do not require transmission reinforcement for Interconnection Service. Additional network constraints will have to be verified with a Transmission Service Request (TSR) and associated studies. With a defined source and sink in a TSR, this list of Network Constraints will be refined and expanded to account for all Network Upgrade requirements.

The required interconnection costs listed in Appendix E and F 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 through SPP's Open Access Same Time Information System (OASIS) as required by Attachment Z1 of the SPP OATT.

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Introduction

Pursuant to the Southwest Power Pool (SPP) Open Access Transmission Tariff (OATT), SPP has conducted this Preliminary Interconnection System Impact Study (PISIS) for certain generator interconnection requests in the SPP Generator Interconnection Queue. These interconnection requests have been clustered together for the following System Impact Study window which closed September 30, 2014. The customers will be referred to in this study as the PISIS-2014-002 Interconnection Customers. This PISIS analyzes interconnecting a generator interconnection request associated with new generation totaling 1,171 MW which would be located within the transmission system of Southwestern Public Service (SPS), and American Electric Power (AEPW). The interconnection requests have a requested in service date as listed in Appendix A². The generator interconnection requests included in this System Impact Study are listed in Appendix A by their queue number, amount, requested interconnection service, area, requested interconnection point, proposed interconnection point, and the requested in-service date.

The primary objective of this PISIS is to identify the system constraints associated with connecting the generation to the area transmission system. The Impact Study and other subsequent Interconnection Studies are designed to identify required interconnection facilities, Network Upgrades and other Direct Assignment Facilities needed to accept power into the grid at each specific interconnection receipt point.

² The generation interconnection requests in-service dates will 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.

Model Development

Interconnection Requests Included in the Cluster

SPP included all interconnection requests that submitted a Preliminary Interconnection System Impact Study Agreement no later than September 30, 2014 and were subsequently accepted by Southwest Power Pool under the terms of the Generator Interconnection Procedures (GIP). The interconnection requests that are included in this study are listed in Appendix A.

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 projects were dispatched as Energy Resources with equal distribution across the SPP footprint. Prior queued projects that requested Network Resource Interconnection Service (NRIS) were dispatched in an additional analysis into the balancing authority of the interconnecting transmission owner.

Development of Base Cases

Power Flow

The 2014 series Integrated Transmission Planning models (used in the 2015ITPNT) including the 2015 (spring and summer peak seasons), the 2020 (summer and winter peak seasons), and the 2025 (summer peak season) scenario 0 cases were used for this study. After the cases were developed, each of the control areas' resources were then re-dispatched to account for the new generation requests using current dispatch orders. Planned High Priority Incremental Loads (HPILs) are accounted for in these models.

Dynamic Stability

The 2014 series SPP Model Development Working Group (MDWG) Models 2015 summer, 2015 winter, and 2025 summer peak cases were used as starting points for this study.

Short Circuit

The 2025 summer peak stability case was used for this analysis.

Base Case Upgrades

The following facilities are part of the 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 PISIS-2014-002 Interconnection Customers have not been assigned acceleration costs for the below listed projects. The PISIS-2014-002 Interconnection Customers' Generation Facilities in service dates may need to be delayed until the completion of the following upgrades. If the Interconnection Request proceeds into the DISIS Queue, it may be determined that the Interconnection Request may only go into service with Limited Operation. 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.

- 2012 Integrated Transmission Plan (2012 ITP10) Projects
 - Woodward-Tatonga-Mathewson-Cimarron 345kV transmission line, scheduled for 2021 in-service³
 - Chisholm – Gracemont 345kV transmission line, and Chisholm 345/230kV transformer circuit #1, scheduled for 3/1/2018 in-service⁴
- 2015 Integrated Transmission Plan Near Term (2015 ITPNT) Projects
 - China Draw 115kV Reactive Power Support
 - 200Mvar Capacitive and 50Mvar Inductive Static Var Compensator (SVC)
 - Road Runner 115kV Reactive Power Support
 - 200Mvar Capacitive and 50Mvar Inductive Static Var Compensator (SVC)
 - Agave Hill 115kV reactive Power Support
 - 28.8Mvar Capacitor Bank(s)
 - Potash Junction – Intrepid – IMC #1 – Livingston Ridge 115kV rebuild
 - Ponderosa Tap – Whitten 115kV rebuild
- Balanced Portfolio Projects⁵:
 - Iatan – Nashua 345/161 kV Project, scheduled for 6/1/2015 in-service
 - Iatan – Nashua 345 kV circuit #1 and associated terminal equipment
 - Nashua 345/161/13 kV autotransformer circuit #1
- High Priority Project⁶:
 - Valliant – Northwest Texarkana 345kV circuit #1
- Nebraska City – Mullin Creek – Sibley 345kV circuit #1 build, scheduled for 6/1/2017 in-service⁷
- Northwest 345/138/13.8kV circuit #3 autotransformer, scheduled for 6/1/2017 in-service⁸
- Hoskins – Neligh East 345/115kV Project⁹
 - Neligh East 345/115kV substation and transformer
 - Neligh East Area 115kV upgrades to support new station
 - Hoskins – Neligh East 345kV circuit #1
- High Priority Incremental Loads (HPILs) Projects¹⁰:
 - TUCO Interchange – Yoakum – Hobbs Interchange 345/230kV Project
 - TUCO Interchange – Yoakum – Hobbs Interchange 345kV circuit #1 and associated terminal equipment upgrades
 - Hobbs 345/230/13kV transformer circuit #1
 - Yoakum 345/230/13kV transformer circuit #1

³ SPP Notification to Construct (NTC) 200223

⁴ SPP Notification to Construct (NTC) 200240 and 200255

⁵ Notification to Construct (NTC) issued June 2009

⁶ SPP Notification to Construct (NTC) 20096

⁷ SPP Notification to Construct (NTC) 20097 and 20098

⁸ SPP Transmission Service Project identified in SPP 2009-AG2-AFS6. Per SPP NTC 20137

⁹ SPP Regional Reliability 2012 ITP 10 Project Per SPP-NTC-200220

¹⁰ Per Network Upgrades assigned in High Priority Incremental Loads (HPILs) study, Including Direct Assigned Upgrades, Projects in SPP-NTC-200256 and SPP-NTC-200283.

- Battle Axe – Road Runner 115kV circuit #1
- Chaves County – Price – CV Pines – Capitan 115kV circuit #1
- China Draw – Yeso Hills 115kV circuit #1
- Dollarhide – Toboso Flats 115kV circuit #1
- Hobbs Interchange – Kiowa 345kV circuit #1
- Kiowa – North Loving – China Draw 345/115kV Projects
 - Kiowa – North Loving – China Draw circuit #1 and associated terminal equipment upgrades
 - China Draw 345/115/13kV transformer circuit #1
 - North Loving 345/115/13kV transformer circuit #1
- Kiowa – Road Runner 345/230/115kV Projects
 - Kiowa 345/230kV transformer circuit #1
 - Road Runner 345/115/13kV transformer circuit #1
- Livingston Ridge – Sage Brush – Lagarto – Cardinal 115kV circuit #1
- North Loving – South Loving 115kV circuit #1
- Ponderosa – Ponderosa Tap 115kV circuit #1
- Potash 230/115/13kV Transformer circuit #1 replacement

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 the PISIS-2014-002 study and are assumed to be in service. This list may not be all inclusive. The PISIS-2014-002 Interconnection Customers, at this time, do not have responsibility for these facilities but may later be assigned the cost of these facilities if higher queued customers terminate their Generator Interconnection Agreement or withdraw from the interconnection queue. The PISIS-2014-002 Interconnection Customer Generation Facilities in-service dates may need to be delayed until the completion of the following upgrades.

- Upgrades assigned to DISIS-2009-001 Interconnection Customers:
 - Spearville Project
 - Spearville 345/115 kV transformer circuit #1 addition
 - Spearville – North Ft. Dodge 115 kV addition
 - Ft Dodge – North Ft. Dodge circuit #2 addition
 - Move Fort Dodge terminal of Shooting Star 115kV at North Ft Dodge
 - Fort Randall – Meadow Grove – Kelly 230kV circuit #1 rerate (320MVA)
- Upgrades assigned to DISIS-2010-001 Interconnection Customers:
 - Switch 2749 – Wildorado 69kV circuit # 1 rebuild
- Upgrades assigned to DISIS-2010-002 Interconnection Customers:
 - Twin Church – Dixon County 230kV circuit #1 rerate (320MVA)
 - Buckner – Spearville 345kV terminal equipment
- Upgrades assigned to DISIS-2011-001 Interconnection Customers:
 - Hoskins – Dixon County – Twin Church 230kV circuit #1 conductor clearance increase
 - (NRIS only) New Deal – TUCO 345kV/115kV Project
 - (NRIS only) Wolfforth Interchange 230/115/13kV transformer circuit #1
 - (NRIS only) Woodward – FPL Switch – Mooreland – Glass Mountain 138kV circuit #1 rebuild

- Upgrades assigned to DISIS-2011-002 Interconnection Customers:
 - None at this time
- Upgrades assigned to DISIS-2012-001 Interconnection Customers:
 - None at this time
- Upgrades assigned to DISIS-2012-002 Interconnection Customers:
 - Amoco Wasson – Oxy Tap 230kV circuit #1 replace line traps
 - Associated Electric Cooperatives Inc. (AECI) Fairfax 138/69kV transformer replacement
 - Lake Creek – Lone Wolf 69kV circuit #1 reset CT
 - Remington – Fairfax 138kV circuit #1 conductor clearance increase
 - (NRIS only) Arkansas City – Paris – Creswell – Oak – Rainbow – City of Winfield 69kV circuit #1 rebuild
 - (NRIS only) Creswell 138/69/13kV Transformer circuit #1 and #2, replacements
- Upgrades assigned to DISIS-2013-001 Interconnection Customers:
 - None at this time
- Upgrades assigned to DISIS-2013-002 Interconnection Customers:
 - Battle Creek – County Line – Neligh East 115kV circuit #1 rebuild
- Upgrades assigned to DISIS 2014-001 Interconnection Customers
 - National Enrichment Plant – Targa – Cardinal 115kV circuit #1 rebuild
- Upgrades assigned to DISIS 2014-002 Interconnection Customers
- Upgrades assigned to DISIS 2014-002 Interconnection Customers
 - GEN-2014-007 Tap – Border – Chisholm 345kV Project
 - Chisholm 345kV Substation Expansion for terminating Border – Woodward 345kV circuit #1 into Chisholm 345kV
 - GEN-2014-007 Tap – Border – Chisholm 345kV circuit #2 build
 - Chisholm – Gracemont 345kV circuit #1 build
 - Chisholm – Potter County 345kV circuit #1 build
 - TUCO 2 345kV project
 - TUCO 2 345kV Bus
 - GEN-2014-007 Tap – TUCO 2 345kV circuit #1 build
 - TUCO – TUCO 2 – Tolk 345kV circuit #1 build
 - Tolk - Potter County 345kV circuit #1 build
 - Arnold – Ransom 115kV circuit #1 replace terminal equipment
 - Bailey County Earth – Castro County 115kV circuit #1 rebuild
 - Beaver County – Grapevine 345kV circuit #1 build
 - Border 200Mvar Static VAR Compensator (SVC) and 200Mvar Capacitor Bank(s)
 - Bushland Interchange 230/115/13.2kV transformer circuit #1 replacement
 - Bushland Interchange – Hillside 115kV circuit #1 replace terminal equipment
 - Carlisle 230/115/13kV transformer circuit #1 replacement
 - Cimarron – Minco 345kV circuit #1 replace 1600 amp switches
 - Chaves County 115kV Reactive Power support
 - Clark County 100Mvar Static VAR Compensator (SVC)
 - Elk City 230/138/13kV transformer circuit #1 upgrade terminal equipment
 - GEN-2013-059 tap – Ogallala 230kV circuit #1 replace terminal equipment
 - Gavins Point – Yankton Junction 115kV circuit #1
 - GEN-2014-067 tap – GEN-2014-068 tap 230kV circuit #1 build

- Gerald Gentleman Station Flowgate Stability Limit Mitigation
- Grapevine 345kV Substation upgrade
- Grapevine – Chisholm 345kV circuit #1 build
- Harper – Milan tap 138kV circuit #1 rebuild
- Knoll – Postrock 230kV circuit #1 rebuild
- LES – GEN-2014-057 Tap - Sunnyside 345kV circuit #1 upgrade terminal equipment
- Meadow Grove – South Norfolk 230kV circuit #1 build
- Milan Tap – Clearwater 138kV circuit #1 rebuild
- Norton 230/115kV 24Mvar capacitor bank
- Norton – Pleasant Hill 230kV circuit #1 230kV conversion
- Oasis – San Juan Tap 230kV circuit #1 replace wave trap
- Ogallala – Gerald Gentleman Station 230kV circuit #1 replace terminal equipment and increase line clearance
- Oklaunioun 150Mvar Capacitor Bank(s) and 150Mvar Static VAR Compensator (SVC)
- Petersburg – North Petersburg 115kV circuit #1 replace strain bus
- Potter County 345/230/13kV transformer circuit #2 build
- Potter County – Grapevine 345kV circuit #1 build
- Smokey Hills – Summit 230kV circuit #1 structure replacement
- South Norfolk 345/230/13.8kV transformer circuit #1
- Tolk – Potter County 345kV circuit #1 build
- (NRIS only) Andrews 230/115/13kV transformer circuit #1 and #2
- (NRIS only) Cunningham – Maddox 115kV circuit #1 rebuild
- (NRIS only) Cunningham – Potash Junction 230kV circuit #1 replace terminal equipment
- (NRIS only) Deaf Smith 21 – Deaf Smith County Interchange 115kV circuit #1 rebuild
- (NRIS only) Castro County – Deaf Smith 21 115kV circuit #1
- (NRIS only) Plant X – Tolk East 230kV rebuild
- (NRIS only) Woodward 138/69/13.2kV transformer circuit #1 replacement
- (NRIS only) Woodward – Woodward EHV 138kV circuit #1 rebuild

Potential Upgrades Not in the Base Case

Any potential upgrades that do not have a Notification to Construct (NTC) and 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.

Regional Groupings

The interconnection requests listed in Appendix A were grouped together into two active regional groups based on geographical and electrical impacts. These groupings are shown in Appendix C.

Power Flow

For Energy Resource Interconnection Service (ERIS), the generating plants were modeled at 100% nameplate of maximum generation. The generating plants in the remote areas were modeled at

20% nameplate of maximum generation. These projects were dispatched as Energy Resources with a load factor by area distribution across the SPP footprint. All generators that requested Network Resource Interconnection Service (NRIS) were dispatched in an additional analysis into the balancing authority of the interconnecting transmission owner at 100% nameplate with Energy Resource Interconnection Service (ERIS) only requests at 80% nameplate. This method allowed for the identification of network constraints that were common to the regional groupings that could then in turn have the mitigating upgrade cost allocated throughout the entire cluster.

Peaking units were not dispatched in the 2015 spring model. To study peaking units' impacts, the 2015 summer, 2020 summer and winter, and 2025 summer seasonal models were chosen and peaking units were modeled at 100% of the nameplate rating and non-dispatchable generating facilities were modeled at 10% of the nameplate rating. Each interconnection request was also modeled separately at 100% nameplate for certain analyses.

Dynamic Stability

For each group, all interconnection requests were studied at 100% nameplate output while the other groups were dispatched at 20% output for non-dispatchable requests and 100% output for thermal requests.

Identification of Network Constraints

The initial set of network constraints were found by using PSS[®]MUST First Contingency Incremental Transfer Capability (FCITC) analysis on the entire cluster grouping dispatched at the various levels mentioned above. The Energy Resource Interconnection Service (ERIS) constraints were then screened to determine which of the generation interconnection requests had at least a 20% Distribution Factor (DF) upon outage based constraints (n-1) and 3% DF upon system intact constraints (n-0). In addition, stability issues are also considered for transmission reinforcement under ERIS. Interconnection Requests that have requested Network Resource Interconnection Service (NRIS) were also studied in the NRIS analysis to determine if any constraint measured at least a 3% DF. If so, these constraints were also considered for mitigation under NRIS.

Constraints that were identified and require transmission reinforcement are listed in Appendix G. These constraints met the criteria for analysis for Energy Resource Interconnection Service and Network Resource Interconnection Service (if requested).

Other network constraints which do not require transmission reinforcements are shown in Appendix H. 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 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.

Determination of Cost Allocated Network Upgrades

Cost Allocated Network Upgrades of wind generator interconnection requests were determined using the 2015 spring model. Cost Allocated Network Upgrades of peaking units was determined using the 2020 summer peak model. A PSS[®]MUST sensitivity analysis was performed to determine the Distribution Factors (DF), a distribution factor with no contingency that each generator interconnection request had on each new upgrade. The impact each generator interconnection request had on each upgrade project was weighted by the size of each request. Finally the costs due by each request for a particular project were 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 Generator 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 Generator Interconnection request 'X' for Upgrade Project 1 is found by the following set of steps and formulas:

- Determine an Impact Factor on a given project for all responsible GI requests:

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

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

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

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

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

- 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.

Credits/Compensation for Amounts Advanced for Network Upgrades

Interconnection Customer shall be entitled to either credits or potentially Long Term Congestion Rights (LTCR)¹¹ 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 Customer.

Required Interconnection Facilities

The requirement to interconnect the 1,171 MW of 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 the cluster total an estimated \$497,575,000. Interconnection Facilities specific to each generator interconnection request are listed in Appendix E. A preliminary one-line drawing for each generator interconnection request are 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” above.

Power Flow Analysis

Power Flow Analysis Methodology

The ACCC function of PSS®E was 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 were evaluated.

Power Flow Analysis

A power flow analysis was conducted for each Interconnection Customer’s facility using modified versions of the 2015 spring and summer peak, , the 2020 summer and winter peak, and the 2025 summer peak models. The output of the Interconnection Customer’s facility was 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 pursuing Network Resource Interconnection Service (NRIS) had an additional analysis conducted for displacing resources in the interconnecting Transmission Owner’s balancing authority.

¹¹ FERC compliance filing pending

This analysis was conducted assuming that previous queued requests in the immediate area of these interconnect requests were in-service. The analysis of each Customer's project indicates that criteria violations will occur on the SPS transmission system under system intact and contingency conditions in the peak seasons.

Cluster Group 1 (Woodward Area)

In addition to the 5,233.24 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 2 (Hitchland Area)

In addition to the 3,727.7 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 3 (Spearville Area)

In addition to the 3,909.3 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 4 (NW Kansas Group)

In addition to the 2,075.9 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 5 (Amarillo Area)

In addition to the 1,617.1 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 6 (South Texas Panhandle/New Mexico)

In addition to the 5,606.5 MW of previously queued generation in the area, 399.0 MW of new interconnection service was studied. Constraints were seen on the Crossroads (GEN-2008-022 Tap) – Tolk – Potter County & Oklaunion – TUCO 345kV circuits, Amoco – Yoakum 230kV circuit, Eddy County 230/115kV transformer, Carlsbad Interchange – Pecos Interchange & Ochoa Sub – Ponderosa Tap – Whitten 115kV circuits. The constraints require building a new line from the GEN-2014-008 Interconnection Substation to Hobbs 345kV substation, building a new line from the GEN-2014-007 Interconnection Substation¹² to Grapevine County 345kV substation, installing approximately 200Mvar of switched shunt capacitors at Grapevine County 345kV, and rebuilding the existing Ochoa Sub – Ponderosa Tap – Whitten 115kV circuits. Ponderosa Tap – Whitten 115kV rebuild has been identified in the SPP 2015-ITPNT and has an issued NTC-200324.

¹² GEN-2014-007 Tap is a proposed switching station located approximately forty (40) miles from TUCO Interchange on the TUCO Interchange – Border 345kV transmission line. Grapevine is a proposed switching station located in Gray County, Texas. Grapevine 345kV switching station along with Potter – Grapevine – Chisholm 345kV circuit #1 was assigned to DISIS-2014-002 Group 6.
[DISIS-2014-002 study posting link: http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2014_Generation_Studies/DISIS-2014-002_FINAL.pdf](http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2014_Generation_Studies/DISIS-2014-002_FINAL.pdf)

ERIS/NRIS Constraints			
MONITORED ELEMENT	RATE B (MVA)	TC%LOADING (% MVA)	CONTINGENCY
Non-converged contingency	N/A	N/A	CROSSROADS 345.00 - TOLK STATION 345KV CKT 1
Non-converged contingency	N/A	N/A	OKLAUNION - TUCO INTERCHANGE 345KV CKT 1
Non-converged contingency	N/A	N/A	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
OCHOA SUB - PNDEROSATP 3115.00 115KV CKT 1	141	132.8138	HOBBS - KIOWA 7345.00 345KV CKT 1
PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1	141	153.14	HOBBS - KIOWA 7345.00 345KV CKT 1
AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	351	106.1941	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1	141	107.1355	HOBBS - KIOWA 7345.00 345KV CKT 1
EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	288	105.6387	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1

Cluster Group 7 (Southwestern Oklahoma)

In addition to the 1,950.25 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 8 (South Central Kansas/North Oklahoma)

In addition to the 4,204.2 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 9 (Nebraska)

In addition to the 2,609.46 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 10 (Southeast Oklahoma/Northeast Texas)

In addition to the 1204.0 MW of previously queued generation in the area and existing generation at the Gateway and Lebrock stations dispatched at their approved interconnection service limits, 772 MW of new interconnection service was studied. Constraints were seen on the GEN-2014-018 Tap – Tenaska Rusk County/Gateway – Lebrock – Pirkey – Diana East and Lydia – Welsh 345kV circuits and Grimes 345/138kV transformers. The constraints require building a new line from the GEN-2014-018 Interconnection Substation to Diana 345kV substation, replacing terminal equipment on the Lebrock – Pirkey 345kV circuits, rebuilding the existing Lydia – Welsh 345kV circuit, and rebuilding the existing Sabine Mining Co. Tap – Southeast Marshall – Scottsville 138KV circuits.

Analysis for Network Resource Interconnection Service (NRIS) showed that additional constraints are located on the Entergy Transmission System. If the Interconnection Request moves forward into an Interconnection Facilities Study, SPP will coordinate with Entergy and the Mid-Continent Independent System Operator (MISO) on impacts to the Entergy system.

It should be noted that this area of the SPP footprint has a documented stability limit for the existing generation on the Pirkey – Lebrock – Tenaska Rusk County/Gateway – Crockett 345kV circuits. The Gateway plant is approved to interconnect at a maximum of 634 MW into the SPP

footprint. Any additional generation installed by the PISIS-2014-002 Interconnection Customers will require new transmission reinforcements to allow any interconnection service.

ERIS/NRIS Constraints			
MONITORED ELEMENT	RATE B (MVA)	TC%LOADING (% MVA)	CONTINGENCY
Non-converged contingency	N/A	N/A	G14-018T 345.00 - TENASKA RUSK COUNTY 345KV CKT 1
Non-converged contingency	N/A	N/A	LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1
LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1	1195	117.7068	CROCKETT - G14-018T 345.00 345KV CKT 1
LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1	1195	100.558	CROCKETT - GRIMES 345KV CKT 1
LEBROCK - PIRKEY 345KV CKT 1	986	152.0862	LEBROCK - PIRKEY 345KV CKT 2
LEBROCK - PIRKEY 345KV CKT 2	986	152.7453	LEBROCK - PIRKEY 345KV CKT 1
LEBROCK - PIRKEY 345KV CKT 2	986	109.1814	CROCKETT - G14-018T 345.00 345KV CKT 1
DIANA - PIRKEY 345KV CKT 1	1243	103.158	CROCKETT - G14-018T 345.00 345KV CKT 1
LYDIA - WELSH 345KV CKT 1	1059	110.3499	NORTHWEST TEXARKANA - WELSH 345KV CKT 1
SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1	272	114.8114	DIANA - PIRKEY 345KV CKT 1
SCOTTSVILLE - SOUTHEAST MARSHALL 138KV CKT 1	272	100.0667	DIANA - PIRKEY 345KV CKT 1

Entergy Constraints with ERIS/NRIS upgrades in service			
MONITORED ELEMENT	RATE B (MVA)	TC%LOADING (% MVA)	CONTINGENCY
4BENTWATER! 138.00 - GRIMES 138KV CKT 1	206	133.9175	BASE CASE
4BENTWATER! 138.00 - GRIMES 138KV CKT 1	206	175.485	GRIMES - MT. ZION 138KV CKT 1
4BENTWATER! 138.00 - WALDEN 138KV CKT 1	206	120.4655	BASE CASE
4BENTWATER! 138.00 - WALDEN 138KV CKT 1	206	161.4796	GRIMES - MT. ZION 138KV CKT 1
4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1	112	142.0516	GRIMES - MT. ZION 138KV CKT 1
4FISHCRK - LONGMIRE 138KV CKT 1	112	135.3922	GRIMES - MT. ZION 138KV CKT 1
4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1	206	140.4025	4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1
4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1	112	150.0365	GRIMES - MT. ZION 138KV CKT 1
APRIL - LAKE FOREST 138KV CKT 1	206	137.572	GRIMES - MT. ZION 138KV CKT 1
APRIL - WALDEN 138KV CKT 1	206	104.3079	BASE CASE
APRIL - WALDEN 138KV CKT 1	206	145.5227	GRIMES - MT. ZION 138KV CKT 1
CONROE BULK - WOODHAVEN 138KV CKT 1	206	128.7956	GRIMES - MT. ZION 138KV CKT 1
DOBBIN - TUBULAR 138KV CKT 1	112	174.079	GRIMES - MT. ZION 138KV CKT 1
EGYPT - PANORAMA 138KV CKT 1	206	115.267	4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1
GRIMES - MAGNOLIA ANDERSON 138KV CKT 1	206	130.5023	COLLEGE STATION TAP - GRIMES 138KV CKT 1
GRIMES - MT. ZION 138KV CKT 1	206	146.2724	BASE CASE
GRIMES - MT. ZION 138KV CKT 1	206	192.9603	4BENTWATER! 138.00 - GRIMES 138KV CKT 1
GRIMES 345/138KV TRANSFORMER CKT 1	525	173.2341	GRIMES 345/138KV TRANSFORMER CKT 2
GRIMES 345/138KV TRANSFORMER CKT 2	525	173.2341	GRIMES 345/138KV TRANSFORMER CKT 1
HUNTSVILLE - LINE 558 TAP 138KV CKT 1	206	135.1452	BASE CASE
HUNTSVILLE - LINE 558 TAP 138KV CKT 1	206	181.7396	4BENTWATER! 138.00 - GRIMES 138KV CKT 1
LAKE FOREST - WOODHAVEN 138KV CKT 1	206	132.7854	GRIMES - MT. ZION 138KV CKT 1
LINE 558 TAP - MT. ZION 138KV CKT 1	206	142.9403	BASE CASE
LINE 558 TAP - MT. ZION 138KV CKT 1	206	189.5884	4BENTWATER! 138.00 - GRIMES 138KV CKT 1
LONGMIRE - PANORAMA 138KV CKT 1	206	117.6038	4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1

Cluster Group 12 (Northwest Arkansas)

In addition to the 30.0 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 13 (Northwest Missouri)

In addition to the 798.6 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 14 (South Central Oklahoma)

In addition to the 612.5 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

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.

Stability & Short Circuit Analysis

A stability and short circuit analysis was conducted for each Interconnection Customer using modified versions of the 2014 series SPP Model Development Working Group (MDWG) Models 2015 summer, 2015 winter, and 2025 summer peak dynamic cases¹³. The stability analysis was conducted with all upgrades in service that were identified in the power flow analysis unless otherwise noted in the individual group stability study. For each group, the interconnection requests were studied at 100% nameplate output while the other groups were dispatched at 20% output for non-dispatchable requests and 100% output for other requests. The output of the Interconnection Customer's facility was offset in each model by a reduction in output of existing online SPP generation. Each Interconnection Request was studied in a Stand Alone scenario in addition to the cluster scenario. The following synopsis is included for each group. The entire stability study for each group can be found in the Appendices.

Cluster Group 1 (Woodward Area)

There were no customers requesting interconnection service in the Woodward area.

Cluster Group 2 (Hitchland Area)

There were no customers requesting interconnection service in the Hitchland area.

Cluster Group 3 (Spearville Area)

There were no customers requesting interconnection service in the Spearville area.

Cluster Group 4 (Northwest Kansas)

There were no customers requesting interconnection service in the Northwest Kansas area.

Cluster Group 5 (Amarillo Area)

There were no customers requesting interconnection service in the Amarillo Area.

Cluster Group 6 (South Texas Panhandle/New Mexico)

The Group 6 stability analysis for this area was performed by SPP Staff. Several stability related issues were observed in the analysis of GEN-2014-008 and GEN-2014-065. Potential transmission stability issues were observed as noted in the Group 6 stability report. The most notable issues were for the N-1 outages of the 345kV line from TUCO to the Oklaunion 345kV and for the outage of Tolk – Crossroads 345kV. It was found the issues were mitigated with the addition of a new circuit from GEN-2014-007 Tap¹⁴ to Grapevine 345kV, Grapevine 200Mvar of switchable capacitor

¹³ Short Circuit analysis performed only on the 2025 Summer Peak seasonal model.

¹⁴ GEN-2014-007 Tap is a proposed switching station located approximately forty (40) miles from TUCO Interchange on the TUCO Interchange – Border 345kV transmission line. Grapevine is a proposed switching station located in Gray County, Texas. Grapevine 345kV switching station along with Potter – Grapevine – Chisholm 345kV circuit #1 was assigned to DISIS-2014-002 Group 6.
[DISIS-2014-002 study posting link: http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2014_Generation_Studies/DISIS-2014-002_FINAL.pdf](http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2014_Generation_Studies/DISIS-2014-002_FINAL.pdf)

bank(s), and a new 345kV transmission circuit from GEN-2014-008 Tap to Hobbs 345kV. These network upgrades were also identified as needed in the power flow study of PISIS-2014-002. SLNOS1 out of step relay was also disabled for TUCO Interchange – Oklaunion 345kV¹⁵.

GEN-2014-065 was modeled using the SMASC dynamic dyr model instead of the customer provided SMAUPS dynamic model as detailed in the Group 6 report. If GEN-2014-065 proceeds to the Definitive Interconnection System Impact Study (DISIS) with the SMAUPS dynamic model, GEN-2014-065 will need to work with the vendor to resolve this dynamic model issue.

During reduced wind generation condition, it was identified that GEN-2014-008 would require 15.1 Mvar of shunt reactors to compensate the capacitive charging effects during reduced generation conditions. GEN-2014-008 reduced wind generation analysis was conducted using SPP typical 345kV transmission line data (R: resistance , X: reactance, and B: charging current) for the generator lead from the GEN-2014-008 customer substation to the Tap on Tolk – Eddy County. If GEN-2014-008 proceeds to the Definitive Interconnection System Impact Study (DISIS), reduced wind generation analysis results could vary depending on the refined and updated generator lead line and collector system parameters provided by the customer.

With these qualifiers, stability analysis determined that with the reactive power equipment specified, all assigned Network Upgrades listed above and from the power flow analysis in service, and all previously assigned Network Upgrades placed in service the transmission system will remain stable and low voltage ride through requirements are satisfied for the contingencies studied. Power Factor requirements are listed in the table below.

Power Factor Requirements:

Request	Size (MW)	Generator Model	Point of Interconnection	Power Factor Requirement at POI*	
				Lagging (supplying)	Leading (absorbing)
GEN 2014-008	300.0	GE 2.5MW WTG	Tap Tolk - Eddy County 345kV (560008)	0.95	0.95
GEN 2014-065	99.0	SC 900CP-US 0.9MVA inverter	Whitten 115kV (528540)	0.95	0.95

*As reactive power is required for all projects, the final requirement in the GIA will be the pro-forma 95% lagging to 95% leading at the point of interconnection.

Cluster Group 7 (Southwest Oklahoma)

There were no customers requesting interconnection service in the Southwest Oklahoma area.

Cluster Group 8 (South Central Kansas/North Oklahoma)

There were no customers requesting interconnection service in the South Central Kansas/North Oklahoma area.

¹⁵ Out-of-step relays will be further evaluated during the Interconnection Facilities Study

Cluster Group 9 (Nebraska)

There were no customers requesting interconnection service in the Nebraska area.

Cluster Group 10 (Southeast Oklahoma/Northeast Texas)

The Group 10 stability analysis for this area was performed by SPP Staff. It should be noted that there are existing stability concerns for this particular area of the SPP transmission planning footprint. Tenaska Gateway generation was studied at the previously approved 634MW total generation injection amount into the SPP transmission system. Stability related issues were observed in the analysis of GEN-2014-018 addition. Potential transmission stability issues were observed as noted in the Group 10 stability report. The most notable issues were for N-1 outages of GEN-2014-018 Tap – Tenaska Gateway 345kV, Tenaska Gateway – Lebrock 345kV.

In order to mitigate voltage and system instability concerns during the contingencies, a new 345kV line from GEN-2014-018 Tap – Diana is needed.

After implementing the network upgrade mentioned above in upgrade simulation scenarios, all generators in the monitored areas remained stable and within the pre-contingency, voltage recovery, and post fault voltage recovery criterion of 0.7pu to 1.2pu for the entire modeled disturbances besides Fault 37. Fault 37 was found to be unstable during the upgrade scenario with GEN-2014-018 Tap – Diana 345kV. GEN-2014-018 Generation was backed down to 0.0MW in efforts to mitigate the unstable response for the prior outage contingency. Fault 37 could additionally require other existing local area generation to reduce generation as well.

Cluster Group 12 (Northwest Arkansas Area)

There were no customers requesting interconnection service in the Northwest Arkansas area.

Cluster Group 13 (Northwest Missouri Area)

There were no customers requesting interconnection service in the Northwest Missouri area.

Cluster Group 14 (South Central Oklahoma)

There were no customers requesting interconnection service in the Northwest Missouri area.

Conclusion

The minimum cost of interconnecting 1,171 MW of new interconnection requests included in this Preliminary Interconnection System Impact Study is estimated at \$497,575,000 for the Allocated Network Upgrades and Transmission Owner Interconnection Facilities are listed in Appendix E and F. 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 Network Upgrades determined to be required by short circuit analysis. These studies will be performed if the Interconnection Customer executes the appropriate Interconnection Facilities Study Agreement and provides the required data along with demonstration of Site Control and the appropriate deposit. At the time of the Interconnection Facilities Study, a better determination of the interconnection facilities may be available.

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).

Appendices

A: Generator Interconnection Requests Considered for Impact Study

See next page.

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*
GEN-2014-008	300.00	ER/NR	SPS	Tap Crossroads - Eddy County 345kV	Tap Crossroads - Eddy County 345kV	11/15/2018	TBD
GEN-2014-018	772.00	ER/NR	AEPW	Tap Crockett - Tenaska Gateway 345kV	Tap Crockett - Tenaska Gateway 345kV	6/1/2018	TBD
GEN-2014-065	99.00	ER/NR	SPS	Whitten 115kV	Whitten 115kV	12/31/2016	TBD
Total:		1,171.00					

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

B: Prior Queued Generator Interconnection Requests

See next page.

B: Prior Queued Interconnection Requests

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
ASGI-2010-006	150.00	AECI	Tap Fairfax (AECI) - Shilder (AEPW) 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 115kV	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-2013-007	90.00	AECI	Tap Hickory Creek - Locust Creek 161kV	AECI System Impact Study
ASGI-2014-001	2.50	SPS	SP-Erskine 115kV	Transitioned to IFS Queue
ASGI-2014-002	49.60	SPS	Tap Tucumcari - Santa Rosa 115kV	Under Study (DISIS-2014-002)
ASGI-2014-004	10.00	SPS	Livingstone Ridge 115kV	Under Study (DISIS-2014-002)
ASGI-2014-005	10.00	SPS	Strata 69kV	Under Study (DISIS-2014-002)
ASGI-2014-008	10.00	SPS	South Loving 69kV	Under Study (DISIS-2014-002)
ASGI-2014-009	10.00	SPS	Wood Draw 115kV	Under Study (DISIS-2014-002)
ASGI-2014-010	10.00	SPS	Ochoa 115kV	Under Study (DISIS-2014-002)
ASGI-2014-011	10.00	SPS	Zia 115kV	Under Study (DISIS-2014-002)
ASGI-2014-012	10.00	SPS	Cooper Ranch 115kV	Under Study (DISIS-2014-002)
ASGI-2014-013	10.00	SPS	SP-Erskine 115kV	Under Study (DISIS-2014-002)
ASGI-2014-014	56.40	GRDA	Ferguson 69kV	Under Study (DISIS-2014-002)
GEN-2001-014	96.00	WFEC	Ft Supply 138kV	On-Line
GEN-2001-026	74.25	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
GEN-2002-008	240.00	SPS	Hitchland 345kV	On-Line at 120MW
GEN-2002-009	80.00	SPS	Hansford 115kV	On-Line
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

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2003-021N	75.00	NPPD	Ainsworth Wind Tap 115kV	On-Line
GEN-2003-022	120.00	AEPW	Washita 138kV	On-Line
GEN-2004-014	154.50	SUNCMKEC	Spearville 230kV	On-Line at 100MW
GEN-2004-020	27.00	AEPW	Washita 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-2005-008	120.00	OKGE	Woodward 138kV	On-Line
GEN-2005-012	250.00	SUNCMKEC	Ironwood 345kV	On-Line at 160MW
GEN-2005-013	201.00	WERE	Caney River 345kV	On-Line
GEN-2006-002	101.00	AEPW	Sweetwater 230kV	On-Line
GEN-2006-006	205.50	SUNCMKEC	Spearville 345kV	On Suspension
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-2006-040	108.00	SUNCMKEC	Mingo 115kV	On Suspension
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-2007-011	135.00	SUNCMKEC	Syracuse 115kV	On Suspension
GEN-2007-011N08	81.00	NPPD	Bloomfield 115kV	On-Line
GEN-2007-021	201.00	OKGE	Tatonga 345kV	On-Line
GEN-2007-025	300.00	WERE	Viola 345kV	On-Line
GEN-2007-032	150.00	WFEC	Tap Clinton Junction - Clinton 138kV	On Suspension
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 Schedule for 2015
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	765.00	OKGE	Woodward EHV 345kV	On Schedule for 2014
GEN-2008-003	101.00	OKGE	Woodward EHV 138kV	On-Line
GEN-2008-013	300.00	OKGE	Hunter 345kV	On-Line at 235MW
GEN-2008-017	300.00	SUNCMKEC	Setab 345kV	On Schedule for 2015
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	Tap Tolk - Eddy County (Crossroads) 345kV	On Schedule for 2015
GEN-2008-023	150.00	AEPW	Hobart Junction 138kV	On-Line
GEN-2008-037	101.00	WFEC	Tap Washita - Blue Canyon Wind 138kV	On-Line
GEN-2008-044	197.80	OKGE	Tatonga 345kV	On-Line
GEN-2008-047	300.00	OKGE	Beaver County 345kV	On Schedule for 2014

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
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-2008-088	50.60	SPS	Vega 69kV	On Suspension
GEN-2008-092	201.00	MIDW	Post Rock 230kV	On Schedule for 2014
GEN-2008-098	100.80	WERE	Waverly 345kV	On Schedule for 2015
GEN-2008-1190	60.00	OPPD	S1399 161kV	On-Line
GEN-2008-123N	89.70	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV	On Schedule for 2014
GEN-2008-124	200.10	SUNCMKEC	Ironwood 345kV	On Schedule for 2016
GEN-2008-129	80.00	GMO	Pleasant Hill 161kV	On-Line
GEN-2009-008	199.50	MIDW	South Hays 230kV	On Schedule for 2015
GEN-2009-020	48.60	MIDW	Tap Nekoma - Bazine (Walnut Creek) 69kV	On Schedule for 2015
GEN-2009-025	60.00	OKGE	Nardins 69kV	On-Line
GEN-2009-040	73.80	WERE	Marshall 115kV	On Schedule for 2015
GEN-2010-001	300.00	OKGE	Beaver County 345kV	On Schedule for 2014 (204 MW) and 2015 (96 MW)
GEN-2010-003	100.80	WERE	Waverly 345kV	On Schedule for 2015
GEN-2010-005	300.00	WERE	Viola 345kV	On-Line at 170MW
GEN-2010-006	205.00	SPS	Jones 230kV	On-Line
GEN-2010-009	165.60	SUNCMKEC	Buckner 345kV	On-Line
GEN-2010-011	29.70	OKGE	Tatonga 345kV	On-Line
GEN-2010-014	358.80	SPS	Hitchland 345kV	On Suspension
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 Schedule for 2017
GEN-2010-046	56.00	SPS	TUCO Interchange 230kV	On Schedule for 2016
GEN-2010-048	70.00	MIDW	Tap Beach Station - Redline 115kV	DISIS Stage
GEN-2010-051	200.00	NPPD	Tap Twin Church - Hoskins 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-2011-007	250.10	OKGE	Tap Cimarron - Woodring (Mathewson) 345kV	On Suspension
GEN-2011-008	600.00	SUNCMKEC	Clark County 345kV	On Schedule 2019
GEN-2011-010	100.80	OKGE	Minco 345kV	On-Line
GEN-2011-011	50.00	KACP	Iatan 345kV	On-Line
GEN-2011-014	201.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV	On Schedule 2016
GEN-2011-016	200.10	SUNCMKEC	Spearville 345kV	Transitioned to IFS Queue
GEN-2011-017	299.00	SUNCMKEC	Tap Spearville - Post Rock (GEN-2011-017T) 345kV	On Schedule 2018
GEN-2011-018	73.60	NPPD	Steele City 115kV	On-Line
GEN-2011-019	299.00	OKGE	Woodward 345kV	On Suspension
GEN-2011-020	299.00	OKGE	Woodward 345kV	On Suspension
GEN-2011-022	299.00	SPS	Hitchland 345kV	On Suspension
GEN-2011-025	80.00	SPS	Tap Floyd County - Crosby County 115kV	On Schedule for 2015
GEN-2011-027	120.00	NPPD	Hoskins 230kV	On Schedule for 2015
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	250.00	OKGE	Border 345kV	On Suspension

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2011-050	109.80	AEPW	Santa Fe Tap 138kV	On Suspension
GEN-2011-051	104.40	OKGE	Tap Woodward - Tatonga 345kV (GEN-2011-051 Tap)	On Suspension
GEN-2011-054	300.00	OKGE	Cimarron 345kV	On Schedule for 2013 (200 MW) and 2014 (99 MW)
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 Schedule for 2014
GEN-2012-001	61.20	SPS	Cirrus Tap 230kV	On-Line
GEN-2012-004	41.40	OKGE	Carter County 138kV	On Schedule for 2014
GEN-2012-007	120.00	SUNCMKEC	Rubart 115kV	On-Line
GEN-2012-009	15.00	SPS	Mustang 230kV	On Schedule for 2015
GEN-2012-010	15.00	SPS	Mustang 230kV	On Schedule for 2015
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	Transitioned to IFS Queue
GEN-2012-027	136.00	AEPW	Shidler 138kV	On Suspension
GEN-2012-028	74.80	WFEC	Gotebo 69kV	On Schedule for 2015
GEN-2012-031	200.00	OKGE	Cimarron 345kV (GEN-2010-040 Sub)	DISIS Stage
GEN-2012-032	300.00	OKGE	Open Sky 345kV	On Schedule for 2015
GEN-2012-033	98.80	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV	On Schedule for 2015
GEN-2012-034	7.00	SPS	Mustang 230kV	On Schedule for 2015
GEN-2012-035	7.00	SPS	Mustang 230kV	On Schedule for 2015
GEN-2012-036	7.00	SPS	Mustang 230kV	On-Line
GEN-2012-037	203.00	SPS	TUCO 345kV	On Schedule for 2015
GEN-2012-040	76.50	WFEC	Chilocco 138kV	On Suspension
GEN-2012-041	121.50	OKGE	Ranch Road 345kV	On Schedule for 2015
GEN-2013-002	50.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2	Transitioned to IFS Queue
GEN-2013-007	100.30	OKGE	Tap Prices Falls - Carter 138kV	On Schedule for 2015
GEN-2013-008	1.20	NPPD	Steele City 115kV	On-Line
GEN-2013-010	99.00	SUNCMKEC	Tap Spearville - Post Rock (North of GEN-2011-017 Tap) 345kV	DISIS Stage
GEN-2013-011	30.00	AEPW	Turk 138kV	Transitioned to IFS Queue
GEN-2013-012	147.00	OKGE	Redbud 345kV	On-Line
GEN-2013-014	25.50	NPPD	Tap Guide Rock - Pauline (Rosemont) 115kV	On Suspension
GEN-2013-016	203.00	SPS	TUCO 345kV	Transitioned to IFS Queue
GEN-2013-019	73.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2	Transitioned to IFS Queue
GEN-2013-022	25.00	SPS	Norton 115kV	Transitioned to IFS Queue
GEN-2013-027	150.00	SPS	Tap Tolk - Yoakum 230kV	DISIS Stage
GEN-2013-028	559.50	GRDA	Tap N Tulsa - GRDA 1 345kV	Transitioned to IFS Queue
GEN-2013-029	300.00	OKGE	Renfrow 345kV	Transitioned to IFS Queue
GEN-2013-030	300.00	OKGE	Beaver County 345kV	Transitioned to IFS Queue
GEN-2013-032	204.00	NPPD	Neligh 115kV	Transitioned to IFS Queue
GEN-2013-033	28.00	MIDW	Goodman Energy Center 115kV	Transitioned to IFS Queue
GEN-2013-035	105.60	OKGE	Tap Woodward - Tatonga 345kV (GEN-2011-051 Tap)	Transitioned to IFS Queue
GEN-2014-001	200.60	WERE	Tap Wichita - Emporia Energy Center 345kV	Transitioned to IFS Queue
GEN-2014-002	10.53	OKGE	Tatonga 345kV (GEN-2007-021 POI)	Transitioned to IFS Queue
GEN-2014-003	15.84	OKGE	Tatonga 345kV (GEN-2007-044 POI)	Transitioned to IFS Queue
GEN-2014-004	3.96	NPPD	Steele City 115kV (GEN-2011-018 POI)	Transitioned to IFS Queue

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2014-005	5.67	OKGE	Minco 345kV (GEN-2011-010 POI)	Transitioned to IFS Queue
GEN-2014-007	400.00	SPS	Tap TUCO Interchange - Border 345kV	DISIS Stage
GEN-2014-012	225.00	SPS	Tap Hobbs Interchange - Andrews 230kV	Transitioned to IFS Queue
GEN-2014-013	73.50	NPPD	Meadow Grove (GEN-2008-086N2 Sub) 230kV	Transitioned to IFS Queue
GEN-2014-019	15.00	OKGE	Beaver County 345kV	DISIS Stage
GEN-2014-020	100.00	AEPW	Tuttle 138kV	DISIS Stage
GEN-2014-021	300.00	GMO	Tap Nebraska City - Mullin Creek 345kV	DISIS Stage
GEN-2014-022	15.00	OKGE	Open Sky 345kV	DISIS Stage
GEN-2014-023	79.90	NPPD	Tap Fort Randall - Meadow Grove 230kV	DISIS Stage
GEN-2014-025	2.40	MIDW	Tap Nekoma - Bazine (Walnut Creek) 69kV	DISIS Stage
GEN-2014-026	150.00	OKGE	Beaver County 345kV	DISIS Stage
GEN-2014-027	60.00	AEPW	Weleetka 138kV	DISIS Stage
GEN-2014-028	35.00	EMDE	Riverton 161kV	DISIS Stage
GEN-2014-031	35.80	NPPD	Meadow Grove 230kV	DISIS Stage
GEN-2014-032	10.20	NPPD	Meadow Grove 230kV	DISIS Stage
GEN-2014-033	70.00	SPS	Chaves County 115kV	DISIS Stage
GEN-2014-034	70.00	SPS	Chaves County 115kV	DISIS Stage
GEN-2014-035	30.00	SPS	Chaves County 115kV	DISIS Stage
GEN-2014-036	50.00	AEPW	Hollis 138kV	DISIS Stage
GEN-2014-037	200.00	SPS	Tap Hitchland - Beaver County Dbl Ckt (Optima) 345kV	DISIS Stage
GEN-2014-038	200.00	SPS	Tap Hitchland - Potter County 345kV	DISIS Stage
GEN-2014-039	73.60	NPPD	Friend 115kV	DISIS Stage
GEN-2014-040	349.00	SPS	Castro 115kV	DISIS Stage
GEN-2014-041	120.80	SUNCMKEC	Arnold 115kV	DISIS Stage
GEN-2014-046	114.00	SPS	Chaves County 115kV	DISIS Stage
GEN-2014-047	40.00	SPS	Tap Tolk - Eddy County (Crossroads) 345kV	DISIS Stage
GEN-2014-048	110.00	SPS	Tap Eddy County - Tweedy 115kV	DISIS Stage
GEN-2014-049	200.00	SUNCMKEC	Thistle 345kV	DISIS Stage
GEN-2014-050	100.00	WERE	Swissvale 345kV	DISIS Stage
GEN-2014-051	174.00	WERE	Jeffrey Energy Center 345kV	DISIS Stage
GEN-2014-052	200.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV	DISIS Stage
GEN-2014-053	80.00	SPS	Carlisle 230kV	DISIS Stage
GEN-2014-054	120.00	SPS	Carlisle 230kV	DISIS Stage
GEN-2014-055	160.00	NPPD	Belden 115kV	DISIS Stage
GEN-2014-056	250.00	OKGE	Minco 345kV	DISIS Stage
GEN-2014-057	250.00	AEPW	Tap Lawton - Sunnyside 345kV	DISIS Stage
GEN-2014-058	300.00	OKGE	Tap Tatonga - Mathewson 345kV	DISIS Stage
GEN-2014-059	161.10	NPPD	Tap Sidney - Ogallala 230kV	DISIS Stage
GEN-2014-060	125.80	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV	DISIS Stage
GEN-2014-061	161.00	OKGE	Tatonga 345kV	DISIS Stage
GEN-2014-062	200.10	SPS	Tap Tolk - Eddy County (Crossroads) 345kV	DISIS Stage
GEN-2014-063	381.00	SPS	Hobbs 230kV	DISIS Stage
GEN-2014-064	248.40	OKGE	Otter 138kV	DISIS Stage
GEN-2014-066	30.00	SPS	Norton 115kV	DISIS Stage
GEN-2014-067	361.00	SPS	Tap Potter County - New Hart 230kV	DISIS Stage
GEN-2014-068	203.00	SPS	Tap Deaf Smith - Plant X 230kV	DISIS Stage
GEN-2014-069	90.00	SPS	Tap Postash Junction - Livingston Ridge 115kV	DISIS Stage
GEN-2014-070	110.00	SPS	Tap Hobbs - Yoakum 230kV	DISIS Stage
Gray County Wind (Montezuma)	110.00	SUNCMKEC	Gray County Tap 115kV	On-Line

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
LeBrock	510.00	AEPW	LeBrock 345kV	On-Line
Llano Estacado (White Deer)	80.00	SPS	Llano Wind 115kV	On-Line
NPPD Distributed (Broken Bow)	8.30	NPPD	Broken Bow 115kV	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 (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
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
Tenaska Gateway	634.00	AEPW	Tenaska Gateway 345kV	On-Line
Total:	33,578.8			

C: Study Groupings

See next page

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	765.00	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-2011-007	250.10	OKGE	Tap Cimarron - Woodring (Mathewson) 345kV
GEN-2011-010	100.80	OKGE	Minco 345kV
GEN-2011-019	299.00	OKGE	Woodward 345kV
GEN-2011-020	299.00	OKGE	Woodward 345kV
GEN-2011-051	104.40	OKGE	Tap Woodward - Tatonga 345kV (GEN-2011-051 Tap)
GEN-2011-054	300.00	OKGE	Cimarron 345kV
GEN-2012-031	200.00	OKGE	Cimarron 345kV (GEN-2010-040 Sub)
GEN-2013-035	105.60	OKGE	Tap Woodward - Tatonga 345kV (GEN-2011-051 Tap)
GEN-2014-002	10.53	OKGE	Tatonga 345kV (GEN-2007-021 POI)
GEN-2014-003	15.84	OKGE	Tatonga 345kV (GEN-2007-044 POI)
GEN-2014-005	5.67	OKGE	Minco 345kV (GEN-2011-010 POI)
GEN-2014-020	100.00	AEPW	Tuttle 138kV
GEN-2014-056	250.00	OKGE	Minco 345kV
GEN-2014-058	300.00	OKGE	Tap Tatonga - Mathewson 345kV
GEN-2014-061	161.00	OKGE	Tatonga 345kV
PRIOR QUEUED SUBTOTAL	5,233.24		
AREA TOTAL	5,233.24		

GROUP 2: HITCHLAND AREA

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2011-002	20.00	SPS	Herring 115kV
GEN-2002-008	240.00	SPS	Hitchland 345kV
GEN-2002-009	80.00	SPS	Hansford 115kV
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-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-2014-019	15.00	OKGE	Beaver County 345kV
GEN-2014-026	150.00	OKGE	Beaver County 345kV
GEN-2014-037	200.00	SPS	Tap Hitchland - Beaver County Dbl Ckt (Optima) 345kV
GEN-2014-038	200.00	SPS	Tap Hitchland - Potter County 345kV
GEN-2014-052	200.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV
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	3,727.70		
AREA TOTAL	3,727.70		

GROUP 3: SPEARVILLE AREA

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2012-006	22.50	SUNCMKEC	Tap Hugoton - Rolla 69kV
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-2006-006	205.50	SUNCMKEC	Spearville 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	Spearville 345kV
GEN-2011-017	299.00	SUNCMKEC	Tap Spearville - Post Rock (GEN-2011-017T) 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-2014-049	200.00	SUNCMKEC	Thistle 345kV
Gray County Wind (Montezuma)	110.00	SUNCMKEC	Gray County Tap 115kV
PRIOR QUEUED SUBTOTAL	3,909.30		
AREA TOTAL	3,909.30		

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-2006-040	108.00	SUNCMKEC	Mingo 115kV
GEN-2007-011	135.00	SUNCMKEC	Syracuse 115kV
GEN-2008-017	300.00	SUNCMKEC	Setab 345kV
GEN-2008-092	201.00	MIDW	Post Rock 230kV
GEN-2009-008	199.50	MIDW	South Hays 230kV
GEN-2009-020	48.60	MIDW	Tap Nekoma - Bazine (Walnut Creek) 69kV
GEN-2010-048	70.00	MIDW	Tap Beach Station - Redline 115kV
GEN-2010-057	201.00	MIDW	Rice County 230kV
GEN-2013-033	28.00	MIDW	Goodman Energy Center 115kV
GEN-2014-025	2.40	MIDW	Tap Nekoma - Bazine (Walnut Creek) 69kV
GEN-2014-041	120.80	SUNCMKEC	Arnold 115kV
PRIOR QUEUED SUBTOTAL	2,075.90		
AREA TOTAL	2,075.90		

GROUP 5: AMARILLO AREA

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2013-001	11.50	SPS	PanTex South 115kV
GEN-2002-022	240.00	SPS	Bushland 230kV
GEN-2008-051	322.00	SPS	Potter County 345kV
GEN-2008-088	50.60	SPS	Vega 69kV
GEN-2014-040	349.00	SPS	Castro 115kV
GEN-2014-067	361.00	SPS	Tap Potter County - New Hart 230kV
GEN-2014-068	203.00	SPS	Tap Deaf Smith - Plant X 230kV
Llano Estacado (White Deer)	80.00	SPS	Llano Wind 115kV
PRIOR QUEUED SUBTOTAL	1,617.10		
AREA TOTAL	1,617.10		

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 115kV
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-2014-002	49.60	SPS	Tap Tucumcari - Santa Rosa 115kV
ASGI-2014-004	10.00	SPS	Livingstone Ridge 115kV
ASGI-2014-005	10.00	SPS	Strata 69kV
ASGI-2014-008	10.00	SPS	South Loving 69kV
ASGI-2014-009	10.00	SPS	Wood Draw 115kV
ASGI-2014-010	10.00	SPS	Ochoa 115kV
ASGI-2014-011	10.00	SPS	Zia 115kV
ASGI-2014-012	10.00	SPS	Cooper Ranch 115kV
ASGI-2014-013	10.00	SPS	SP-Erskine 115kV
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	Tap Tolk - Eddy County (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-2012-009	15.00	SPS	Mustang 230kV
GEN-2012-010	15.00	SPS	Mustang 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-2014-007	400.00	SPS	Tap TUCO Interchange - Border 345kV
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-2014-046	114.00	SPS	Chaves County 115kV
GEN-2014-047	40.00	SPS	Tap Tolk - Eddy County (Crossroads) 345kV

GEN-2014-048	110.00	SPS	Tap Eddy County - Tweedy 115kV
GEN-2014-053	80.00	SPS	Carlisle 230kV
GEN-2014-054	120.00	SPS	Carlisle 230kV
GEN-2014-062	200.10	SPS	Tap Tolk - Eddy County (Crossroads) 345kV
GEN-2014-063	381.00	SPS	Hobbs 230kV
GEN-2014-066	30.00	SPS	Norton 115kV
GEN-2014-069	90.00	SPS	Tap Postash Junction - Livingston Ridge 115kV
GEN-2014-070	110.00	SPS	Tap Hobbs - Yoakum 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
PRIOR QUEUED SUBTOTAL	5,606.50		
GEN-2014-008	300.00	SPS	Tap Crossroads - Eddy County 345kV
GEN-2014-065	99.00	SPS	Whitten 115kV
CURRENT CLUSTER SUBTOTAL	399.00		
AREA TOTAL	6,005.50		

GROUP 7: SOUTHWEST OKLAHOMA AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-026	74.25	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	Washita 138kV
GEN-2004-020	27.00	AEPW	Washita 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-2007-032	150.00	WFEC	Tap Clinton Junction - Clinton 138kV
GEN-2007-052	150.00	WFEC	Anadarko 138kV
GEN-2008-023	150.00	AEPW	Hobart Junction 138kV
GEN-2008-037	101.00	WFEC	Tap Washita - Blue Canyon Wind 138kV
GEN-2011-037	7.00	WFEC	Blue Canyon 5 138kV
GEN-2011-049	250.00	OKGE	Border 345kV
GEN-2012-028	74.80	WFEC	Gotebo 69kV
GEN-2014-036	50.00	AEPW	Hollis 138kV
PRIOR QUEUED SUBTOTAL	1,950.25		
AREA TOTAL	1,950.25		

GROUP 8: NORTH OKLAHOMA/SOUTH CENTRAL KANSAS AREA

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2010-006	150.00	AECI	Tap Fairfax (AECI) - Shilder (AEPW) 138kV
ASGI-2014-014	56.40	GRDA	Ferguson 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	60.00	OKGE	Nardins 69kV
GEN-2010-003	100.80	WERE	Waverly 345kV
GEN-2010-005	300.00	WERE	Viola 345kV
GEN-2010-055	4.50	AEPW	Wekiwa 138kV
GEN-2011-057	150.40	WERE	Creswell 138kV
GEN-2012-027	136.00	AEPW	Shidler 138kV
GEN-2012-032	300.00	OKGE	Open Sky 345kV
GEN-2012-033	98.80	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV
GEN-2012-040	76.50	WFEC	Chilocco 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 345kV
GEN-2014-022	15.00	OKGE	Open Sky 345kV
GEN-2014-028	35.00	EMDE	Riverton 161kV
GEN-2014-064	248.40	OKGE	Otter 138kV

PRIOR QUEUED SUBTOTAL	4,204.20	
AREA TOTAL	4,204.20	

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-2008-086N02	201.00	NPPD	Meadow Grove 230kV
GEN-2008-1190	60.00	OPPD	S1399 161kV
GEN-2008-123N	89.70	NPPD	Tap Pauline - Hildreth (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 Twin Church - Hoskins 230kV
GEN-2011-018	73.60	NPPD	Steele City 115kV
GEN-2011-027	120.00	NPPD	Hoskins 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-2013-014	25.50	NPPD	Tap Guide Rock - Pauline (Rosemont) 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	Neligh 115kV
GEN-2014-004	3.96	NPPD	Steele City 115kV (GEN-2011-018 POI)
GEN-2014-013	73.50	NPPD	Meadow Grove (GEN-2008-086N2 Sub) 230kV
GEN-2014-023	79.90	NPPD	Tap Fort Randall - Meadow Grove 230kV
GEN-2014-031	35.80	NPPD	Meadow Grove 230kV
GEN-2014-032	10.20	NPPD	Meadow Grove 230kV
GEN-2014-039	73.60	NPPD	Friend 115kV
GEN-2014-055	160.00	NPPD	Belden 115kV
GEN-2014-059	161.10	NPPD	Tap Sidney - Ogallala 230kV
GEN-2014-060	125.80	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV
NPPD Distributed (Broken Bow)	8.30	NPPD	Broken Bow 115kV
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	2,609.46		
AREA TOTAL	2,609.46		

GROUP 10: SOUTHEAST OKLAHOMA/NORTHEAST TEXAS AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2014-027	60.00	AEPW	Weleetka 138kV
LeBrock	510.00	AEPW	LeBrock 345kV
Tenaska Gateway	634.00	AEPW	Tenaska Gateway 345kV
PRIOR QUEUED SUBTOTAL	1,204.00		
GEN-2014-018	772.00	AEPW	Tap Crockett - Tenaska Gateway 345kV
CURRENT CLUSTER SUBTOTAL	772.00		
AREA TOTAL	1,976.00		

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		
AREA TOTAL	30.00		

GROUP 13: NORTHWEST MISSOURI AREA

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2013-007	90.00	AECI	Tap Hickory Creek - Locust Creek 161kV
GEN-2008-129	80.00	GMO	Pleasant Hill 161kV
GEN-2010-036	4.60	WERE	6th Street 115kV
GEN-2011-011	50.00	KACP	Iatan 345kV
GEN-2014-021	300.00	GMO	Tap Nebraska City - Mullin Creek 345kV
GEN-2014-050	100.00	WERE	Swissvale 345kV
GEN-2014-051	174.00	WERE	Jeffrey Energy Center 345kV
PRIOR QUEUED SUBTOTAL	798.60		
AREA TOTAL	798.60		

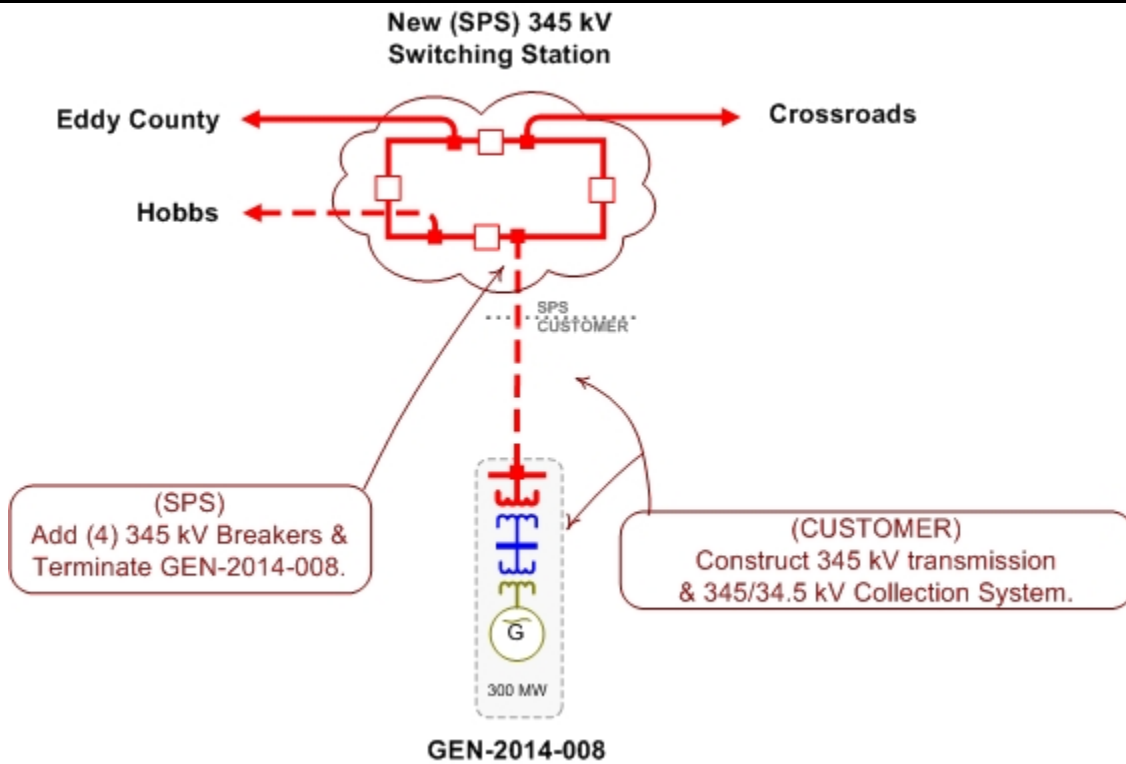
GROUP 14: SOUTH CENTRAL OKLAHOMA AREA

Request	Capacity	Area	Proposed Point of Interconnection
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 345kV
PRIOR QUEUED SUBTOTAL	612.50		
AREA TOTAL	612.50		

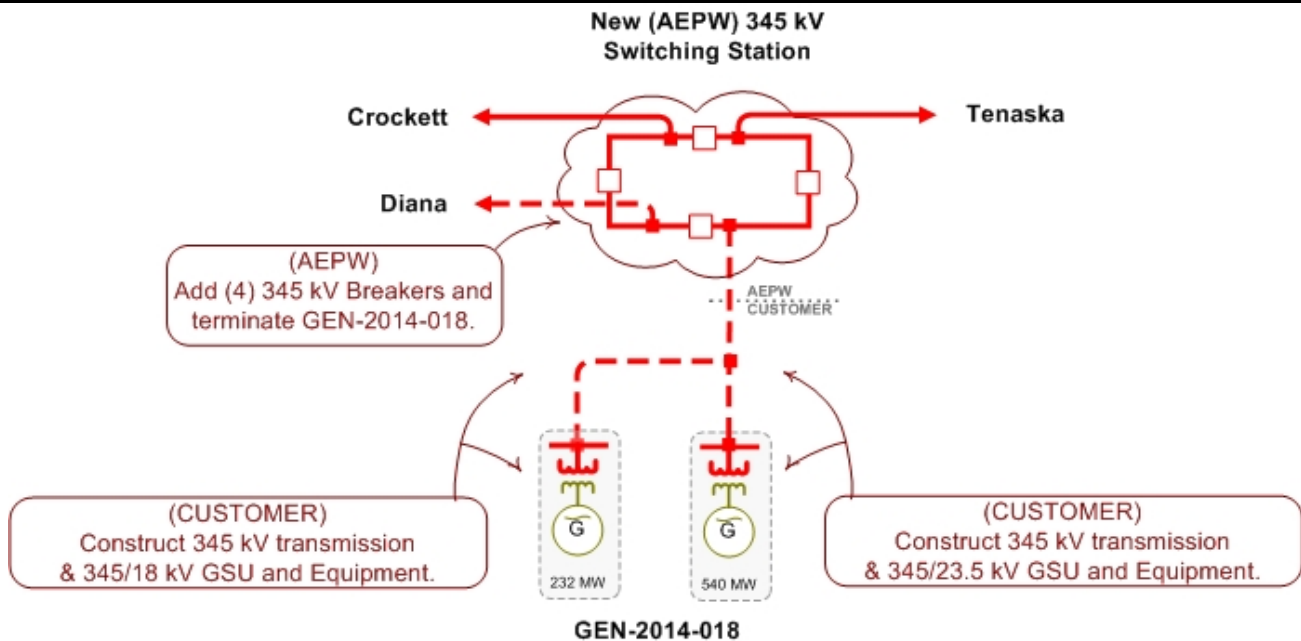
CLUSTER TOTAL (CURRENT STUDY)	1,171.0	MW
PQ TOTAL (PRIOR QUEUED)	33,578.8	MW
CLUSTER TOTAL (INCLUDING PRIOR QUEUED)	34,749.8	MW

D: Proposed Point of Interconnection One Line Diagrams

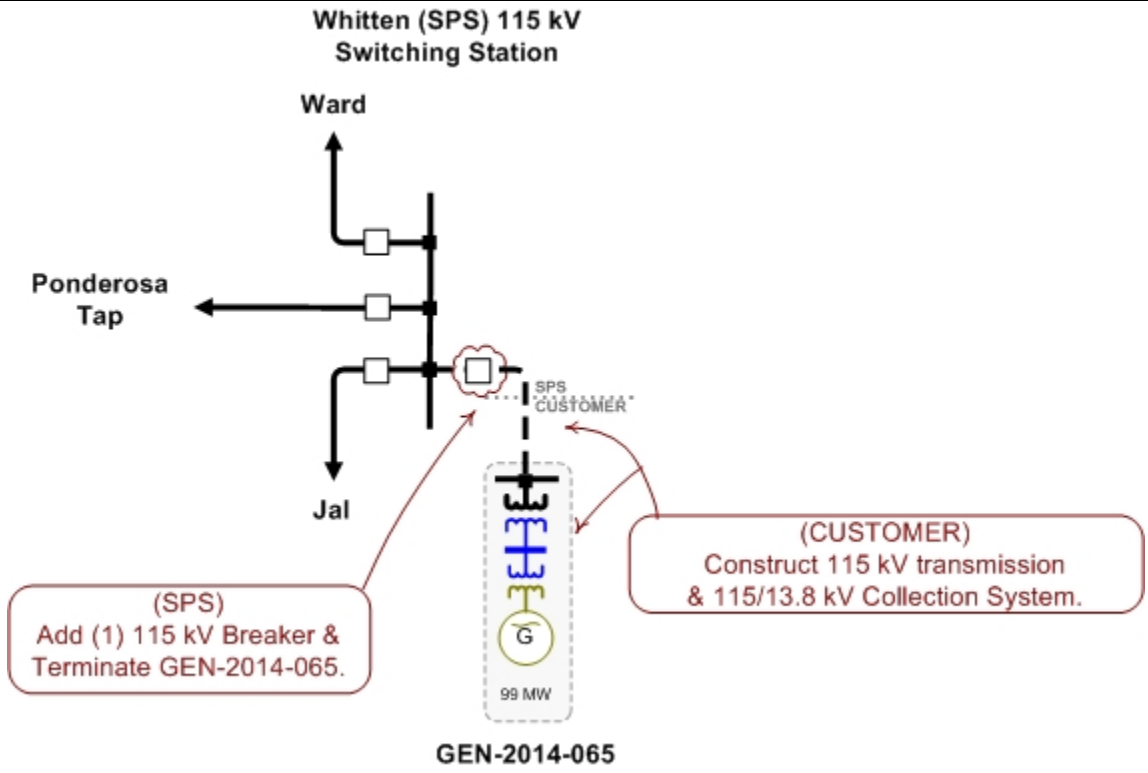
GEN-2014-008



GEN-2014-018



GEN-2014-065



E: Cost Allocation per Interconnection Request (Including Prior Queued Upgrades)

Important Note:

****WITHDRAWAL OF HIGHER QUEUED PROJECTS WILL CAUSE A RESTUDY
AND MAY RESULT IN HIGHER INTERCONNECTION COSTS****

This section shows each Generator Interconnection Request Customer, their current study impacted Network Upgrades, and the previously allocated upgrades upon which they rely to accommodate their interconnection to the transmission system.

The costs associated with the current study Network Upgrades are allocated to the Customers shown in this report.

In addition should a higher queued request, defined as one this study includes as a prior queued request, withdraw, the Network Upgrades assigned to the withdrawn request may be reallocated to the remaining requests that have an impact on the Network Upgrade under a restudy. Also, should a Interconnection Request choose to go into service prior to the operation date of any necessary Network Upgrades, the costs associated with those upgrades may be reallocated to the impacted Interconnection Request. The actual costs allocated to each Generator Interconnection Request Customer will be determined at the time of a restudy.

The required interconnection costs listed 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 through SPP's Open Access Same Time Information System (OASIS) as required by Attachment Z1 of the SPP OATT. In addition, costs associated with a short circuit analysis will be allocated should the Interconnection Request Customer choose to execute a Facility Study Agreement.

There may be additional costs allocated to each Customer. See Appendix F for more details.

Appendix E. Cost Allocation Per Request

(Including Previously Allocated Network Upgrades*)

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2014-008			
Carlsbad Interchange - Pecos Interchange 115KV CKT 1 NRIS only required upgrade: Rebuild approximately 2 miles 115kV	Current Study	\$1,500,000	\$1,500,000
Eddy County 230/115kV Transformer CKT 2 NRIS only required upgrade: Replace existing 230/115/13kV Transformer circuit #2	Current Study	\$12,000,000	\$12,000,000
GEN-2014-007 Tap - Grapevine 345kV CKT 1 Build approximately 110 miles of 345kV.	Current Study	\$102,137,550	\$137,500,000
GEN-2014-008 Interconnection Costs See One-line diagram	Current Study	\$13,000,000	\$13,000,000
GEN-2014-008 Tap - Hobbs 345kV CKT 1 Build approximately 58 miles of 345kV.	Current Study	\$65,976,532	\$72,500,000
Grapevine 345kV Reactive Equipment Install approximately 200Mvar of 345kV switched shunt capacitors.	Current Study	\$11,142,278	\$15,000,000
Chisholm - Elk City 230kV CKT 1 Rebuild approximately 15 miles of 230kV from Chisholm - Elk City.	Previously Allocated		\$15,000,000
Chisholm - Gracemont 345kV CKT 1 Per SPP-NTC-200255 and 200240 (Total Project E&C Cost Shown)	Previously Allocated		\$162,952,357
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation.	Previously Allocated		\$12,000,000
Cimarron - Minco 345kV CKT 1 Replace 1600 amp switches.	Previously Allocated		\$1,000,000
Cunningham Station - Maddox Station 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 3 miles of 115kV line.	Previously Allocated		\$1,914,000
El Dorado - El Dorado Junction 69kV CKT 1 Rebuild approximately 12 miles of 69kV from El Dorado - El Dorado Junction.	Previously Allocated		\$10,000,000
Elk City 230/138/13kV Transformer CKT 1 Replace terminal equipment for Elk City Transformer to achieve transformer limit of 450MVA.	Previously Allocated		\$15,000,000
GEN 2014-007 Tap - TUCO 2 345kV CKT 1 Build GEN-2014-007 Tap - TUCO 2 345kV.	Previously Allocated		\$35,000,000

* 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
GEN-2014-007 Tap - Border - Chisholm 345kV CKT 2 Build approximately 167 miles of second circuit 345kV from GEN-2014-007 Tap - Border - Chisholm	Previously Allocated		\$167,000,000
GEN-2014-069 Tap - IMC Tap 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 2 miles of 115kV from GEN-2014-069 Tap - IMC #1 Tap as per 2015 ITPNT.	Previously Allocated		\$1,327,927
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm.	Previously Allocated		\$68,000,000
Grapevine Substation Upgrade 345kV Build Grapevine Substation and terminate Beaver Co - Grapevine, Potter Co - Grapevine, Grapevine - Chisholm 345kV into the Grapevine Substation.	Previously Allocated		\$12,000,000
LES - GEN-2014-057 Tap - Sunnyside 345kV CKT 1 Replace Terminal Equipment.	Previously Allocated		\$200,000
National Enrichment Plant-Targa 115kV CKT 1 Rebuild approximately 4 miles of 115kV from National Enrichment Plant to Targa per 2015 ITPNT.	Previously Allocated		\$2,909,669
Oasis - San Juan Tap 230kV CKT 1 Replace the line trap at Oasis.	Previously Allocated		\$100,000
Plant X - Tolk East 230kV NRIS only required upgrade: Rebuild approximately 10 miles of 230kV	Previously Allocated		\$15,000,000
Potash Junction 230/115 kV Ckt 1 Per HPILs SPP-NTC-200282 (Total Project E&C Cost Shown)	Previously Allocated		\$3,508,346
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine.	Previously Allocated		\$59,000,000
Targa-Cardinal 115kV CKT 1 Rebuild approximately 3 miles of 115kV from Targa to Cardinal per 2015 ITPNT.	Previously Allocated		\$2,049,062
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County.	Previously Allocated		\$105,000,000
Tolk - TUCO 2 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - TUCO 2.	Previously Allocated		\$64,000,000
TUCO Interchange - Yoakum - Hobbs 345/230kV Projects Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		\$237,543,568
Wipp - Sand Dunes 115kV CKT 1 Rebuild approximately 6 miles of 115kV from Wipp - Sand Dunes.	Previously Allocated		\$4,500,000
Yoakum 230/115/13kV Transformer CKT 1&2 NRIS only required upgrade: Replace existing two Yoakum 230/115/13kV transformers per SPP-NTC-200262.	Previously Allocated		\$7,514,514
	Current Study Total		\$205,756,361

* 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-2014-018			
GEN-2014-018 Interconnection Costs See One-line diagram	Current Study	\$19,000,000	\$19,000,000
GEN-2014-018 Tap - Diana East 345kV CKT 1 Build approximately 75 miles of 345kV.	Current Study	\$140,000,000	\$140,000,000
Lebrock - Pirkey 345kV CKT 1 Replace Terminal Equipment	Current Study	\$750,000	\$750,000
Lebrock - Pirkey 345kV CKT 2 Replace Terminal Equipment	Current Study	\$750,000	\$750,000
Lydia - Welsh 345kV CKT 1 Rebuild approximately 32 miles of 345kV	Current Study	\$60,000,000	\$60,000,000
Sabine Mining Co. T - Southeast Marshall 138KV CKT 1 NRIS only required upgrade: Rebuild approximately 11 miles of 115kV	Current Study	\$8,250,000	\$8,250,000
Scottsville - Southeast Marshall 138KV CKT 1 NRIS only required upgrade: Rebuild approximately 6 miles of 115kV	Current Study	\$4,500,000	\$4,500,000
Canyon West Substation - Dawn Substation 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 14 miles of 115kV from Canyon West Substation - Dawn Substation per 2015 ITPNT.	Previously Allocated		\$8,110,872
Castro County - Deaf Smith 21 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 1 mile of 115kV from Castro County - Deaf Smith #21.	Previously Allocated		\$800,000
Dawn Substation - Panda Energy Substation 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 8.5 miles of 115kV from Dawn Substation - Panda Energy Substation per 2015 ITPNT.	Previously Allocated		\$5,737,375
Deaf Smith 21 - Deaf Smith County Interchange 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 22 miles of 115kV from Deaf Smith #21 - Deaf Smith County Interchange.	Previously Allocated		\$15,000,000
Hitchland 230/115/13.2kV Transformer CKT 2 NRIS only required upgrade: Build 230/115/13.2kV Transformer CKT 2	Previously Allocated		\$4,220,694
	Current Study Total	\$233,250,000	

GEN-2014-065

GEN-2014-007 Tap - Grapevine 345kV CKT 1 Build approximately 110 miles of 345kV.	Current Study	\$35,362,450	\$137,500,000
GEN-2014-008 Tap - Hobbs 345kV CKT 1 Build approximately 58 miles of 345kV.	Current Study	\$6,523,468	\$72,500,000
GEN-2014-065 Interconnection Costs See One-line diagram	Current Study	\$6,000,000	\$6,000,000

* 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
Grapevine 345kV Reactive Equipment Install approximately 200Mvar of 345kV switched shunt capacitors.	Current Study	\$3,857,722	\$15,000,000
Ochoa - Ponderosa Tap 115kV CKT 1 Rebuild approximately 9.1 miles of 115kV	Current Study	\$6,825,000	\$6,825,000
Agave Hill 115kV Reactive Power Support Build Agave Hill 28.8Mvar Capacitor bank per 2015 ITPNT.	Previously Allocated		\$1,619,280
Amoco Wasson - Oxy Tap 230kV CKT 1 Replace line traps at both terminals	Previously Allocated		\$200,000
Chisholm - Elk City 230kV CKT 1 Rebuild approximately 15 miles of 230kV from Chisholm - Elk City.	Previously Allocated		\$15,000,000
Chisholm - Gracemont 345kV CKT 1 Per SPP-NTC-200255 and 200240 (Total Project E&C Cost Shown)	Previously Allocated		\$162,952,357
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation.	Previously Allocated		\$12,000,000
Cimarron - Minco 345kV CKT 1 Replace 1600 amp switches.	Previously Allocated		\$1,000,000
Cunningham Station - Maddox Station 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 3 miles of 115kV line.	Previously Allocated		\$1,914,000
El Dorado - El Dorado Junction 69kV CKT 1 Rebuild approximately 12 miles of 69kV from El Dorado - El Dorado Junction.	Previously Allocated		\$10,000,000
Elk City 230/138/13kV Transformer CKT 1 Replace terminal equipment for Elk City Transformer to achieve transformer limit of 450MVA.	Previously Allocated		\$15,000,000
GEN 2014-007 Tap - TUCO 2 345kV CKT 1 Build GEN-2014-007 Tap - TUCO 2 345kV.	Previously Allocated		\$35,000,000
GEN-2014-007 Tap - Border - Chisholm 345kV CKT 2 Build approximately 167 miles of second circuit 345kV from GEN-2014-007 Tap - Border - Chisholm	Previously Allocated		\$167,000,000
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm.	Previously Allocated		\$68,000,000
Grapevine Substation Upgrade 345kV Build Grapevine Substation and terminate Beaver Co - Grapevine, Potter Co - Grapevine, Grapevine - Chisholm 345kV into the Grapevine Substation.	Previously Allocated		\$12,000,000
Intrepid Tap - GEN-2014-069 Tap 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 2 miles of 115kV from Intrepid Tap - GEN-2014-069 Tap as per 2015 ITPNT.	Previously Allocated		\$1,327,927

* 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
LES - GEN-2014-057 Tap - Sunnyside 345kV CKT 1 Replace Terminal Equipment.	Previously Allocated		\$200,000
National Enrichment Plant-Targa 115kV CKT 1 Rebuild approximately 4 miles of 115kV from National Enrichment Plant to Targa per 2015 ITPNT.	Previously Allocated		\$2,909,669
Oasis - San Juan Tap 230kV CKT 1 Replace the line trap at Oasis.	Previously Allocated		\$100,000
Ochoa 115kV Reactive Power Support Build Ochoa 28.8Mvar Capacitor bank per 2015 ITPNT.	Previously Allocated		\$1,619,280
Plant X - Tolk East 230kV NRIS only required upgrade: Rebuild approximately 10 miles of 230kV	Previously Allocated		\$15,000,000
Ponderosa Tap - Whitten 115kV CKT 1 Per SPP-NTC-200324: Rebuild approximately 5.9 miles of 115kV	Previously Allocated		\$4,044,971
Potash Junction - Intrepid Tap 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 1.5 miles of 115kV from Potash Junction - Intrepid Tap as per 2015 ITPNT.	Previously Allocated		\$1,258,393
Potash Junction 230kV Reactive Power Support Build Potash Junction 100Mvar Capacitor bank per 2015 ITPNT.	Previously Allocated		\$6,465,875
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine.	Previously Allocated		\$59,000,000
Targa-Cardinal 115kV CKT 1 Rebuild approximately 3 miles of 115kV from Targa to Cardinal per 2015 ITPNT.	Previously Allocated		\$2,049,062
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County.	Previously Allocated		\$105,000,000
Tolk - TUCO 2 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - TUCO 2.	Previously Allocated		\$64,000,000
TUCO 2 Substation Upgrade 345kV Build TUCO 2 345kV substation and approximately 1 mile 345kV from TUCO - TUCO 2.	Previously Allocated		\$15,000,000
TUCO Interchange - Yoakum - Hobbs 345/230kV Projects Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		\$237,543,568
Yoakum 230/115/13kV Transformer CKT 1&2 NRIS only required upgrade: Replace existing two Yoakum 230/115/13kV transformers per SPP-NTC-200262.	Previously Allocated		\$7,514,514
	Current Study Total		\$58,568,639
TOTAL CURRENT STUDY COSTS:			\$497,575,000

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

F: Cost Allocation per Proposed Study Network Upgrade

Important Note:

****WITHDRAWAL OF HIGHER QUEUED PROJECTS WILL CAUSE A RESTUDY
AND MAY RESULT IN HIGHER INTERCONNECTION COSTS****

This section shows each Direct Assigned Facility and Network Upgrade and the Generator Interconnection Request Customer(s) which have an impact in this study assuming all higher queued projects remain in the queue and achieve commercial operation.

The required interconnection costs listed 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 through SPP's Open Access Same Time Information System (OASIS) as required by Attachment Z1 of the SPP OATT. In addition, costs associated with a short circuit analysis will be allocated should the Interconnection Request Customer choose to execute a Facility Study Agreement.

There may be additional costs allocated to each Customer. See Appendix E for more details.

Appendix F. Cost Allocation by Upgrade

Carlsbad Interchange - Pecos Interchange 115KV CKT 1	\$1,500,000
NRIS only required upgrade: Rebuild approximately 2 miles 115kV	
GEN-2014-008	\$1,500,000
Total Allocated Costs	\$1,500,000
Eddy County 230/115kV Transformer CKT 2	\$12,000,000
NRIS only required upgrade: Replace existing 230/115/13kV Transformer circuit #2	
GEN-2014-008	\$12,000,000
Total Allocated Costs	\$12,000,000
GEN-2014-007 Tap - Grapevine 345kV CKT 1	\$137,500,000
Build approximately 110 miles of 345kV.	
GEN-2014-008	\$102,137,550
GEN-2014-065	\$35,362,450
Total Allocated Costs	\$137,500,000
GEN-2014-008 Interconnection Costs	\$13,000,000
See One-line diagram	
GEN-2014-008	\$13,000,000
Total Allocated Costs	\$13,000,000
GEN-2014-008 Tap - Hobbs 345kV CKT 1	\$72,500,000
Build approximately 58 miles of 345kV.	
GEN-2014-008	\$65,976,532
GEN-2014-065	\$6,523,468
Total Allocated Costs	\$72,500,000
GEN-2014-018 Interconnection Costs	\$19,000,000
See One-line diagram	
GEN-2014-018	\$19,000,000
Total Allocated Costs	\$19,000,000
GEN-2014-018 Tap - Diana East 345kV CKT 1	\$140,000,000
Build approximately 75 miles of 345kV.	
GEN-2014-018	\$140,000,000
Total Allocated Costs	\$140,000,000

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

GEN-2014-065 Interconnection Costs **\$6,000,000**

See One-line diagram

GEN-2014-065 \$6,000,000

Total Allocated Costs **\$6,000,000**

Grapevine 345kV Reactive Equipment **\$15,000,000**

Install approximately 200Mvar of 345kV switched shunt capacitors.

GEN-2014-008 \$11,142,278

GEN-2014-065 \$3,857,722

Total Allocated Costs **\$15,000,000**

Lebrock - Pirkey 345kV CKT 1 **\$750,000**

Replace Terminal Equipment

GEN-2014-018 \$750,000

Total Allocated Costs **\$750,000**

Lebrock - Pirkey 345kV CKT 2 **\$750,000**

Replace Terminal Equipment

GEN-2014-018 \$750,000

Total Allocated Costs **\$750,000**

Lydia - Welsh 345kV CKT 1 **\$60,000,000**

Rebuild approximately 32 miles of 345kV

GEN-2014-018 \$60,000,000

Total Allocated Costs **\$60,000,000**

Ochoa - Ponderosa Tap 115kV CKT 1 **\$6,825,000**

Rebuild approximately 9.1 miles of 115kV

GEN-2014-065 \$6,825,000

Total Allocated Costs **\$6,825,000**

Sabine Mining Co. T - Southeast Marshall 138KV CKT 1 **\$8,250,000**

NRIS only required upgrade: Rebuild approximately 11 miles of 115kV

GEN-2014-018 \$8,250,000

Total Allocated Costs **\$8,250,000**

Scottsville - Southeast Marshall 138KV CKT 1 **\$4,500,000**

NRIS only required upgrade: Rebuild approximately 6 miles of 115kV

GEN-2014-018 \$4,500,000

Total Allocated Costs **\$4,500,000**

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

G: Power Flow Analysis (Constraints Used For Mitigation)

See next page.

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	06ALL		0 15G	G14_008		Non-Converged Contingency	956	1052	0.65593	-	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06NR		0 15G	G14_008		Non-Converged Contingency	956	1052	0.60607	-	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 15G	G14_008		Non-Converged Contingency	0	0	0.34126	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		0 15G	G14_008		Non-Converged Contingency	1420	1775	0.25765	-	'POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 15G	G14_008		Non-Converged Contingency	956	994	0.17063	-	'OKLAUNION - TUCO INTERCHANGE 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 15SP	G14_008		Non-Converged Contingency	956	1052	0.65813	-	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 15SP	G14_008		Non-Converged Contingency	0	0	0.3525	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		0 20SP	G14_008		Non-Converged Contingency	956	1052	0.64695	-	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 20WP	G14_008		Non-Converged Contingency	987	1083	0.64783	-	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 20WP	G14_008		Non-Converged Contingency	0	0	0.34967	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		0 20WP	G14_008		Non-Converged Contingency	1033	1071	0.17483	-	'OKLAUNION - TUCO INTERCHANGE 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 25SP	G14_008		Non-Converged Contingency	956	1052	0.64746	-	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL		2 15G	G14_008		Non-Converged Contingency	0	0	0.35122	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		2 15G	G14_008		Non-Converged Contingency	1420	1775	0.23084	-	'POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL		2 15G	G14_008		Non-Converged Contingency	956	994	0.17561	-	'OKLAUNION - TUCO INTERCHANGE 345KV CKT 1'
FDNSLock-Blown up	06ALL		2 15SP	G14_008		Non-Converged Contingency	0	0	0.36241	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		2 20WP	G14_008		Non-Converged Contingency	0	0	0.35888	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		2 20WP	G14_008		Non-Converged Contingency	1033	1071	0.17944	-	'OKLAUNION - TUCO INTERCHANGE 345KV CKT 1'
FDNSLock-Blown up	06ALL		3 15G	G14_008		Non-Converged Contingency	0	0	0.32605	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		3 15G	G14_008		Non-Converged Contingency	956	994	0.16302	-	'OKLAUNION - TUCO INTERCHANGE 345KV CKT 1'
FDNS	00NR		0 25SP	G14_008	'TO->FROM'	'CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1'	141	141	0.04605	108.4933	'HOBBS - KIOWA 7345.00 345KV CKT 1'
FDNS	06ALL		0 15G	G14_008	'FROM->TO'	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'	717	926	0.65593	109.1413	'BASE CASE'
FDNS	00NR		0 25SP	G14_008	'FROM->TO'	'EDDY NORTH 6230.00 (WAUK W01134) 230/115/13.2KV TRANSFORMER CKT 2'	250	288	0.21845	105.7988	'EDDY COUNTY INTERCHANGE - EDDY NORTH 6230.00 230KV CKT @1'
FDNS	00NR		0 25SP	G14_008	'FROM->TO'	'EDDY NORTH 6230.00 (WAUK W01134) 230/115/13.2KV TRANSFORMER CKT 2'	250	288	0.21845	103.5133	'EDDY COUNTY INTERCHANGE - EDDY NORTH 6230.00 230KV CKT @1'
FDNS	00NR		2 25SP	G14_008	'TO->FROM'	'CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1'	141	141	0.04605	108.4902	'HOBBS - KIOWA 7345.00 345KV CKT 1'
FDNS	00NR		2 25SP	G14_008	'FROM->TO'	'EDDY NORTH 6230.00 (WAUK W01134) 230/115/13.2KV TRANSFORMER CKT 2'	250	288	0.21845	105.7913	'EDDY COUNTY INTERCHANGE - EDDY NORTH 6230.00 230KV CKT @1'
FDNS	00NR		2 25SP	G14_008	'FROM->TO'	'EDDY NORTH 6230.00 (WAUK W01134) 230/115/13.2KV TRANSFORMER CKT 2'	250	288	0.21845	103.5059	'EDDY COUNTY INTERCHANGE - EDDY NORTH 6230.00 230KV CKT @1'
FDNS	00NR		3 25SP	G14_008	'TO->FROM'	'CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1'	141	141	0.04611	107.1355	'HOBBS - KIOWA 7345.00 345KV CKT 1'
FDNS	00NR		3 25SP	G14_008	'FROM->TO'	'EDDY NORTH 6230.00 (WAUK W01134) 230/115/13.2KV TRANSFORMER CKT 2'	250	288	0.21848	105.6387	'EDDY COUNTY INTERCHANGE - EDDY NORTH 6230.00 230KV CKT @1'
FDNS	00NR		3 25SP	G14_008	'FROM->TO'	'EDDY NORTH 6230.00 (WAUK W01134) 230/115/13.2KV TRANSFORMER CKT 2'	250	288	0.21848	103.355	'EDDY COUNTY INTERCHANGE - EDDY NORTH 6230.00 230KV CKT @1'
FDNS	00NR		4 25SP	G14_008	'TO->FROM'	'CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1'	141	141	0.04611	107.1355	'HOBBS - KIOWA 7345.00 345KV CKT 1'
FDNS	00NR		4 25SP	G14_008	'FROM->TO'	'EDDY NORTH 6230.00 (WAUK W01134) 230/115/13.2KV TRANSFORMER CKT 2'	250	288	0.21848	105.6387	'EDDY COUNTY INTERCHANGE - EDDY NORTH 6230.00 230KV CKT @1'
FDNS	00NR		4 25SP	G14_008	'FROM->TO'	'EDDY NORTH 6230.00 (WAUK W01134) 230/115/13.2KV TRANSFORMER CKT 2'	250	288	0.21848	103.355	'EDDY COUNTY INTERCHANGE - EDDY NORTH 6230.00 230KV CKT @1'
FDNSLock-Blown up	00NR		0 15SP	G14_018		Non-Converged Contingency	717	789	0.78733	-	'G14-018T 345.00 - TENASKA RUSK COUNTY 345KV CKT 1'
FDNSLock-Blown up	10ALL		0 15SP	G14_018		Non-Converged Contingency	717	789	0.74304	-	'G14-018T 345.00 - TENASKA RUSK COUNTY 345KV CKT 1'
FDNSLock-Blown up	10ALL		0 15SP	G14_018		Non-Converged Contingency	1121	1195	0.71982	-	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNSLock-Blown up	00NR		0 15SP	G14_018		Non-Converged Contingency	1121	1195	0.66649	-	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNSLock-Blown up	10ALL		0 20SP	G14_018		Non-Converged Contingency	1121	1195	0.70043	-	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNSLock-Blown up	00NR		0 20SP	G14_018		Non-Converged Contingency	1121	1195	0.65559	-	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNSLock-Blown up	10ALL		0 20WP	G14_018		Non-Converged Contingency	1195	1195	0.69137	-	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNSLock-Blown up	00NR		0 20WP	G14_018		Non-Converged Contingency	1195	1195	0.61101	-	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNSLock-Blown up	10ALL		0 25SP	G14_018		Non-Converged Contingency	1121	1195	0.70153	-	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNSLock-Blown up	00NR		0 25SP	G14_018		Non-Converged Contingency	1121	1195	0.66446	-	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	10ALL		0 20SP	G14_018	'TO->FROM'	'CHEROKEE REC - KNOX LEE 138KV CKT 1'	214	298	0.0318	102.4458	'BASE CASE'
FDNS	10ALL		0 20SP	G14_018	'TO->FROM'	'CHEROKEE REC - KNOX LEE 138KV CKT 1'	214	298	0.0318	102.4458	'BASE CASE'
FDNS	10ALL		0 25SP	G14_018	'TO->FROM'	'CHEROKEE REC - KNOX LEE 138KV CKT 1'	214	298	0.03232	99.8	'BASE CASE'
FDNS	10ALL		0 25SP	G14_018	'TO->FROM'	'CHEROKEE REC - KNOX LEE 138KV CKT 1'	214	298	0.03232	99.8	'BASE CASE'
FDNS	10ALL		0 25SP	G14_018	'TO->FROM'	'DIANA - PIRKEY 345KV CKT 1'	1121	1243	0.62955	103.158	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	10ALL		0 20SP	G14_018	'TO->FROM'	'DIANA - PIRKEY 345KV CKT 1'	1121	1243	0.62885	100.5059	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		0 20SP	G14_018	'FROM->TO'	'EASTON REC - KNOX LEE 138KV CKT 1'	454	547	0.1226	107.5304	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0 20WP	G14_018	'FROM->TO'	'EASTON REC - KNOX LEE 138KV CKT 1'	543	598	0.10036	105.4198	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0 20SP	G14_018	'TO->FROM'	'EASTON REC - PIRKEY 138KV CKT 1'	454	553	0.1226	107.5182	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'TO->FROM'	'JEFFERSON SWITCHING - MARSHALL 138KV CKT 1'	238	238	0.10436	114.57	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0 25SP	G14_018	'TO->FROM'	'JEFFERSON SWITCHING - MARSHALL 138KV CKT 1'	238	238	0.10243	113.6071	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0 20SP	G14_018	'TO->FROM'	'JEFFERSON SWITCHING - MARSHALL 138KV CKT 1'	238	238	0.10511	101.2925	'DIANA - PIRKEY 345KV CKT 1'
FDNS	10ALL		0 20WP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 1'	896	986	0.67086	152.0862	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		0 20WP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 1'	896	986	0.53663	151.318	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	10ALL		0 15SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 1'	896	986	0.70333	149.8682	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 1'	896	986	0.61198	149.4207	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		0 20SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 1'	896	986	0.60456	143.5729	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		0 25SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 1'	896	986	0.61714	141.5103	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	10ALL		0 20SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 1'	896	986	0.68407	140.7743	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	10ALL		0 25SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 1'	896	986	0.68571	139.3943	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	10ALL		0 20WP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.67362	152.7453	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		0 20WP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.53883	151.9763	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	10ALL		0 15SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.706	150.4752	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.61431	150.0315	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		0 20SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.60704	144.2223	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		0 25SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.61967	142.1588	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	10ALL		0 20SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.68688	141.422	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	10ALL		0 25SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.68852	140.0399	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		0 20WP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.42296	109.1814	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	10ALL		0 20WP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.53219	109.1793	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	10ALL		0 25SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.54191	104.8737	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	10ALL		0 20SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.54081	104.8562	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		0 25SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.4788	104.854	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.46364	104.841	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	10ALL		0 15SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.53984	104.8313	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		0 20SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.47125	104.8196	'CROCKETT - G14-018T 345.00 345KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		0	20WP	G14_018	'TO->FROM'	1195	1195	0.82648	117.7068	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	10ALL		0	20WP	G14_018	'TO->FROM'	1195	1195	0.96687	117.7054	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	10ALL		0	25SP	G14_018	'TO->FROM'	1121	1195	0.97944	113.0377	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	10ALL		0	20SP	G14_018	'TO->FROM'	1121	1195	0.97804	113.0258	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		0	25SP	G14_018	'TO->FROM'	1121	1195	0.89859	113.0243	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'TO->FROM'	1121	1195	0.87917	113.0156	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	10ALL		0	15SP	G14_018	'TO->FROM'	1121	1195	0.97678	113.009	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		0	20SP	G14_018	'TO->FROM'	1121	1195	0.88892	113.0012	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	10ALL		0	20WP	G14_018	'TO->FROM'	1195	1195	0.90083	100.558	'CROCKETT - GRIMES 345KV CKT 1'
FDNS	00NR		0	20WP	G14_018	'TO->FROM'	1195	1195	0.76746	100.5487	'CROCKETT - GRIMES 345KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'TO->FROM'	261	298	0.11549	126.5898	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	25SP	G14_018	'TO->FROM'	261	298	0.11544	120.0385	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	20SP	G14_018	'TO->FROM'	261	298	0.1183	108.9532	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	20WP	G14_018	'TO->FROM'	307	321	0.10023	100.5227	'DIANA - PIRKEY 345KV CKT 1'
FDNS	10ALL		0	25SP	G14_018	'TO->FROM'	905	1059	0.32899	112.2357	'SPP-AEPW-04'
FDNS	10ALL		0	25SP	G14_018	'TO->FROM'	905	1059	0.32164	110.3499	'NORTHWEST TEXARKANA - WELSH 345KV CKT 1'
FDNS	00NR		0	25SP	G14_018	'TO->FROM'	410	491	0.13623	103.3901	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'TO->FROM'	410	491	0.13697	103.2925	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	293	340	0.11549	129.9313	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	25SP	G14_018	'FROM->TO'	293	340	0.11544	125.571	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	20SP	G14_018	'FROM->TO'	293	340	0.1183	115.1318	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	272	272	0.11549	158.4369	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	25SP	G14_018	'FROM->TO'	272	272	0.11544	152.8421	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	20SP	G14_018	'FROM->TO'	272	272	0.1183	139.8337	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	20WP	G14_018	'FROM->TO'	287	287	0.10023	128.5187	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	25SP	G14_018	'FROM->TO'	272	272	0.04648	105.8	'ARSENAL HILL - STALL GENERATION 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	272	272	0.05306	105.2377	'MARSHALL - PIRKEY 138KV CKT 1'
FDNS	00NR		0	25SP	G14_018	'FROM->TO'	272	272	0.05408	104.682	'MARSHALL - PIRKEY 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	272	272	0.05212	104.1899	'SPP-AEPW-05'
FDNS	00NR		0	25SP	G14_018	'FROM->TO'	272	272	0.06809	103.8355	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	272	272	0.04376	103.7714	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	272	272	0.0525	103.0752	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	272	272	0.04543	102.5	'ARSENAL HILL - STALL GENERATION 138KV CKT 1'
FDNS	00NR		0	25SP	G14_018	'FROM->TO'	272	272	0.04485	102.5	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		0	25SP	G14_018	'FROM->TO'	272	272	0.05336	101.9937	'SPP-AEPW-05'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	272	272	0.06436	101.835	'CROCKETT - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		0	25SP	G14_018	'FROM->TO'	272	272	0.05356	101.0948	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		0	25SP	G14_018	'FROM->TO'	272	272	0.06818	100.8142	'CROCKETT - GRIMES 345KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	272	272	0.04954	99.7	'EASTON REC - PIRKEY 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	272	272	0.04954	99.5	'EASTON REC - KNOX LEE 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'TO->FROM'	272	272	0.11549	143.3987	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	25SP	G14_018	'TO->FROM'	272	272	0.11544	136.6067	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	20SP	G14_018	'TO->FROM'	272	272	0.1183	124.237	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0	20WP	G14_018	'TO->FROM'	287	287	0.10023	116.257	'DIANA - PIRKEY 345KV CKT 1'
FDNS	10ALL		2	20WP	G14_018	'FROM->TO'	896	986	0.35054	109.6185	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		2	20WP	G14_018	'FROM->TO'	896	986	0.24748	109.3043	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	10ALL		2	15SP	G14_018	'FROM->TO'	896	986	0.36637	106.8257	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	896	986	0.29881	105.3022	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		2	20SP	G14_018	'FROM->TO'	896	986	0.29909	104.0844	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		2	25SP	G14_018	'FROM->TO'	896	986	0.31035	101.5099	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	10ALL		2	20SP	G14_018	'FROM->TO'	896	986	0.36091	100.6684	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	10ALL		2	20WP	G14_018	'FROM->TO'	896	986	0.35437	110.8951	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		2	20WP	G14_018	'FROM->TO'	896	986	0.25018	110.5782	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	10ALL		2	15SP	G14_018	'FROM->TO'	896	986	0.37034	108.065	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	896	986	0.30205	106.5288	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		2	20SP	G14_018	'FROM->TO'	896	986	0.30236	105.3105	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		2	25SP	G14_018	'FROM->TO'	896	986	0.31374	102.7174	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	10ALL		2	20SP	G14_018	'FROM->TO'	896	986	0.36485	101.8626	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	10ALL		2	25SP	G14_018	'FROM->TO'	896	986	0.36621	100.5883	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	10ALL		2	25SP	G14_018	'TO->FROM'	905	1059	0.36163	116.2292	'SPP-AEPW-04'
FDNS	10ALL		2	25SP	G14_018	'TO->FROM'	905	1059	0.34705	113.4207	'NORTHWEST TEXARKANA - WELSH 345KV CKT 1'
FDNS	10ALL		2	20SP	G14_018	'TO->FROM'	905	1059	0.36253	101.0305	'SPP-AEPW-04'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	272	272	0.0481	114.8922	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		2	25SP	G14_018	'FROM->TO'	272	272	0.05077	113.7121	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		2	20SP	G14_018	'FROM->TO'	272	272	0.05356	102.6641	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		2	25SP	G14_018	'FROM->TO'	272	272	0.03405	100.3	'ARSENAL HILL - STALL GENERATION 138KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	272	272	0.04339	100.1981	'SPP-AEPW-05'
FDNS	00NR		2	15SP	G14_018	'TO->FROM'	272	272	0.0481	100.1469	'DIANA - PIRKEY 345KV CKT 1'
FDNS	10ALL		3	20WP	G14_018	'FROM->TO'	896	986	0.35071	109.651	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		3	20WP	G14_018	'FROM->TO'	896	986	0.2475	109.3346	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	10ALL		3	15SP	G14_018	'FROM->TO'	896	986	0.36652	106.8646	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	896	986	0.29886	105.3329	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		3	20SP	G14_018	'FROM->TO'	896	986	0.29914	104.1287	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		3	25SP	G14_018	'FROM->TO'	896	986	0.31039	101.568	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	10ALL		3	20SP	G14_018	'FROM->TO'	896	986	0.36107	100.7303	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	10ALL		3	25SP	G14_018	'FROM->TO'	896	986	0.36241	99.5	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	10ALL		3	20WP	G14_018	'FROM->TO'	896	986	0.35454	110.9278	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		3	20WP	G14_018	'FROM->TO'	896	986	0.25021	110.6087	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	10ALL		3	15SP	G14_018	'FROM->TO'	896	986	0.37049	108.1042	'LEBROCK - PIRKEY 345KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		3 15SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.3021	106.5598	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		3 20SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.30241	105.3552	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		3 25SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.31378	102.7762	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	10ALL		3 20SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.36502	101.925	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	10ALL		3 25SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 2'	896	986	0.36637	100.664	'LEBROCK - PIRKEY 345KV CKT 1'
FDNS	00NR		3 15SP	G14_018	'FROM->TO'	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'	272	272	0.04802	114.8114	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		3 25SP	G14_018	'FROM->TO'	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'	272	272	0.05069	113.5815	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		3 20SP	G14_018	'FROM->TO'	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'	272	272	0.05348	102.5629	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		3 25SP	G14_018	'FROM->TO'	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'	272	272	0.03393	100.1	'ARSENAL HILL - STALL GENERATION 138KV CKT 1'
FDNS	00NR		3 15SP	G14_018	'FROM->TO'	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'	272	272	0.04318	100	'SPP-AEPW-05'
FDNS	00NR		3 15SP	G14_018	'TO->FROM'	'SCOTTSVILLE - SOUTHEAST MARSHALL 138KV CKT 1'	272	272	0.04802	100.0667	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.0475	175.485	'GRIMES - MT. ZION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.04761	175.0182	'T133'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.0475	174.5678	'HUNTSVILLE T'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.0475	174.4659	'LINE 558 TAP - MT. ZION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.0475	172.0181	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.04155	151.6514	'NAVSOTA - TUBULAR 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.04155	151.0008	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.04155	149.0553	'NAVASOTA-LON'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.04155	149.0553	'T154'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.04155	147.0796	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03826	146.7674	'T104'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03826	146.672	'BRYAN-GRIMES'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.0508	146.1702	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.05281	145.9028	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.04155	145.7678	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03805	144.7899	'GRIMES TO NA'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03805	144.7899	'T153'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03805	144.6606	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03805	144.6532	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.04155	144.5913	'4FISHCRK - LONGMIRE 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	144.2737	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03336	144.2276	'CHINA - CHINA PORTER SERIES CAP 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03336	144.2094	'CHINA PORTER SERIES - CHINA PORTER SERIES CAP 230KV CKT 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03336	144.1792	'CHINA TO POR'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03336	144.172	'CHINA PORTER SERIES - PORTER 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03336	144.1535	'PORTER (PORTER) 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	144.1	'SABINE 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03805	144.0899	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	143.6	'ERCOT EQUIVALENCE 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	143.5568	'EASTDC - ERCOT EQUIVALENCE 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03764	142.8787	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	142.3032	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.0373	142.1162	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	142.1	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	141.8295	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	141.7	'SABINE 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03386	141.5267	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03691	140.7992	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03621	140.6045	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03915	140.5005	'GEORGIA - HUNTSVILLE 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03915	140.3004	'GEORGIA - TEMCO 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	140.3	'NELSON 230/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03757	140.2916	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.04014	140.0365	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	139.7739	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	139.7	'NELSON 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03901	139.6833	'HUNTSVILLE-L'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	139.6076	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	139.4	'SABINE 230/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	138.7	'FLINT CREEK 161/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03751	138.6054	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	138.5347	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03415	138.4862	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03901	138.4703	'T136'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	138.4	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03887	138.3372	'SPP-AEPW-01'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03373	138.306	'AMELIA BULK - CHINA 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	138.2	'CO-GENTRIX - RIVERSIDE STATION 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03712	137.916	'HUNTSVILLE-R'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03712	137.9108	'HUNTSVILLE - LINE 558/91 TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03712	137.9096	'LINE 558/91 TAP - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	137.9	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03585	137.8638	'CONAIR - LINE 523 TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03502	137.8466	'BEVIL - CYPRESS 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03513	137.8288	'CHINA - SABINE 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	137.8286	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	137.8268	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'	206	206	0.03581	137.8	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	137.8	'SABINE 138/20.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	137.8	'SABINE 138/20.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.04155	137.7254	'LONGMIRE - PANORAMA 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	137.7	'RIVERSIDE STATION 138/22.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	137.7	'RIVERSIDE STATION 138/24.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	137.6964	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03758	137.6639	'SPP-AEPW-05'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03727	137.6525	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	137.6	'NORTHEAST STATION 138/22.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03502	137.5051	'AMELIA BULK - BEVIL 230KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03585	137.4389	'4CONROE2 138.00 - LINE 523 TAP 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03809	137.4224	'LYDIA - WELSH 345KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	137.3682	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03727	137.3375	'CROCKETT - LATEXO (ETEC) 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	137.3	'FANCY POINT - RIVER BEND 230KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	137.3	'RIVER BEND 230/21.5KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03502	137.2759	'BULK-CYPRESS'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03761	137.2721	'DIANA - SOUTHWEST SHREVEPORT 345KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	137.1	'8COTNWD2 500.00 - HARTBURG 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03757	137.0173	'BISHOP - PEE DEE 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03567	136.9744	'8DANIEL8 500.00 - MCKNIGHT 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03567	136.9686	'8DANIEL8 500.00/230KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03727	136.9508	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03725	136.9288	'LNG - TEMCO 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03337	136.9096	'HARTBURG - MOUNT OLIVE 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	136.8	'8CAJUN2 500/24.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	136.8	'GRAND GULF 500/22.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	136.7991	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03621	136.787	'4GOSLIN1 138.00 - GOSLIN 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03621	136.7864	'4GOSLIN1 138.00 - ALDEN 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03727	136.7413	'GRAPELAND (ETEC) - SLOCUM 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	136.7	'EXXON MOBIL IPP 138/18.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03757	136.6832	'PEE DEE-RIVT'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03757	136.6832	'T167'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.04155	136.635	'EGYPT - PANORAMA 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03757	136.5855	'BISHOP - CEDAR 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03725	136.5355	'LACON - LNG 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03529	136.5229	'HARTBURG 500/230KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03529	136.5017	'HARTBURG - INLAND ORANGE 230KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03777	136.478	'LYDIA - VALLIANT 345KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03588	136.4442	'LONGWOOD - WILKES 345KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.04155	136.3716	'EK-LONGMIRE'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.04155	136.3716	'T142'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03624	136.2986	'4PELNRD 138.00 - JACINTO 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03727	136.2983	'ALTO (ETEC) - SLOCUM 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03757	136.2809	'CEDAR - CINCINNATI 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	136.2106	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	136.2	'SOUTHWESTERN STATION 138/24.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	136.196	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	136.1504	'GEN335178 5-RS COGEN R5'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	136.109	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03574	136.1084	'FRANKLIN - GRAND GULF 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03806	136.108	'PITTSBURG - VALLIANT 345KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	136.1	'PPG 69/18.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03727	136.0553	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03709	136.029	'SPP-AEPW-04'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	136.0119	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03634	135.9565	'PIRKEY - SABINE MINING CO. T 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.95	'GEN334232 1-1PELNRD U1 13.800'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.95	'GEN334233 1-1PELNRD U2 13.800'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.9	'4PELNRD 138.00 138/13.8KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.9	'4PELNRD 138.00 138/13.8KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.9	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.9	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03529	135.8895	'INLAND-ORANGE - MCLEWIS 230KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03634	135.8604	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03542	135.8275	'OAK RIDGE - PORTER 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03727	135.8057	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.8	'TURK 138/24.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.7816	'GEN300003 1-THOMAS HILL UNIT 3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03587	135.7311	'BAXTER WILSON SES - PERRYVILLE 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03529	135.7059	'HELBIG BULK - MCLEWIS 230KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.7	'CO-GENTRIX (COGEN G2) 345/18.0/13.8KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.7	'NELSON 138/18.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.7	'NINEMILE POINT 230 230/26.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.6964	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.6	'6HARDINETEC 230.00 - CYPRESS 230KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.6	'8COTNWD2 500.00 - 8XMFRINT3 500.00 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.6	'CO-GENTRIX (COGEN G1) 345/18.0/13.8KV TRANSFORMER CRT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03564	135.5712	'JACINTO - SPLENDORA 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03555	135.5597	'CHEEK - SOUTH BEAUMONT 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.538	'GEN303007 1-1BC2 U2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03621	135.5037	'CARROLL - DOLET HILLS 230KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03634	135.5035	'SCOTTSDALE - SOUTHEAST MARSHALL 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03593	135.5007	'DOLET HILLS - MANCOMP 6 230.00 230KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03585	135.4946	'T141'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03588	135.4878	'COCODRIE - VILLE PLATTE 230KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.477	'GEN640009 1-COOPER NUCLEAR STATION'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	135.4638	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03574	135.4316	'COLY - MCKNIGHT 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03757	135.4267	'CINCINNATI - WALKER 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03066	134.5089	'4CONROE2 138.00 - CONROE BULK 138KV CRT 21'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	133.9175	'BASE CASE'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	133.9175	'BASE CASE'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	133.7428	'4BENTWATER! 138.00 138KV SWITCHED SHUNT'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	133.7428	'4BENTWATER! 138.00 138KV SWITCHED SHUNT'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	133.2444	'GRIMES 138KV SWITCHED SHUNT'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	133.2224	'GRIMES 138KV SWITCHED SHUNT'
FDNS	10ALL		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.04886	132.4918	'BASE CASE'
FDNS	10ALL		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.04886	132.4918	'BASE CASE'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.05591	132.3985	'G14-018T 345.00 - TENASKA RUSK COUNTY 345KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	132.3513	'OKLAUN 345/24.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03574	132.3397	'EEK-SECURITY'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03574	132.3074	'BULK-RAYWOOD'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03565	132.3016	'8CAJUN2 - FANCY POINT 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	132.3	'LAWRENCE ENERGY CENTER UNIT 5 - LAWRENCE HILL 230KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	132.3	'LAWRENCE ENERGY CENTER UNIT 5 230/24.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	132.2	'SEMINOLE 138/20.9KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	132.1146	'GEN520947 1-HUGO1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03566	132.0601	'8BYLUT - WEBRE 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03305	132.0456	'T198'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	132.0255	'GEN635212 2-NEAL UNIT 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03544	132.0022	'NEW CANEY - PORTER 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	132	'TENASKA GATEWAY GENERATION 345/18.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	131.9854	'GEN337692 1-LAKE CATHERINE UNIT #4'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	131.9848	'SPSCONT-01'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.0358	131.8024	'SPP-AEPW-40'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03579	131.6173	'SPP-AEPW-35'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03426	131.6123	'NELSON - RICHARD 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	131.5166	'GEN506753 1-LEBROCK GAS 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	131.5132	'GEN506752 1-LEBROCK GAS 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	131.4325	'GEN509409 1-WILKES #3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	131.0739	'GEN635213 3-NEAL UNIT 3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	131.0386	'GEN509408 1-WILKES #2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	131	'TOLK STATION EAST 230/24.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	130.9	'PIRKEY 138/24.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	130.8739	'GEN344895 2-1LAB G2 20.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	130.8464	'GEN344896 3-1LAB G3 20.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	130.8455	'GEN344897 4-1LAB G4 20.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	130.8448	'GEN344894 1-1LAB G1 20.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03499	130.7462	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	130.6543	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	130.6	'G14_018 1 345.00 345/18.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03605	130.5773	'COLFAX - MONTGOMERY 230KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03497	130.5554	'RICHARD - WELLS 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	130.4409	'GEN509416 1-TURK GENERATION'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03605	130.4013	'WINFIELD TO'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	130.3396	'GEN509398 1-KNOXLEE #5'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	130.2909	'GEN509405 1-WELSH #2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	130.2082	'GEN506745 1-TENASKA GATEWAY STEAM 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03605	130.0878	'COLFAX - RODEMACHER 230KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	129.8651	'GEN635214 4-NEAL UNIT 4'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	129.7705	'GEN636641 1-LOUISA UNIT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	129.6	'TENASKA GATEWAY GENERATION 345/23.0KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	129.5957	'GEN509404 1-WELSH #1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	129.5948	'GEN509406 1-WELSH #3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03392	129.5552	'WEBRE - WELLS 500KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03508	129.2504	'CONROE BULK - GOSLIN 138KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	129.0864	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	128.2665	'GEN562658 1-G14_018 3 18.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	127.4106	'GEN344225 1-ICAL G1 25.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	127.1	'TENASKA GATEWAY GENERATION - TENASKA RUSK COUNTY 345KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03691	126.9425	'DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	126.8	'G14_018 1 345.00 345/23.5KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.0339	126.7086	'GRIMES 345/138KV TRANSFORMER CRT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.0339	126.7086	'GRIMES 345/138KV TRANSFORMER CRT 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03542	126.4878	'GOSLIN-OAK R'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4BENTWATER! 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	125.6292	'GEN506748 1-TENASKA GATEWAY GAS 3'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATE (MVA)	RATE (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY	
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	124.5	'DOLET HILLS 345/24.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03444	124.2875	'GRIMES 345/230KV TRANSFORMER CRT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03444	124.2601	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CRT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03444	124.253	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	124.0788	'GEN509403 1-PIRKEY GENERATION'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	123.6	'G14-018T 345.00 - G14_018 1 345.00 345KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	122.1164	'GEN334030 1-FRONTIER UNIT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	122.1164	'GEN334031 1-FRONTIER UNIT 2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	122.1164	'GEN334032 1-FRONTIER UNIT 3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	122.1	'FRONTIER 345/18.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	122.1	'FRONTIER 345/18.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	122.1	'FRONTIER 345/18.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	121.936	'GEN562657 1-G14_018 2 23.500'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03473	119.8008	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CRT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03473	119.7936	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CRT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03473	119.7203	'GRIMES 345/230KV TRANSFORMER CRT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03136	114.2877	'GRIMES 345/230KV TRANSFORMER CRT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03136	114.2683	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CRT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03136	114.2624	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	111.8383	'GEN334033 1-FRONTIER UNIT 4'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'4BENTWATER' 138.00 - GRIMES 138KV CRT 1'	206	206	0.03581	111.7	'FRONTIER 345/23.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.0475	161.4796	'GRIMES - MT. ZION 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.04761	161.029	'T133'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.0475	160.5797	'HUNTSVILLE T'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.0475	160.477	'LINE 558 TAP - MT. ZION 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.0475	158.0609	'HUNTSVILLE - LINE 558 TAP 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.04155	138.0002	'NAVSOTA - TUBULAR 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.04155	137.3494	'DOBBIN - TUBULAR 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.04155	135.4463	'NAVSOTA-LON'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.04155	135.4463	'T154'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.04155	133.4485	'4SPRINGBRNCH138.00 - DOBBIN 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03826	133.0635	'T104'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03826	132.9721	'BRYAN-GRIMES'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.0508	132.4877	'LEBROCK - TENASKA RUSK COUNTY 345KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.05281	132.2305	'DIANA - G14-018T 345.00 345KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.04155	132.1458	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03805	131.1464	'GRIMES TO NA'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03805	131.1464	'T153'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03805	131.0158	'MAGNOLIA ANDERSON - SOTA 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03805	131.006	'GRIMES - MAGNOLIA ANDERSON 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.04155	130.9779	'4FISHCRK - LONGMIRE 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03336	130.6267	'CHINA - CHINA PORTER SERIES CAP 230KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	130.6084	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03336	130.6078	'CHINA PORTER SERIES - CHINA PORTER SERIES CAP 230KV CRT 2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03336	130.5912	'CHINA TO POR'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03336	130.5848	'CHINA PORTER SERIES - PORTER 230KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03336	130.5658	'PORTER (PORTER) 230/138/13.8KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03805	130.4575	'NAVSOTA - SOTA 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	130.4	'SABINE 230/24.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03585	130.1072	'4CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	129.9277	'EASTDC - ERCOT EQUIVALENCE 345KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	129.9	'ERCOT EQUIVALENCE 345/24.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03764	129.2456	'COLLEGE STATION TAP - GRIMES 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03585	129.0662	'4CANEYCREEK 138.00 - CONAIR 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	128.6937	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.0373	128.5007	'BRYAN - COLLEGE STATION TAP 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	128.5	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	128.236	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	128.1	'SABINE 138/22.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03386	127.9295	'CYPRESS - HARTBURG 500KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03691	127.2185	'DOLET HILLS 345/230KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03621	127.1457	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03915	126.9461	'GEORGIA - HUNTSVILLE 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03757	126.7509	'BRYAN - PEE DEE 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03915	126.7478	'GEORGIA - TEMCO 138KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	126.7	'NELSON 230/20.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.04014	126.4713	'7SAREPT 345.00 - LONGWOOD 345KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	126.2147	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03901	126.1317	'HUNTSVILLE-L'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	126.1	'NELSON 230/24.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	126.0537	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	125.9	'SABINE 230/22.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	125.2	'FLINT CREEK 161/22.0KV TRANSFORMER CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03751	125.0643	'DIANA - PIRKEY 345KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	124.9672	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03415	124.9495	'ELDORADO EHV - MOUNT OLIVE 500KV CRT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03901	124.9478	'T136'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03887	124.8031	'SPP-AEPW-01'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'4BENTWATER' 138.00 - WALDEN 138KV CRT 1'	206	206	0.03581	124.8	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CRT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03373	124.7716	'AMELIA BULK - CHINA 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	124.7	'CO-GENTRIX - RIVERSIDE STATION 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03585	124.4266	'CONAIR - LINE 523 TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03712	124.391	'HUNTSVILLE-R'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03712	124.3861	'HUNTSVILLE - LINE 558/91 TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03712	124.3855	'LINE 558/91 TAP - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03502	124.3397	'BEVIL - CYPRESS 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03513	124.3122	'CHINA - SABINE 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	124.3046	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	124.302	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	124.3	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	124.3	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.04155	124.2056	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	124.2	'RIVERSIDE STATION 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	124.2	'RIVERSIDE STATION 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	124.2	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	124.2	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	124.1738	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03758	124.1411	'SPP-AEPW-05'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03727	124.133	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	124.1	'NORTHEAST STATION 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03502	124.0025	'AMELIA BULK - BEVIL 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03585	123.9962	'ACONROE2 138.00 - LINE 523 TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03809	123.9047	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	123.8518	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03727	123.8238	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	123.8	'FANCY POINT - RIVER BEND 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	123.8	'RIVER BEND 230/21.5KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03502	123.7777	'BULK-CYPRESS'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03761	123.7573	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	123.6	'SCOTNWD2 500.00 - HARTBURG 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03757	123.5477	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03567	123.4656	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03567	123.46	'8DANIEL8 500.00/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03727	123.4441	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03725	123.4154	'LNG - TEMCO 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03337	123.4022	'HARTBURG - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03621	123.3307	'AGOSLINI 138.00 - ALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03621	123.3072	'AGOSLINI 138.00 - GOSLIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	123.3007	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	123.3	'8CAJUN2 500/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	123.3	'GRAND GULF 500/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03727	123.2385	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03757	123.2299	'PEE DEE-RIVT'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03757	123.2299	'T167'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	123.2	'EXXON MOBIL IPP 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.04155	123.1496	'EGYPT - PANORAMA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03757	123.1208	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03529	123.0339	'HARTBURG 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03725	123.0204	'LACON - LNG 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03529	123.0099	'HARTBURG - INLAND-ORANGE 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03777	122.9779	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03588	122.9449	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.04155	122.8747	'EEK-LONGMIRE'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.04155	122.8747	'T142'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03757	122.8187	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03624	122.8139	'4PELCNRD 138.00 - JACINTO 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03727	122.8028	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.7158	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.7014	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.7	'SOUTHWESTERN STATION 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.657	'GEN335178 5-RS Cogen R5'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.6161	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03574	122.6156	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03806	122.6151	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.6	'PPG 69/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03727	122.5646	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03709	122.5359	'SPP-AEPW-04'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.5208	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03634	122.4653	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.4574	'GEN334232 1-1PELCNRD U1 13.800'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.4574	'GEN334233 1-1PELCNRD U2 13.800'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03529	122.4058	'INLAND-ORANGE - MCLEWIS 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.4	'4PELCNRD 138.00 138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.4	'4PELCNRD 138.00 138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.4	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.4	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.4	'TURK 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03634	122.3713	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03727	122.3203	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.2948	'GEN300003 1-THOMAS HILL UNIT 3'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03587	122.2453	'BAXTER WILSON SES - PERRYVILLE 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03529	122.2252	'HELBIG BULK - MCLEWIS 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.2115	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.2	'CO-GENTRIX (COGEN G2) 345/18.0/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.2	'NELSON 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	122.2	'NINEMILE POINT 230 230/26.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03564	122.0879	'JACINTO - SPLENDORA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03066	121.2538	'4CONROE2 138.00 - CONROE BULK 138KV CKT Z1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	120.4655	'BASE CASE'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	120.4655	'BASE CASE'
FDNS	10ALL		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.04886	119.0661	'BASE CASE'
FDNS	10ALL		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.04886	119.0661	'BASE CASE'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	118.6964	'GEN520947 1-HUGO1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03305	118.653	'T198'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03566	118.6429	'8BYLBUT - WEBRE 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	118.6089	'GEN635212 2-NEAL UNIT 2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	118.5694	'GEN337692 1-LAKE CATHERINE UNIT #4'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	118.5691	'SPSCONT-01'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03544	118.563	'NEW CANEY - PORTER 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	118.5	'TENASKA GATEWAY GENERATION 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.0358	118.3901	'SPP-AEPW-40'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03579	118.2085	'SPP-AEPW-35'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03426	118.2035	'NELSON - RICHARD 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	118.1097	'GEN506753 1-LEBROCK GAS 2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	118.1064	'GEN506752 1-LEBROCK GAS 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	118.0272	'GEN509409 1-WILKES #3'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	117.6752	'GEN635213 3-NEAL UNIT 3'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	117.6407	'GEN509408 1-WILKES #2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	117.6	'TOLK STATION EAST 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	117.5	'PIRKEY 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	117.4789	'GEN344895 2-1LAB G2 20.000'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	117.4519	'GEN344896 3-1LAB G3 20.000'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	117.451	'GEN344897 4-1LAB G4 20.000'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	117.4503	'GEN344894 1-1LAB G1 20.000'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03499	117.3541	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	117.2639	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	117.2	'G14_018_1 345.00 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03605	117.1883	'COLFAX - MONTGOMERY 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03497	117.1665	'RICHARD - WELLS 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	117.0545	'GEN509416 1-TURK GENERATION'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03605	117.0156	'WINFIELD TO'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	116.9546	'GEN509398 1-KNOXLEE #5'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	116.9073	'GEN509405 1-WELSH #2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	116.8271	'GEN506745 1-TENASKA GATEWAY STEAM 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03605	116.7089	'COLFAX - RODEMACHER 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	116.4893	'GEN635214 4-NEAL UNIT 4'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	116.3964	'GEN636641 1-LOUISA UNIT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	116.2254	'GEN509404 1-WELSH #1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	116.2245	'GEN509406 1-WELSH #3'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	116.2	'TENASKA GATEWAY GENERATION 345/23.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03392	116.1869	'WEBRE - WELLS 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03508	115.8477	'CONROE BULK - GOSLIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	115.7252	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	114.9227	'GEN562658 1-G14_018_3 18.000'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	114.0811	'GEN344225 1-1CAL G1 25.000'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	113.8	'TENASKA GATEWAY GENERATION - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03691	113.6236	'DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	113.5	'G14_018_1 345.00 345/23.5KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.0339	113.2131	'GRIMES 345/138KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.0339	113.2131	'GRIMES 345/138KV TRANSFORMER CKT 2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03542	113.0982	'GOSLIN-OAK R'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	112.3368	'GEN506748 1-TENASKA GATEWAY GAS 3'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	111.3	'DOLET HILLS 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	110.8164	'GEN509403 1-PIRKEY GENERATION'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	110.3	'G14-018T 345.00 - G14_018_1 345.00 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	108.8905	'GEN334030 1-FRONTIER UNIT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	108.8905	'GEN334031 1-FRONTIER UNIT 2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	108.8905	'GEN334032 1-FRONTIER UNIT 3'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	108.8	'FRONTIER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	108.8	'FRONTIER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	108.8	'FRONTIER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	108.8	'FRONTIER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03581	108.7174	'GEN562657 1-G14_018_2 23.500'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03444	107.0509	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03444	107.0327	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03444	107.0287	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03473	105.8086	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'	206	206	0.03473	104.5745	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'4BENTWATER! 138.00 - WALDEN 138KV CKT 1'	206	206	0.03473	104.5705	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'4BENTWATER! 138.00 - WALDEN 138KV CKT 1'	206	206	0.03136	102.0258	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'4BENTWATER! 138.00 - WALDEN 138KV CKT 1'	206	206	0.03136	101.962	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'4BENTWATER! 138.00 - WALDEN 138KV CKT 1'	206	206	0.03136	101.9556	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03114	142.0516	'GRIMES - MT. ZION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03129	141.7495	'T133'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03048	141.6497	'4BENTWATER! 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03114	140.7214	'LINE 558 TAP - MT. ZION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03114	140.6075	'HUNTSVILLE T'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03114	137.5452	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03048	136.4971	'4BENTWATER! 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03048	134.1803	'T132'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03048	129.4924	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03048	125.7174	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03048	123.4803	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03048	121.5295	'CONROE BULK - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03258	103.9086	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03387	103.5745	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4FISHCRK - LONGMIRE 138KV CKT 1'	112	112	0.03114	135.3922	'GRIMES - MT. ZION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4FISHCRK - LONGMIRE 138KV CKT 1'	112	112	0.03129	135.0544	'T133'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4FISHCRK - LONGMIRE 138KV CKT 1'	112	112	0.03048	134.8867	'4BENTWATER! 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4FISHCRK - LONGMIRE 138KV CKT 1'	112	112	0.03114	134.0557	'LINE 558 TAP - MT. ZION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4FISHCRK - LONGMIRE 138KV CKT 1'	112	112	0.03114	133.9334	'HUNTSVILLE T'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4FISHCRK - LONGMIRE 138KV CKT 1'	112	112	0.03114	130.8634	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4FISHCRK - LONGMIRE 138KV CKT 1'	112	112	0.03048	129.6907	'4BENTWATER! 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4FISHCRK - LONGMIRE 138KV CKT 1'	112	112	0.03048	127.3935	'T132'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4FISHCRK - LONGMIRE 138KV CKT 1'	112	112	0.03048	122.6846	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4FISHCRK - LONGMIRE 138KV CKT 1'	112	112	0.03048	118.917	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4FISHCRK - LONGMIRE 138KV CKT 1'	112	112	0.03048	116.6804	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'4FISHCRK - LONGMIRE 138KV CKT 1'	112	112	0.03048	114.7301	'CONROE BULK - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1'	206	206	0.06911	140.4025	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1'	206	206	0.06969	140.0855	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1'	206	206	0.06292	138.1045	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03114	150.0365	'GRIMES - MT. ZION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03129	149.7655	'T133'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03048	149.7242	'4BENTWATER! 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03114	148.7087	'LINE 558 TAP - MT. ZION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03114	148.6019	'HUNTSVILLE T'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03114	145.5381	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03048	144.5974	'4BENTWATER! 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03048	142.2573	'T132'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03048	137.5771	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03048	133.7869	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03048	131.5444	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03048	129.5891	'CONROE BULK - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03258	111.9075	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03387	111.5789	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.0475	137.572	'GRIMES - MT. ZION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.04761	137.1091	'T133'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.0475	136.67	'HUNTSVILLE T'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.0475	136.5671	'LINE 558 TAP - MT. ZION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.0475	134.1561	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.04155	113.8117	'NAVSOTA - TUBULAR 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.04155	113.1714	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.04155	111.2453	'NAVSOTA-LON'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.04155	111.2453	'T154'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.04155	109.3001	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03826	109.0357	'T104'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03826	108.9395	'BRYAN-GRIMES'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.0508	108.4492	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.05281	108.1803	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.04155	108.0038	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03805	107.054	'GRIMES TO NA'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03805	107.054	'T153'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03805	106.9261	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03805	106.92	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.04155	106.8405	'4FISHCRK - LONGMIRE 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	106.7662	'GEN34440 1-SABINE UNIT 4'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	106.6	'SABINE 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03336	106.4989	'CHINA - CHINA PORTER SERIES CAP 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03336	106.4871	'CHINA PORTER SERIES - CHINA PORTER SERIES CAP 230KV CKT 2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03336	106.367	'CHINA TO POR'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03805	106.3577	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03336	106.3547	'CHINA PORTER SERIES - PORTER 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03336	106.3428	'PORTER (PORTER) 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	105.8441	'EASTDC - ERCOT EQUIVALENCE 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	105.8	'ERCOT EQUIVALENCE 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03585	105.1968	'4CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03764	105.166	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	104.468	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.0373	104.4075	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	104.3	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03585	104.2905	'4CANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	104.1216	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	104	'SABINE 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03386	103.7985	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03691	103.0973	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03915	102.7789	'GEORGIA - HUNTSVILLE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	102.6	'NELSON 230/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03915	102.5808	'GEORGIA - TEMCO 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03757	102.5713	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03621	102.4177	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04014	102.3365	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	102.0772	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	102	'NELSON 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03901	101.9799	'HUNTSVILLE-1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	101.9044	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	101.7	'SABINE 230/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	101	'FLINT CREEK 161/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	100.9689	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03751	100.911	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	100.8	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03415	100.7908	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03901	100.7694	'T136'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03373	100.6612	'AMELIA BULK - CHINA 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03887	100.6426	'SPP-AEPW-01'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	100.5	'CO-GENTRIX - RIVERSIDE STATION 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03712	100.2215	'HUNTSVILLE-R'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03712	100.2161	'HUNTSVILLE - LINE 558/91 TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03712	100.2148	'LINE 558/91 TAP - RIVTRIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	100.2	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	100.136	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	100.134	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03513	100.1171	'CHINA - SABINE 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	100.1	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	100.1	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	100.1	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03502	100.0925	'BEVIL - CYPRESS 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04155	100	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03758	100	'SPP-AEPW-05'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03727	100	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	100	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	100	'RIVERSIDE STATION 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	100	'RIVERSIDE STATION 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	99.9	'NORTHEAST STATION 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03585	99.8	'CONAIR - LINE 523 TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03502	99.8	'AMELIA BULK - BEVIL 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03809	99.7	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	99.7	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03761	99.6	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03727	99.6	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	99.6	'FANCY POINT - RIVER BEND 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03581	99.6	'RIVER BEND 230/21.5KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03502	99.5	'BULK-CYPRESS'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0475	145.5227	'GRIMES - MT. ZION 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04761	145.066	'T133'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0475	144.6228	'HUNTSVILLE T'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0475	144.5197	'LINE 558 TAP - MT. ZION 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0475	142.1083	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	121.8793	'NAVSOTA - TUBULAR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	121.2342	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	119.3187	'NAVSOTA-LON'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	119.3187	'T154'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	117.3479	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03826	117.0291	'T104'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03826	116.935	'BRYAN-GRIMES'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0508	116.4483	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.05281	116.1846	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	116.048	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03805	115.0754	'GRIMES TO NA'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03805	115.0754	'T153'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03805	114.946	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03805	114.9383	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	114.8819	'4FISHCRK - LONGMIRE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	114.6932	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03336	114.5378	'CHINA - CHINA PORTER SERIES CAP 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03336	114.5234	'CHINA PORTER SERIES - CHINA PORTER SERIES CAP 230KV CKT 2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	114.5	'SABINE 230/24.0KV TRANSFORMER CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03336	114.4425	'CHINA TO POR'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03336	114.4324	'CHINA PORTER SERIES - PORTER 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03336	114.4178	'PORTER (PORTER) 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03805	114.3819	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	113.9	'ERCOT EQUIVALENCE 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	113.8617	'EASTDC - ERCOT EQUIVALENCE 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03585	113.5357	'4CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03764	113.1802	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03585	112.5778	'4CANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	112.537	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0373	112.4276	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	112.4	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	112.1518	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	112	'SABINE 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03386	111.8335	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03691	111.1295	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03915	110.8308	'GEORGIA - HUNTSVILLE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03621	110.6865	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03915	110.6325	'GEORGIA - TEMCO 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03757	110.6292	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	110.6	'NELSON 230/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04014	110.3742	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	110.1161	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03901	110.0249	'HUNTSVILLE-1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	110	'NELSON 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	109.948	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	109.8	'SABINE 230/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	109.1	'FLINT CREEK 161/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03751	108.9555	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108.9536	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03415	108.8376	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03901	108.8253	'T136'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108.8	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03373	108.6905	'AMELIA BULK - CHINA 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03887	108.6901	'SPP-AEPW-01'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108.6	'CO-GENTRIX - RIVERSIDE STATION 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03712	108.2726	'HUNTSVILLE-R'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03712	108.2674	'HUNTSVILLE - LINE 558/91 TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03712	108.2664	'LINE 558/91 TAP - RIVTRIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108.2	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108.1867	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108.1844	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03513	108.1785	'CHINA - SABINE 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03502	108.1741	'BEVIL - CYPRESS 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108.1	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108.1	'RIVERSIDE STATION 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108.1	'RIVERSIDE STATION 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108.1	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108.1	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	108.0809	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108.0566	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03758	108.0222	'SPP-AEPW-05'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03727	108.0117	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03585	108.0098	'CONAIR - LINE 523 TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	108	'NORTHEAST STATION 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03502	107.8405	'AMELIA BULK - BEVIL 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03809	107.783	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	107.7311	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	107.7	'FANCY POINT - RIVER BEND 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	107.7	'RIVER BEND 230/21.5KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03727	107.6995	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03761	107.6343	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03585	107.6262	'4CONROE2 138.00 - LINE 523 TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03502	107.6132	'BULK-CYPRESS'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	107.4	'8COTNWD2 500.00 - HARTBURG 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03757	107.3883	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03567	107.3393	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03567	107.3336	'8DANIEL8 500.00 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03727	107.316	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03725	107.2862	'LNG - TEMCO 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03337	107.2748	'HARTBURG - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	107.1458	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03621	107.1451	'4GOSLIN1 138.00 - GOSLIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03727	107.1083	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	107.1	'8CAJUN2 500/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	107.1	'EXXON MOBIL IPP 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	107.1	'GRAND GULF 500/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03757	107.0608	'PEE DEE-RIVT'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03757	107.0608	'T167'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03621	107.0539	'AGOSLIN1 138.00 - ALDEN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	107.0037	'EGYPT - PANORAMA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03757	106.9621	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03725	106.8956	'LACON - LNG 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03529	106.8642	'HARTBURG 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03529	106.8536	'HARTBURG - INLAND-ORANGE 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03777	106.8468	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03588	106.8135	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	106.7422	'EEK-LONGMIRE'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	106.7422	'T142'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03624	106.7047	'4PELNRD 138.00 - JACINTO 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03727	106.6686	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03757	106.6597	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.6	'SOUTHWESTERN STATION 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.5819	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.5674	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.523	'GEN335178 5-RS Cogen R5'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.5	'PPG 69/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.4812	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03574	106.4807	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03806	106.4802	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03727	106.4278	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03709	106.4009	'SPP-AEPW-04'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.3849	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03634	106.3294	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.3207	'GEN334232 1-1PELNRD U1 13.800'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.3207	'GEN334233 1-1PELNRD U2 13.800'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.3	'4PELNRD 138.00 138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.3	'4PELNRD 138.00 138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03529	106.2559	'INLAND-ORANGE - MCLEWIS 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03634	106.2343	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.2	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.2	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.2	'TURK 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03727	106.1807	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.1566	'GEN300003 1-THOMAS HILL UNIT 3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03587	106.1066	'BAXTER WILSON SES - PERRYVILLE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03529	106.0736	'HELBIG BULK - MCLEWIS 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106.0729	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106	'CO-GENTRIX (COGEN G2) 345/18.0/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106	'NELSON 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	106	'NINEMILE POINT 230 230/26.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03564	105.9802	'JACINTO - SPLENDORA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	104.3079	'BASE CASE'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	104.3079	'BASE CASE'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03066	104.0832	'4CONROE2 138.00 - CONROE BULK 138KV CKT 21'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03305	102.956	'4CONROE2 138.00 - PLANTATION 138KV CKT 1'
FDNS	10ALL		4	15SP	G14_018	'TO->FROM'	206	206	0.04886	102.8936	'BASE CASE'
FDNS	10ALL		4	15SP	G14_018	'TO->FROM'	206	206	0.04886	102.8936	'BASE CASE'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	102.6	'SEMINOLE 138/20.9KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	102.5194	'GEN520947 1-HUGO1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03566	102.4652	'8BYLUT - WEBRE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03544	102.4512	'NEW CANEY - PORTER 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	102.4315	'GEN635212 2-NEAL UNIT 2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	102.4	'TENASKA GATEWAY GENERATION 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	102.3918	'GEN337692 1-LAKE CATHERINE UNIT #4'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	102.3906	'SPSCONT-01'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03305	102.3588	'T198'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0358	102.2096	'SPP-AEPW-40'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03579	102.026	'SPP-AEPW-35'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03426	102.0211	'NELSON - RICHARD 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101.9261	'GEN506753 1-LEBROCK GAS 2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101.9227	'GEN506752 1-LEBROCK GAS 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101.8426	'GEN509409 1-WILKES #3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101.4875	'GEN635213 3-NEAL UNIT 3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101.4517	'GEN509408 1-WILKES #2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101.4	'PIRKEY 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101.4	'TOLK STATION EAST 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101.2892	'GEN344895 2-1LAB G2 20.000'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101.2619	'GEN344896 3-1LAB G3 20.000'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101.2611	'GEN344897 4-1LAB G4 20.000'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101.2604	'GEN344894 1-1LAB G1 20.000'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03499	101.1617	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101.0705	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	101	'G14_018 1 345.00 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03605	100.9939	'COLFAX - MONTGOMERY 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03497	100.9722	'RICHARD - WELLS 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	100.8587	'GEN509416 1-TURK GENERATION'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03605	100.8192	'WINFIELD TO'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	100.758	'GEN509398 1-KNOXLEE #5'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	100.7097	'GEN509405 1-WELSH #2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	100.6279	'GEN506745 1-TENASKA GATEWAY STEAM 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03605	100.5084	'COLFAX - RODEMACHER 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	100.2883	'GEN635214 4-NEAL UNIT 4'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	100.1945	'GEN636641 1-LOUISA UNIT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	100.1	'GEN509404 1-WELSH #1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	100.1	'GEN509406 1-WELSH #3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	100	'TENASKA GATEWAY GENERATION 345/23.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03392	100	'WEBRE - WELLS 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03508	99.7	'CONROE BULK - GOSLIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03581	99.5	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0475	128.7956	'GRIMES - MT. ZION 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04761	128.3273	'T133'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0475	127.8923	'HUNTSVILLE T'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0475	127.7892	'LINE 558 TAP - MT. ZION 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0475	125.3772	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	104.9117	'NAVSOTA - TUBULAR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	104.2767	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	102.3407	'NAVASOTA-LON'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	102.3407	'T154'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04155	100.4234	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03826	100.214	'T104'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03826	100.1158	'BRYAN-GRIMES'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0508	99.6	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	10ALL		4	25SP	G14_018	'TO->FROM'	396	396	0.05531	106.4	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03114	174.079	'GRIMES - MT. ZION 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03048	174.0113	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03129	173.898	'T133'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03114	172.7649	'LINE 558 TAP - MT. ZION 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03114	172.6791	'HUNTSVILLE T'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03114	169.6188	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03048	168.973	'4BENTWATER1 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03048	166.5753	'T132'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03048	161.9315	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03048	158.1138	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03048	155.8658	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03048	153.9066	'CONROE BULK - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03258	136.1653	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	112	112	0.03387	135.8534	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	10ALL		4	15SP	G14_018	'TO->FROM'	112	112	0.03134	120.1578	'BASE CASE'
FDNS	10ALL		4	15SP	G14_018	'TO->FROM'	112	112	0.03134	120.1578	'BASE CASE'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.06969	115.267	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.06292	115.0335	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.06911	114.9823	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.05527	192.9603	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.05527	188.4146	'4BENTWATER1 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.05527	187.7331	'T132'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.05527	182.2072	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.05527	178.8557	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.05527	176.8676	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.05527	175.1324	'CONROE BULK - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04837	173.5105	'T104'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04837	173.3977	'BRYAN-GRIMES'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04708	167.2994	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04964	166.3366	'NAVSOTA - TUBULAR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04964	165.6121	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04964	163.16	'NAVASOTA-LON'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04964	163.16	'T154'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04787	162.449	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04641	161.8299	'GRIMES TO NA'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04641	161.8299	'T153'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04641	161.7905	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04641	161.7829	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04635	161.7218	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.06133	161.2087	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04964	161.1965	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04641	160.9701	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.06375	160.8763	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04964	159.7203	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04964	158.3952	'4FISHCRK - LONGMIRE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	157.9083	'EASTDC - ERCOT EQUIVALENCE 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	157.9	'ERCOT EQUIVALENCE 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04014	157.8339	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	156.4488	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	156.2	'SABINE 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	156.1753	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	155.9	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04455	154.9006	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	154.5158	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	154.3	'SABINE 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04787	154.1383	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04835	153.6445	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	153.4	'NELSON 230/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04787	153.0918	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	152.9203	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	152.8	'NELSON 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04787	152.3086	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	152.1	'FLINT CREEK 161/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	152.0623	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04523	151.978	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04118	151.8108	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	151.8	'SABINE 230/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04684	151.6105	'SPP-AEPW-01'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	151.5305	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	151.5	'CO-GENTRIX - RIVERSIDE STATION 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04787	151.4405	'PEE DEE-RIVT'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04787	151.4405	'T167'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	151.3	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	151	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.9239	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.9	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.9	'RIVERSIDE STATION 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04533	150.8957	'SPP-AEPW-05'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04494	150.8215	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.8	'RIVERSIDE STATION 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04143	150.7889	'CYPRESS - HONEY 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.7	'NORTHEAST STATION 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04964	150.6071	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.5142	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04592	150.5058	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04494	150.4377	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04143	150.388	'BRAGG - HONEY 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04537	150.3839	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.3395	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.3375	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.3	'FANCY POINT - RIVER BEND 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.3	'RIVER BEND 230/21.5KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04143	150.2706	'BRAGG - MENARD 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04143	150.2371	'T147'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04787	150.2232	'CINCINNATI - WALKER 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.2	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.2	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	150.1	'8COTNWD2 500.00 - HARTBURG 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04494	149.9667	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04302	149.9269	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04302	149.9201	'8DANIEL8 500.00/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04026	149.8825	'HARTBURG - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04143	149.7822	'GULF LIVINGSTON - MENARD 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04494	149.7114	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	149.7	'8CAJUN2 500/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	149.7	'GRAND GULF 500/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04787	149.4097	'RIVTRIN - WALKER 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04289	149.3946	'HOLLY SPRINGS - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04143	149.3759	'GULF LIVINGSTON - POCO 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04326	149.3637	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04553	149.3636	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04964	149.3367	'EGYPT - PANORAMA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	149.3195	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	149.2783	'GEN334232 1-1PELONRD U1 13.800'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	149.2783	'GEN334233 1-1PELONRD U2 13.800'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04143	149.2556	'T169'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	149.2	'4PELONRD 138.00 138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	149.2	'4PELONRD 138.00 138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	149.2	'EXXON MOBIL IPP 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04494	149.1718	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04273	149.1392	'CHINA - SABINE 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	149.0394	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	149.0218	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	149	'SOUTHWESTERN STATION 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04143	148.955	'CYPRESS-POCO'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04964	148.949	'EEK-LONGMIRE'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04964	148.949	'T142'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04588	148.9162	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.9133	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04204	148.9094	'AMELIA BULK - CHINA 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04289	148.8969	'HOLLY SPRINGS - JASPER 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.0431	148.8783	'FRANKLIN - GRAND GULF 500KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04494	148.8757	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04472	148.8369	'SPP-AEPW-04'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.7963	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.7805	'GEN335178 5-RS Cogen R5'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04383	148.762	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04251	148.735	'CYPRESS 500/138KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.7	'PPG 69/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04383	148.6447	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.0416	148.602	'CHINA - CHINA - JACNTO SERIES CAPACITOR 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.0416	148.602	'CHINA-JACINT'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.6	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.6	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.6	'TURK 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04135	148.5732	'DEER - DOUCETTE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04494	148.5714	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.0416	148.5685	'CHINA - JACNTO SERIES CAPACITOR - JACINTO 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.521	'GEN300003 1-THOMAS HILL UNIT 3'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04277	148.4652	'HARTBURG 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04277	148.4334	'HARTBURG - INLAND-ORANGE 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04334	148.4303	'DOLET HILLS - MANCOMP 6 230.00 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04325	148.4217	'BAXTER WILSON SES - PERRYVILLE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.0423	148.4065	'4COLEYCREEK 138.00 - APCLNRD 138.00 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.4	'CO-GENTRIX (COGEN G2) 345/18.0/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.3	'GHARDINETEC1230.00 - CYPRESS 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.3	'8COTNWD2 500.00 - 8XMFRINT3 500.00 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.3	'CO-GENTRIX (COGEN G1) 345/18.0/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.3	'NINEMILE POINT 230 230/26.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.2672	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.2611	'GEN303007 1-1BC2 U2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.0423	148.2478	'4COLEYCREEK 138.00 - SHEPHERD 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04312	148.2089	'LEACH - TOLEDO BEND 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04383	148.2086	'SCOTTSDALE - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04135	148.202	'CAMDEN - DEER 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.2	'NELSON 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04334	148.1636	'FISHER - MANCOMP 6 230.00 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04366	148.1606	'CARROLL - DOLET HILLS 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04312	148.1543	'NEWTON BULK'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.1536	'GEN640009 1-COOPER NUCLEAR STATION'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04334	148.1504	'FISHER 230/138KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04312	148.1499	'LEACH - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.1418	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04289	148.1087	'BEVIL - CYPRESS 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.1018	'GEN336191 1-LITTLE GYPSY UNIT#3'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.0871	'GEN303006 1-1BC2 U1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04383	148.0812	'LONGWOOD - SCOTTSDALE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.0431	148.0761	'COLY - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04301	148.0531	'CYPRESS - LUMBERTON 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148.0202	'GEN303024 1-1G3INTHB 18.000'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	148	'8COTNWD2 500.00 - 8XMFRINT4 500.00 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04325	147.9916	'COCODRIE - VILLE PLATTE 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.9875	'GEN303008 1-1BC2 U3'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04289	147.9382	'AMELIA BULK - BEVIL 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04311	147.9179	'EAST LEESVILLE - RODEMACHER 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04316	147.9127	'DBL-THIS-WWR'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04277	147.9106	'INLAND-ORANGE - MCLEWIS 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.9	'LITTLE GYPSY 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.9	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.9	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.9	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.9	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04355	147.8911	'7SAREPT 345.00 345/115KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04301	147.8854	'KOUNTZE BULK - LUMBERTON 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.8772	'GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04601	147.8706	'7SAREPT 345.00 - ELDORADO EHV 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04601	147.8706	'A222'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.8516	'GEN335370 1-1ACADIA_S26116.000'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04325	147.8443	'VILLE PLATTE - WESTFORK 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04287	147.8316	'KOUNTZE BULK - WARREN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04342	147.8268	'CONROE BULK - GOSLIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04359	147.8168	'MARSHALL - PIRKEY 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04299	147.8078	'8CAJUN2 - WEBRE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.8025	'GEN659103 1-ANTELOPE VALLEY UNIT1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.8025	'GEN659107 2-ANTELOPE VALLEY UNIT2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.8	'MICHOUO 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.8	'NORTHEAST STATION 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.8	'NORTHEAST STATION 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.8	'RODEMACHER 230/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.7997	'GEN303026 1-1G4INTHB 18.000'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.7973	'GEN335371 1-1G2-1ACAD 18.000'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.7973	'GEN335372 1-1G2-2ACAD 18.000'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04601	147.797	'ELDORADO EHV 500/345KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04325	147.7956	'WELLS - WESTFORK 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	147.7795	'GEN659118 1-LARAMIE RIVER UNIT1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	146.2724	'BASE CASE'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	146.2724	'BASE CASE'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.03981	144.7833	'LACON - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04316	144.7204	'ACONROE2 138.00 - LINE 523 TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	144.6965	'GEN509407 1-WILKES #1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04135	144.6882	'STALEY TO CO'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04315	144.6814	'BULK-RAYWOOD'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04228	144.6546	'REEK-RIVTRIN'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04293	144.6434	'4GOSLIN1 138.00 - ALDEN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	144.6	'8OUACHITA% 500.00 - STERLINGTON 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	144.6	'RAUN 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04316	144.5505	'CONAIR - LINE 523 TAP 138KV CKT 1'
FDNS	10ALL		4	15SP	G14_018	'FROM->TO'	206	206	0.05883	144.5406	'BASE CASE'
FDNS	10ALL		4	15SP	G14_018	'FROM->TO'	206	206	0.05883	144.5406	'BASE CASE'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04293	144.537	'4GOSLIN1 138.00 - GOSLIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	144.5	'HUGO POWER PLANT 138/23.4KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.0675	144.4229	'G14-018T 345.00 - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	144.4	'LAWRENCE ENERGY CENTER UNIT 5 - LAWRENCE HILL 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	144.4	'LAWRENCE ENERGY CENTER UNIT 5 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	144.3857	'OKLAUN 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04106	144.3534	'CARLISLE - ONALASKA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04299	144.3486	'8CAJUN2 - FANCY POINT 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.043	144.2708	'EEK-SECURITY'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	144.2	'SEMINOLE 138/20.9KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	144.0979	'GEN520947 1-HUGO1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.043	144.0609	'8BYLBUT - WEBRE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	144.0364	'GEN635212 2-NEAL UNIT 2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	144.0212	'GEN337692 1-LAKE CATHERINE UNIT #4'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	143.9437	'SPSCONT-01'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	143.9	'TENASKA GATEWAY GENERATION 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04106	143.7306	'CARLISLE - GULF TRINITY 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04317	143.7232	'SPP-AEPW-40'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04319	143.717	'RICH-POCO'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04319	143.717	'T170'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04106	143.5969	'GULF TRINITY - RIVTRIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	143.5495	'LINE 558 TAP - WYNTEX 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04136	143.5293	'NELSON - RICHARD 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04316	143.5002	'SPP-AEPW-35'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	143.3693	'GEN506753 1-LEBROCK GAS 2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	143.3652	'GEN506752 1-LEBROCK GAS 1'
FDNS	00NR		4	25SP	G14_018	'FROM->TO'	206	206	0.04456	143.3517	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'FROM->TO'	206	206	0.04456	143.342	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	143.2813	'GEN509409 1-WILKES #3'
FDNS	00NR		4	25SP	G14_018	'FROM->TO'	206	206	0.04456	143.2564	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04106	143.1761	'T183'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04135	143.0542	'RIVTRIN - STALEY 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	142.9118	'GEN635213 3-NEAL UNIT 3'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	142.8033	'GEN509408 1-WILKES #2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	142.8	'TOLK STATION EAST 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	142.7	'PIRKEY 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	142.6932	'GEN344895 2-1LAB G2 20.000'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	142.6609	'GEN344896 3-1LAB G3 20.000'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	142.6599	'GEN344897 4-1LAB G4 20.000'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	142.659	'GEN344894 1-1LAB G1 20.000'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04293	142.6417	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04219	142.4403	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04316	142.4189	'ACANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	142.3269	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.0422	142.306	'RICHARD - WELLS 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04346	142.2906	'COLFAX - MONTGOMERY 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	142.2	'G14_018_1 345.00 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	142.0809	'GEN509416 1-TURK GENERATION'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04346	142.077	'WINFIELD TO'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04316	142.0216	'ACANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	141.9532	'GEN509398 1-KNOXLEE #5'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	141.8972	'GEN509405 1-WELSH #2'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04306	141.8576	'GOSLIN-OAK R'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	141.7794	'GEN506745 1-TENASKA GATEWAY STEAM 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04346	141.7085	'COLFAX - RODEMACHER 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	141.4841	'GEN635214 4-NEAL UNIT 4'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.0423	141.4641	'4PELCNRD 138.00 - JACINTO 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	141.3871	'GEN636641 1-LOUISA UNIT 1'
FDNS	00NR		4	20SP	G14_018	'FROM->TO'	206	206	0.04493	141.0843	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04095	141.0807	'WEBRE - WELLS 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	206	206	0.04318	141.0589	'GEN509404 1-WELSH #1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	141.0579	'GEN509406 1-WELSH #3'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	141	'TENASKA GATEWAY GENERATION 345/23.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03981	140.7406	'LACON - LNG 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04493	140.7088	'GPONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04493	140.6993	'GPONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	140.6161	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04058	140.4404	'GPONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04058	140.4305	'GPONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04316	140.356	'T141'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04058	140.3558	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03981	139.7138	'LNG - TEMCO 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	139.4237	'GEN562658 1-G14_018 3 18.000'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	138.6105	'GEN344225 1-1CAL G1 25.000'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	138	'TENASKA GATEWAY GENERATION - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	137.7	'G14_018 1 345.00 345/23.5KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04455	137.5712	'DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04087	137.5702	'GRIMES 345/138KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04087	137.5702	'GRIMES 345/138KV TRANSFORMER CKT 2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	136.2393	'GEN506748 1-TENASKA GATEWAY GAS 3'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	135	'DOLET HILLS 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	134.3943	'GEN509403 1-PIRKEE GENERATION'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	133.7	'G14-018T 345.00 - G14_018 1 345.00 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	131.9814	'GEN334030 1-FRONTIER UNIT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	131.9814	'GEN334031 1-FRONTIER UNIT 2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	131.9814	'GEN334032 1-FRONTIER UNIT 3'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	131.9	'FRONTIER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	131.9	'FRONTIER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	131.9	'FRONTIER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	131.7613	'GEN562657 1-G14_018 2 23.500'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03851	131.4673	'T104'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03851	131.3771	'BRYAN-GRIMES'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03457	130.6465	'HUNTSVILLE-1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03444	130.3174	'GEORGIA - TEMCO 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03507	129.9821	'T104'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03507	129.8773	'BRYAN-GRIMES'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03883	129.8161	'T104'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03444	129.7972	'GEORGIA - HUNTSVILLE 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03883	129.7066	'BRYAN-GRIMES'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03938	129.0205	'ABENTWATER! 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03457	128.9763	'T136'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03788	128.1696	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0345	126.9682	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03971	126.6359	'ABENTWATER! 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03819	126.6039	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03587	126.4635	'ABENTWATER! 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03938	125.7533	'ABENTWATER! 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0403	125.2007	'4PONDEROSA! 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03671	123.8961	'4PONDEROSA! 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03854	123.8897	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03971	123.814	'ABENTWATER! 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03526	123.8011	'LINE 558/91 TAP - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03526	123.7969	'HUNTSVILLE-R'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03526	123.7919	'HUNTSVILLE - LINE 558/91 TAP 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03587	123.7864	'ABENTWATER! 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04064	123.6122	'4PONDEROSA! 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0351	122.9551	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04494	122.3574	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04954	122.0421	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03886	122.0123	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.05127	121.8824	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03938	121.6271	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03675	121.2971	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04722	121.2892	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04951	121.0131	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03651	120.2929	'GRIMES TO NA'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03651	120.2929	'T153'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03587	120.1891	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03651	120.1292	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03651	120.1105	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.05149	120.1029	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03971	119.7232	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03347	119.6227	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	119.5559	'GEN334033 1-FRONTIER UNIT 4'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03651	119.5354	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03706	119.5072	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04318	119.4	'FRONTIER 345/23.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03262	119.3698	'LACON - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	119.2583	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03938	119.1853	'APRIL - LAKE FOREST 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.02972	118.8979	'LACON - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03719	118.5169	'4MOCKINGBIRD138.00 - NAVSOTA 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03719	118.5162	'4MOCKINGBIRD138.00 - TUBULAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	118.4974	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03326	118.4384	'GRIMES TO NA'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03326	118.4384	'T153'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03682	118.3889	'GRIMES TO NA'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03682	118.3889	'T153'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	118.3749	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03326	118.2902	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03326	118.2837	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03611	118.263	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03682	118.2497	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03682	118.2425	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03587	118.1587	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03719	118.1103	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03759	118.0988	'SPP-AEPW-01'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	118.0396	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	117.9404	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03326	117.8824	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03682	117.759	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03289	117.707	'LACON - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	117.5	'FLINT CREEK 161/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	117.4802	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03938	117.4588	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03276	117.4153	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03971	117.4061	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	117.4	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	117.3702	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	117.3	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	117.1694	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	117.1365	'GEN335206 1-NELSON UNIT 6'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03297	117.1364	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	117.0521	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	117	'SABINE 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03587	116.932	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	116.9	'CO-CENTRIX - RIVERSIDE STATION 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03647	116.82	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	116.7841	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03388	116.7651	'4MOCKINGBIRD138.00 - NAVSOTA 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03388	116.7643	'4MOCKINGBIRD138.00 - TUBULAR 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	116.724	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	116.6091	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	116.6059	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0369	116.4623	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0375	116.412	'4MOCKINGBIRD138.00 - NAVSOTA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0375	116.4114	'4MOCKINGBIRD138.00 - TUBULAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	116.4	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03388	116.3662	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03318	116.3358	'CYPRESS - HONEY 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	116.214	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	116.2068	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	116.2	'RIVERSIDE STATION 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0342	116.1833	'HOLLY SPRINGS - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03854	116.1237	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03819	116.1003	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	116.1	'FLINT CREEK 161/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	116.1	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	116.1	'NORTHEAST STATION 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	116.1	'SABINE 230/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	116.0819	'GEN335206 1-NELSON UNIT 6'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	116.0492	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0375	116.0082	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	116	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03971	115.9682	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03819	115.9424	'4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03938	115.9318	'4PONDEROSA% 138.00 - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03587	115.931	'4PONDEROSA% 138.00 - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03318	115.9163	'BRAGG - HONEY 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03318	115.8036	'BRAGG - MENARD 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	115.8	'FLINT CREEK 161/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	115.8	'SABINE 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03318	115.7859	'T147'
FDNSLock	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0351	115.7855	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03659	115.7671	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	115.7	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	115.6422	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03662	115.6337	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	115.6	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	115.5486	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	115.5	'CO-GENTRIX - RIVERSIDE STATION 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	115.404	'GEN335206 1-NELSON UNIT 6'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	115.4	'SABINE 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0342	115.3964	'HOLLY SPRINGS - JASPER 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	115.3541	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03318	115.2976	'GULF LIVINGSTON - MENARD 138KV CKT 1'
FDNSLock	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03334	115.2259	'FORK CREEK - SAM RAYBURN 4 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	115.2	'GRAND GULF 500/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03687	115.1903	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03673	115.1854	'SPP-AEPW-05'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03626	115.1409	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03719	115.1208	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	115.1	'CO-GENTRIX - RIVERSIDE STATION 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	115.1	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	115.0803	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03794	114.9901	'SPP-AEPW-01'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03393	114.9881	'4COLEYCREEK 138.00 - 4PELGNRD 138.00 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	114.9	'SABINE 230/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	114.9	'NELSON 230/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	114.8852	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03318	114.873	'GULF LIVINGSTON - POCO 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03324	114.8366	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03854	114.8182	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03626	114.8101	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03318	114.8031	'T169'
FDNS	10ALL		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04617	114.8024	'BASE CASE'
FDNS	10ALL		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04617	114.8024	'BASE CASE'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03478	114.8008	'4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03393	114.7771	'4COLEYCREEK 138.00 - SHEPHERD 138KV CKT 1'
FDNS	10ALL		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04622	114.7623	'BASE CASE'
FDNS	10ALL		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04622	114.7623	'BASE CASE'
FDNSLock	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0351	114.758	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03971	114.7053	'4PONDEROSA% 138.00 - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	114.7	'NORTHEAST STATION 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03673	114.6638	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNSLock	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.033	114.6635	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03318	114.6291	'CYPRESS-POCO'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.02972	114.6282	'LACON - LNG 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	114.6	'8CAJUN2 500/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03023	114.586	'CYPRESS - HONEY 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03091	114.5273	'4COLEYCREEK 138.00 - 4PELGNRD 138.00 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03114	114.5215	'HOLLY SPRINGS - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	114.5098	'GEN336252 1-NINEMILE POINT UNIT#5'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	114.5	'RIVERSIDE STATION 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	114.5	'SABINE 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	114.5	'8COTNWD2 500.00 - HARTBURG 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	114.4433	'GEN336251 1-NINEMILE POINT UNIT#4'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	114.4214	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	114.42	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03626	114.4064	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	114.4	'SABINE 230/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	114.4	'SOUTHWESTERN STATION 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03268	114.3581	'BOLD SPRINGS - POCO 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0386	114.3035	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.033	114.3013	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	114.3	'NORTHEAST STATION 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03472	114.2843	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	114.2787	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03472	114.2683	'8DANIEL8 500.00 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03851	114.2581	'4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0342	114.2563	'GOREE - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03091	114.2302	'4COLEYCREEK 138.00 - SHEPHERD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	114.2	'GRAND GULF 500/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03626	114.1852	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03886	114.1785	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	114.1616	'GEN501813 1-RODEMACHER UNIT 3'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03299	114.1583	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03346	114.1424	'CYPRESS - HONEY 138KV CKT 1'
FDNSLock	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0351	114.1112	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03479	114.0848	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03458	114.0672	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	114.0504	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03606	114.0144	'SPP-AEPW-04'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03854	114.0143	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03495	114.0138	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03449	114.0103	'HOLLY SPRINGS - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03023	114.0063	'BRAGG - HONEY 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	114	'SABINE 138/22.0KV TRANSFORMER CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATE	RATE(TC%LOADING		CONTINGENCY
							(MVA)	MVA)	TDF	(% MVA)	
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03388	113.9866	'ASPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.9762	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.97	'GEN303007 1-1BC2 U2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03262	113.9667	'LACON - LNG 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.033	113.9169	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03023	113.8944	'BRAGG - MENARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03023	113.8737	'T147'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03334	113.8734	'ATURKEYCRK 138.00 - FORK CREEK 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.8567	'GEN334232 1-1PELNRD U1 13.800'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.8567	'GEN334233 1-1PELNRD U2 13.800'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03395	113.8503	'SPP-AEPW-01'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	113.8	'NELSON 230/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.8	'RODEMACHER 230/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03723	113.7543	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03346	113.7506	'SPP-AEPW-05'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03346	113.7448	'BRAGG - HONEY 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03325	113.7336	'6BATISTE% 230.00 - CHINA 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03003	113.7328	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.728	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03325	113.7182	'6BATISTE% 230.00 - CHINA - JACNTO SERIES CAPACITOR 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.033	113.7171	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03626	113.7124	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.7086	'GEN336191 1-LITTLE GYPSY UNIT#3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03325	113.7023	'CHINA - JACNTO SERIES CAPACITOR - JACINTO 230KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.7	'CO-GENTRIX (COGEN G2) 345/18.0/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.7	'TURK 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03115	113.6954	'GOREE - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	113.6929	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0353	113.6911	'CONROE BULK - GOSLIN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.661	'GEN501812 1-RODEMACHER UNIT 2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03346	113.6327	'BRAGG - MENARD 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03645	113.6312	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03346	113.615	'T147'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.606	'GEN336464 1-MICHOUD UNIT #3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03695	113.6024	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.6007	'GEN501823 1-TECHE UNIT 3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03702	113.6003	'SPP-AEPW-05'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	113.6	'GRAND GULF 500/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.6	'CO GENTRIX (COGEN G1) 345/18.0/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.02972	113.5486	'LNG - TEMCO 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03114	113.5261	'HOLLY SPRINGS - JASPER 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.5019	'GEN303006 1-1BC2 U1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	113.5	'NELSON 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.5	'4PELNRD 138.00 138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.5	'4PELNRD 138.00 138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.5	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.5	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03268	113.4979	'BLANCHARD - BOLD SPRINGS 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.4634	'GEN336821 1-GRAND GULF UNIT'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03626	113.4498	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03339	113.4436	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03542	113.4407	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03334	113.4345	'ATURKEYCRK 138.00 - DOUCETTE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.3943	'GEN335178 5-RS Cogen R5'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.3911	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	113.3883	'GEN336251 1-NINEMILE POINT UNIT#4'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.3797	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03241	113.3668	'SPP-AEPW-04'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03469	113.3489	'LEACH - TOLEDO BEND 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03334	113.3465	'DOUCETTE-SAM'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03334	113.3465	'T122'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.3458	'GEN501811 1-RODEMACHER UNIT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03542	113.3442	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03645	113.3175	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03449	113.3107	'HOLLY SPRINGS - JASPER 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.3048	'GEN303008 1-1BC2 U3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	113.3	'NELSON 230/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0375	113.2966	'ASPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	113.2874	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03469	113.2874	'NEWTON BULK-1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	113.286	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03469	113.2827	'LEACH - NEWTON BULK 138KV CKT 1'
FDNSLock	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0351	113.2786	'PEE DEE-RIVT'
FDNSLock	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0351	113.2786	'T167'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03023	113.2756	'GULF LIVINGSTON - MENARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.033	113.2608	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03421	113.2334	'4COLEYCREEK 138.00 - 4PELNRD 138.00 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.2173	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	113.2163	'GEN336252 1-NINEMILE POINT UNIT#5'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03555	113.2071	'HUGO - SUNNYSIDE 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03541	113.2003	'CARROLL - DOLET HILLS 230KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.2	'GHARDINETEC1230.00 - CYPRESS 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	113.1867	'GEN501813 1-RODEMACHER UNIT 3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.1796	'GEN336222 1-LITTLE GYPSY UNIT#2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03626	113.1689	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03346	113.1511	'GULF LIVINGSTON - MENARD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03677	113.1475	'ACONROE2 138.00 - CONROE BULK 138KV CKT Z1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0342	113.12	'GOREE - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03819	113.1136	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.104	'GEN335075 1-DYNEGY#1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.1033	'GEN335076 1-DYNEGY UNIT2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	113.1	'8COTNWD2 500.00 - HARTBURG 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.1	'EXXON MOBIL IPP 138/138.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03479	113.093	'COLY - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03886	113.0839	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03549	113.0694	'NORTHWEST TEXARKANA - WELSH 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03339	113.0477	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03695	113.0389	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03703	113.0339	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03421	113.0337	'4COLEYCREEK 138.00 - SHEPHERD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113.0266	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03492	113.0236	'DOLET HILLS - MANCOMP 6 230.00 230KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113	'8COTNWD2 500.00 - 8XMFPRINT3 500.00 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	113	'ARSENAL HILL - STALL GENERATION 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03854	112.9948	'PEE DEE-RIVT'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03854	112.9948	'T167'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03362	112.9884	'FORK CREEK - SAM RAYBURN 4 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.9869	'GEN334232 1-1PELCNRD U1 13.800'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.9869	'GEN334233 1-1PELCNRD U2 13.800'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.9852	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	112.98	'GEN334282 1-SAM RAYBURN 4'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	112.9687	'GEN303024 1-1G3INTHB 18.000'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.033	112.9673	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03542	112.9618	'SCOTTSVILLE - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	112.9553	'GEN300003 1-THOMAS HILL UNIT 3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03332	112.9426	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03645	112.94	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.9	'NELSON 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03163	112.8234	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03163	112.8071	'8DANIEL8 500.00 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03023	112.7877	'GULF LIVINGSTON - POCO 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03721	112.7815	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03115	112.771	'GOREE - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03169	112.7655	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.02977	112.7648	'BOLD SPRINGS - POCO 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03289	112.7574	'LACON - LNG 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03346	112.7459	'GULF LIVINGSTON - POCO 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.7398	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.7384	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03645	112.7284	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03023	112.7064	'T169'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.7032	'GEN336252 1-NINEMILE POINT UNIT#5'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.7	'8COTNWD2 500.00 - HARTBURG 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03449	112.6862	'GOREE - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03346	112.6788	'T169'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.6625	'GEN501812 1-RODEMACHER UNIT 2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.6459	'GEN336191 1-LITTLE GYPSY UNIT#3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03501	112.6446	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.6405	'GEN336251 1-NINEMILE POINT UNIT#4'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.033	112.6301	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03501	112.6265	'8DANIEL8 500.00 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03035	112.6217	'FORK CREEK - SAM RAYBURN 4 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.6	'SOUTHWESTERN STATION 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.6	'4PELCNRD 138.00 138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.6	'4PELCNRD 138.00 138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03039	112.5747	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.5716	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.5621	'GEN336821 1-GRAND GULF UNIT'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03115	112.5406	'REEK-RIVTRIN'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03508	112.5328	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03346	112.5117	'CYPRESS-POCO'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03318	112.5075	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.5	'CO-GENTRIX (COGEN G2) 345/18.0/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03023	112.4864	'CYPRESS-POCO'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.4851	'GEN501813 1-RODEMACHER UNIT 3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03521	112.464	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.4564	'GEN336464 1-MICHOUD UNIT #3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03295	112.4268	'BOLD SPRINGS - POCO 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.4	'CO-GENTRIX (COGEN G1) 345/18.0/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.4	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.4	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.4	'TURK 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03215	112.3994	'CONROE BULK - GOSLIN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03478	112.3983	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03343	112.3901	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03349	112.387	'ACONROE2 138.00 - CONROE BULK 138KV CKT Z1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03886	112.3172	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.3015	'GEN335178 5-RS Cogen R5'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.3	'6HARDINETEC1230.00 - CYPRESS 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.3	'8CAJUN2 500/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03645	112.2855	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0322	112.2516	'CARROLL - DOLET HILLS 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.2206	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.2103	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03158	112.2074	'LEACH - TOLEDO BEND 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.2	'8CAJUN2 500/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.187	'GEN334232 1-1PELCNRD U1 13.800'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.187	'GEN334233 1-1PELCNRD U2 13.800'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03636	112.1836	'SPP-AEPW-04'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03158	112.1446	'NEWTON BULK-'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03158	112.1395	'LEACH - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.1289	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03478	112.1192	'EGYPT - PANORAMA 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03388	112.1178	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03362	112.1118	'4TURKEYCRK 138.00 - FORK CREEK 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.1087	'GEN303008 1-1BC2 U3'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.1045	'GEN336222 1-LITTLE GYPSY UNIT#2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.1039	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03182	112.0965	'WELSH - WILKES 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0351	112.0843	'CINCINNATI - WALKER 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112.0525	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03645	112.0372	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0356	112.0323	'CONROE BULK - GOSLIN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112.0271	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112	'CO-GENTRIX (COGEN G2) 345/18.0/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	112	'TURK 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112	'EXXON MOBIL IPP 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	112	'RODEMACHER 230/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03222	111.9984	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	111.9933	'GEN303006 1-1BC2 U1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.9918	'GEN501812 1-RODEMACHER UNIT 2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	111.991	'GEN303007 1-1BC2 U2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.9722	'GEN336191 1-LITTLE GYPSY UNIT#3'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.02973	111.9524	'HARTBURG - LAYFLD8 500.00 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	111.9313	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0318	111.9258	'DOLET HILLS - MANCOMP 6 230.00 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03222	111.9112	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03179	111.9029	'BAXTER WILSON SES - PERRYVILLE 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.9	'4PELCNRD 138.00 138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.9	'4PELCNRD 138.00 138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.9	'CO-GENTRIX (COGEN G1) 345/18.0/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.9	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.9	'SABINE 138/20.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	111.9	'ERCOT EQUIVALENCE 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	111.9	'NORTHEAST STATION 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	111.9	'NORTHEAST STATION 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	111.8919	'EASTDC - ERCOT EQUIVALENCE 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03172	111.8675	'EVADALE BULK - JASPER NEWTON EVADALE 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03169	111.8672	'COLY - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.8475	'GEN336464 1-MICHOUD UNIT #3'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	111.8437	'GEN334282 1-SAM RAYBURN 4'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	111.8352	'GEN335370 1-1ACADIA_52616.000'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03645	111.7807	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.7257	'GEN335178 5-RS Cogen R5'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.7177	'GEN303007 1-1BC2 U2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03358	111.7093	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.7065	'GEN501823 1-TECHE UNIT 3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03572	111.6978	'CARROLL - DOLET HILLS 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03362	111.6848	'4TURKEYCRK 138.00 - DOUCETTE 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03289	111.6438	'LNG - TEMCO 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03574	111.6403	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.6299	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03707	111.6189	'ACONROE2 138.00 - CONROE BULK 138KV CKT Z1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.6185	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03449	111.618	'GOREE - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.6156	'GEN3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03362	111.6144	'T122'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03353	111.6084	'GBATISTE% 230.00 - CHINA 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.6049	'GEN336821 1-GRAND GULF UNIT'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.6	'RODEMACHER 230/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03295	111.5984	'BLANCHARD - BOLD SPRINGS 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03353	111.5929	'GBATISTE% 230.00 - CHINA - JACNTO SERIES CAPACITOR 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03353	111.5785	'CHINA - JACNTO SERIES CAPACITOR - JACINTO 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.5743	'GEN303006 1-1BC2 U1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03851	111.5681	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03498	111.5617	'LEACH - TOLEDO BEND 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.5464	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03574	111.545	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.5392	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03498	111.503	'NEWTON BULK-'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.5	'EXXON MOBIL IPP 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03498	111.4972	'LEACH - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	111.4836	'BASE CASE'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	111.4836	'BASE CASE'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.467	'GEN336222 1-LITTLE GYPSY UNIT#2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.4644	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03886	111.4559	'PEE DEE-RIVT'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03886	111.4559	'T167'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03508	111.4551	'COLY - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.4386	'GEN335075 1-DYNEGY#1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.4	'ARSENAL HILL - STALL GENERATION 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.4	'ERCOT EQUIVALENCE 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.4	'NORTHEAST STATION 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.4	'NORTHEAST STATION 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.4	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.3821	'EASTDC - ERCOT EQUIVALENCE 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03522	111.3766	'DOLET HILLS - MANCOMP 6 230.00 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.3666	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03449	111.3561	'REEK-RIVTRIN'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.3323	'GEN334282 1-SAM RAYBURN 4'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0349	111.3315	'MCADAMS - WOLF CREEK 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.3	'GHARDINETECI230.00 - CYPRESS 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	111.3	'ONETA ENERGY CENTER 345/18.0KV TRANSFORMER CKT 1'
FDNSLock	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	110.7575	'RIVTRIN 138KV SWITCHED SHUNT'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	110.7559	'RIVTRIN 138KV SWITCHED SHUNT'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	110.37	'BASE CASE'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	110.37	'BASE CASE'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03268	109.9353	'CARLISLE - GULF TRINITY 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03489	109.9281	'ELDORADO EHV - STERLINGTON 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0347	109.9025	'SACAJUN2 - FANCY POINT 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03334	109.8719	'CORRIGAN - LINE 111 TAP 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.8583	'GEN345670 1-1RUSH G1 18.000'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	109.8478	'BASE CASE'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	109.8478	'BASE CASE'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.8024	'GEN506750 1-EASTMAN GENERATION B'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.7956	'GEN520947 1-HUGO1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03268	109.7873	'GULF TRINITY - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.6687	'GEN337652 1-WHITE BLUFF UNIT #1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.662	'GEN345671 2-1RUSH G2 18.000'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.6229	'GEN635213 3-NEAL UNIT 3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.6	'TENASKA GATEWAY GENERATION 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.5769	'GEN338146 1-INDEPENDENCE UNIT #2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.5749	'GEN337653 1-WHITE BLUFF UNIT #2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.5523	'GEN338143 1-INDEPENDENCE UNIT #1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.5238	'GEN344895 2-1LAB G2 20.000'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.5153	'SPP-AEPW-40'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.5075	'GEN344896 3-1LAB G3 20.000'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.5057	'GEN344897 4-1LAB G4 20.000'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.505	'GEN344894 1-1LAB G1 20.000'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03268	109.4798	'T183'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03471	109.4218	'8BYLBT - WEBRE 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03485	109.3803	'GOSLIN-OAK R'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03485	109.3714	'SPP-AEPW-35'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03489	109.3647	'RICH-POCO'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03489	109.3647	'T170'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.05368	109.2819	'G14-018T 345.00 - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03334	109.262	'LINE 111 TAP - MAGNOLIA GROVETON 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.2491	'GEN506753 1-LEBROCK GAS 2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.2463	'GEN506752 1-LEBROCK GAS 1'
FDNS	10ALL		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04596	109.1782	'BASE CASE'
FDNS	10ALL		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.04596	109.1782	'BASE CASE'
FDNSLock	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03462	109.1591	'SCHOCTAW MS 500.00 - 8CLAY 500.00 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	109.108	'RIVTRIN 138KV SWITCHED SHUNT'
FDNSLock	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	109.108	'RIVTRIN 138KV SWITCHED SHUNT'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.1	'PERRYVILLE - PERRYVILLE UNIT #6 500KV CKT 21'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	109.0376	'LINE 558 TAP - WYNTEX 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	108.9099	'GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03511	108.8703	'4CANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.8354	'GEN520947 1-HUGO1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	108.8213	'GEN636641 1-LOUISA UNIT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03035	108.8142	'DOUCETTE-COR'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03035	108.8142	'1118'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.8	'RAUN 345/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	108.8	'TOLK STATION EAST 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	108.7425	'GEN635214 4-NEAL UNIT 4'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03485	108.7353	'COLFAX - MONTGOMERY 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03176	108.7308	'SPSCONT-01'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	108.7	'PIRKEY 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03472	108.6891	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.02977	108.6804	'CARLISLE - ONALASKA 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.6647	'GEN337652 1-WHITE BLUFF UNIT #1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03173	108.659	'COLFAX - MONTGOMERY 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03174	108.6525	'GOSLIN-OAK R'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.619	'GEN345671 2-1RUSH G2 18.000'
FDNSLock	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03334	108.6139	'MAGNOLIA GROVETON - STALEY 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.6006	'GEN337653 1-WHITE BLUFF UNIT #2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.589	'GEN338146 1-INDEPENDENCE UNIT #2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03485	108.5791	'WINFIELD TO'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.5775	'GEN338143 1-INDEPENDENCE UNIT #1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03081	108.5679	'4EVGRNSW 138.00 - TEMCO 138KV CKT Z1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03081	108.5673	'4DORRELL 138.00 - 4EVGRNSW 138.00 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03334	108.5496	'CORRIGAN BUL'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03334	108.5496	'T195'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03035	108.5473	'DOUCETTE TO'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.5305	'GEN344895 2-1LAB G2 20.000'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03173	108.5177	'WINFIELD TO'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.5	'8OUACHITA% 500.00 - 8STERLING% 500.00 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.5	'TENASKA GATEWAY GENERATION 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03334	108.4993	'STALEY TO CO'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03511	108.4874	'4CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.4782	'GEN344896 3-1LAB G3 20.000'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.4775	'GEN344897 4-1LAB G4 20.000'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.4769	'GEN344894 1-1LAB G1 20.000'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	108.4478	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03485	108.425	'COLFAX - RODEMACHER 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.4229	'GEN636641 1-LOUISA UNIT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	108.4179	'GEN509409 1-WILKES #3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	108.4128	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	108.3895	'GEN509393 51-ARSENAL HILL GENS #4 (STALL)'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03173	108.355	'COLFAX - RODEMACHER 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03162	108.3492	'8BYLUT - WEBRE 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	108.3474	'GEN509408 1-WILKES #2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03178	108.3235	'RICH-POCO'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03178	108.3235	'T170'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	108.3181	'SPSCONT-01'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	108.303	'GEN635023 3-WALTER SCOTT UNIT 3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	108.3	'G14_018 1 345.00 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03295	108.2005	'CARLISLE - GULF TRINITY 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.05405	108.1847	'G14-018T 345.00 - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	108.1755	'GEN506750 1-EASTMAN GENERATION B'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03198	108.1186	'4CANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03362	108.0953	'CORRIGAN - LINE 111 TAP 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.0876	'LINE 558 TAP - WYNTEX 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	108.056	'GEN520947 1-HUGO1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03295	108.0521	'GULF TRINITY - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03154	108.0281	'8CHOCTAW MS 500.00 - 8CLAY 500.00 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	108.0175	'GEN506745 1-TENASKA GATEWAY STEAM 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108.0122	'GEN635214 4-NEAL UNIT 4'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	108	'TENASKA GATEWAY GENERATION 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	108	'PERRYVILLE - PERRYVILLE UNIT #6 500KV CKT Z1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03518	107.9975	'RICH-POCO'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03518	107.9975	'T170'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	107.9934	'GEN506753 1-LEBROCK GAS 2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	107.9902	'GEN506752 1-LEBROCK GAS 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.9486	'GEN345670 1-1RUSH G1 18.000'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.9446	'GEN345671 2-1RUSH G2 18.000'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03413	107.9435	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.9424	'SPP-AEPW-40'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	107.9294	'GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.9157	'GEN337652 1-WHITE BLUFF UNIT #1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	107.9	'8OUACHITA% 500.00 - 8STERLING% 500.00 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.898	'GEN635213 3-NEAL UNIT 3'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03035	107.8788	'CORRIGAN - LINE 111 TAP 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03514	107.8728	'GOSLIN-OAK R'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.02977	107.8583	'CARLISLE - GULF TRINITY 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.8273	'GEN337653 1-WHITE BLUFF UNIT #2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03162	107.8216	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.8191	'GEN338146 1-INDEPENDENCE UNIT #2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	107.818	'GEN635024 4-WALTER SCOTT UNIT 4'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.8148	'GEN344895 2-1LAB G2 20.000'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03112	107.8116	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03511	107.8089	'T141'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	107.8064	'GEN635213 3-NEAL UNIT 3'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	107.8	'TOLK STATION EAST 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.7967	'GEN344896 3-1LAB G3 20.000'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.7966	'GEN338143 1-INDEPENDENCE UNIT #1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.796	'GEN344897 4-1LAB G4 20.000'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.7953	'GEN344894 1-1LAB G1 20.000'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0349	107.7877	'8CHOCTAW MS 500.00 - RCLAY 500.00 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03514	107.7788	'SPP-AEPW-35'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03295	107.7668	'T183'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.035	107.7604	'8BYLBUT - WEBRE 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.02977	107.7081	'GULF TRINITY - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03401	107.6309	'RICHARD - WELLS 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03514	107.6131	'COLFAX - MONTGOMERY 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	107.6	'PIRKEY 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.5762	'GEN506753 1-LEBROCK GAS 2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.5733	'GEN506752 1-LEBROCK GAS 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03198	107.4867	'4CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03362	107.4787	'LINE 111 TAP - MAGNOLIA GROVETON 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	107.4582	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03514	107.4575	'WINFIELD TO'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	107.4116	'GEN635023 3-WALTER SCOTT UNIT 3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.4	'PERRYVILLE - PERRYVILLE UNIT #6 500KV CKT 21'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	107.4	'TENASKA GATEWAY GENERATION 345/23.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03393	107.3979	'4PELCNRD 138.00 - JACINTO 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.02977	107.3765	'T183'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03514	107.3202	'COLFAX - RODEMACHER 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.3	'TOLK STATION EAST 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0354	107.2953	'4CANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03035	107.2569	'LINE 111 TAP - MAGNOLIA GROVETON 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.2515	'LINE 558 TAP - WYNTEX 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	107.2276	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	107.2	'G14_018_1 345.00 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.1484	'GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	107.1391	'GEN344225 1-1CAL G1 25.000'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.1	'PIRKEY 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03501	107.0956	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.0825	'GEN636641 1-LOUISA UNIT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	107.0496	'GEN509398 1-KNOXLEE #5'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	107.0477	'GEN509416 1-TURK GENERATION'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	107.0258	'GEN635214 4-NEAL UNIT 4'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03326	106.9825	'NELSON - RICHARD 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03198	106.9618	'T141'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	106.9535	'GEN635024 4-WALTER SCOTT UNIT 4'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0354	106.9274	'4CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	106.8699	'GEN506745 1-TENASKA GATEWAY STEAM 1'
FDNSLock	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03362	106.816	'MAGNOLIA GROVETON - STALEY 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	106.7743	'GEN509408 1-WILKES #2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	106.7613	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03362	106.7602	'CORRIGAN BUL'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03362	106.7602	'T195'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03441	106.755	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	106.7167	'GEN509409 1-WILKES #3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03362	106.706	'STALEY TO CO'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	106.7	'G14_018_1 345.00 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	106.6281	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	106.5768	'GEN635023 3-WALTER SCOTT UNIT 3'
FDNSLock	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03035	106.5471	'MAGNOLIA GROVETON - STALEY 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03035	106.4844	'CORRIGAN BUL'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03035	106.4844	'T195'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03035	106.4441	'STALEY TO CO'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03334	106.3876	'RIVTRIN - STALEY 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	106.3375	'GEN506745 1-TENASKA GATEWAY STEAM 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0354	106.317	'T141'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	106.3	'8OUACHITA% 500.00 - 8STERLING% 500.00 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	106.3	'TENASKA GATEWAY GENERATION 345/23.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	106.183	'GEN562658 1-G14_018_3 18.000'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	106.1216	'GEN509404 1-WELSH #1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	106.1203	'GEN509406 1-WELSH #3'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	106.0991	'GEN344225 1-1CAL G1 25.000'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	106.0784	'GEN635024 4-WALTER SCOTT UNIT 4'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03091	106.0387	'4PELCNRD 138.00 - JACINTO 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	105.9156	'GEN509416 1-TURK GENERATION'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03294	105.8145	'WEBRE - WELLS 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	105.8133	'GEN501801 1-DOLET HILLS UNIT1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	105.8	'TENASKA GATEWAY GENERATION 345/23.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03421	105.6492	'4PELCONRD 138.00 - JACINTO 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03099	105.4968	'RICHARD - WELLS 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	105.3599	'GEN344225 1-1CAL_G1_25.000'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	105.3079	'GEN509416 1-TURK GENERATION'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03429	105.2988	'RICHARD - WELLS 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	105	'TENASKA GATEWAY GENERATION - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	104.9818	'GEN562658 1-G14_018_3 18.000'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	104.9702	'GEN509404 1-WELSH #1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	104.9688	'GEN509406 1-WELSH #3'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	104.8312	'GEN501801 1-DOLET HILLS UNIT1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	104.8	'G14_018_1 345.00 345/23.5KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03362	104.7006	'RIVTRIN - STALEY 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	104.4984	'GEN562658 1-G14_018_3 18.000'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03611	104.4818	'DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	104.3949	'GEN509404 1-WELSH #1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	104.3935	'GEN509406 1-WELSH #3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03353	104.338	'NELSON - RICHARD 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	104.1277	'GEN501801 1-DOLET HILLS UNIT1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03032	104.033	'NELSON - RICHARD 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	103.9	'TENASKA GATEWAY GENERATION - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03276	103.8453	'DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03035	103.8221	'RIVTRIN - STALEY 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	103.7259	'GEN506748 1-TENASKA GATEWAY GAS 3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	103.4	'TENASKA GATEWAY GENERATION - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	103.2	'G14_018_1 345.00 345/23.5KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03647	103.1207	'DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	102.9	'G14_018_1 345.00 345/23.5KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03005	102.8905	'WEBRE - WELLS 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03238	102.5624	'GRIMES 345/138KV TRANSFORMER CKT 2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	102.531	'GEN506748 1-TENASKA GATEWAY GAS 3'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.0332	102.5302	'WEBRE - WELLS 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	102.3845	'GEN509403 1-PIRKEY GENERATION'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	101.9946	'GEN506748 1-TENASKA GATEWAY GAS 3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03229	101.9925	'GRIMES 345/138KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	101.8	'DOLET HILLS 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	101.7	'G14-018T 345.00 - G14_018_1 345.00 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	101.2	'DOLET HILLS 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	101.1752	'GEN509403 1-PIRKEY GENERATION'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03265	101.0976	'GRIMES 345/138KV TRANSFORMER CKT 2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03256	100.7813	'GRIMES 345/138KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	100.6007	'GEN509403 1-PIRKEY GENERATION'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	100.5825	'GEN334030 1-FRONTIER UNIT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	100.5825	'GEN334031 1-FRONTIER UNIT 2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	100.5825	'GEN334032 1-FRONTIER UNIT 3'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	100.2348	'GEN562657 1-G14_018_2 23.500'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03515	100	'G14-018T 345.00 - G14_018_1 345.00 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	99.9	'FRONTIER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	99.9	'FRONTIER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03486	99.9	'FRONTIER 345/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	99.8	'G14-018T 345.00 - G14_018_1 345.00 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	99.5	'GEN334030 1-FRONTIER UNIT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	99.5	'GEN334031 1-FRONTIER UNIT 2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03175	99.5	'GEN334032 1-FRONTIER UNIT 3'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.1081	173.2341	'GRIMES 345/138KV TRANSFORMER CKT 2'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.07503	124.9227	'GRIMES 345/138KV TRANSFORMER CKT 2'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.07566	122.0459	'GRIMES 345/138KV TRANSFORMER CKT 2'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.06833	118.1451	'GRIMES 345/138KV TRANSFORMER CKT 2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08106	100.4828	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08427	100.338	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.1081	173.2341	'GRIMES 345/138KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.07477	123.5597	'GRIMES 345/138KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.07539	121.6334	'GRIMES 345/138KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.06809	117.7394	'GRIMES 345/138KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08106	100.4828	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08427	100.338	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.05527	181.7396	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.05527	177.2053	'4BENTWATER1 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.05527	176.529	'T132'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.05527	171.0165	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.05527	167.6748	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.05527	165.6921	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.05527	163.9616	'CONROE BULK - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04837	162.3809	'T104'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04837	162.2658	'BRYAN-GRIMES'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04708	156.1709	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04964	155.1811	'NAVSOTA - TUBULAR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04964	154.4568	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04964	152.0094	'NAVSOTA-LON'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04964	152.0094	'T154'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04787	151.2852	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04641	150.6914	'GRIMES TO NA'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04641	150.6914	'T153'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04641	150.6501	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04641	150.6433	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04635	150.6026	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.06133	150.0713	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04964	150.0462	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04641	149.8325	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.06375	149.7389	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04964	148.5717	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04964	147.2482	'4FISHCRK - LONGMIRE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	146.7737	'EASTDC - ERCOT EQUIVALENCE 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04014	146.691	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	145.3124	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	144.9133	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04455	143.7689	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	143.3833	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04787	142.9845	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04835	142.5136	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04787	141.9496	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	141.7898	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04787	141.1688	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	140.9313	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04523	140.8486	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04118	140.6812	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04684	140.481	'SPP-AEPW-01'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04787	140.3392	'PEE DEE-RIVT'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04787	140.3392	'T167'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	140.3379	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	140.1739	'LINE 558 TAP - WYNTEX 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	139.7948	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04533	139.7666	'SPP-AEPW-05'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04494	139.6924	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04143	139.5921	'CYPRESS - HONEY 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04964	139.4609	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	139.3854	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04592	139.3767	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04494	139.3088	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04537	139.2553	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	139.2098	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	139.2074	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04143	139.199	'BRAGG - HONEY 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04787	139.1085	'CINCINNATI - WALKER 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04143	139.0822	'BRAGG - MENARD 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04143	139.0487	'T147'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04494	138.8379	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04302	138.7984	'8DANIELS 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04302	138.7915	'8DANIELS 500.00 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04026	138.7539	'HARTBURG - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04143	138.6063	'GULF LIVINGSTON - MENARD 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04494	138.5828	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04787	138.3117	'RIVTRIN - WALKER 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04289	138.2632	'HOLLY SPRINGS - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04326	138.2355	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04553	138.235	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04964	138.207	'EGYPT - PANORAMA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04143	138.2056	'GULF LIVINGSTON - POCO 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	138.1891	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	138.1455	'GEN334232 1-1PELCNRD U1 13.800'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	138.1455	'GEN334233 1-1PELCNRD U2 13.800'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04143	138.0852	'T169'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04494	138.0429	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04273	138.0077	'CHINA - SABINE 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	137.9112	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	137.8936	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04964	137.804	'EEK-LONGMIRE'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04964	137.804	'T142'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04588	137.7881	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04143	137.7859	'CYPRESS-POCO'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	137.7852	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04204	137.7773	'AMELIA BULK - CHINA 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04289	137.7672	'HOLLY SPRINGS - JASPER 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0431	137.7502	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04494	137.7471	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04472	137.708	'SPP-AEPW-04'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	137.6683	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	137.6523	'GEN335178 S-RS Cogen RS'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04383	137.6337	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04251	137.6069	'CYPRESS 500/138KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04383	137.5165	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0416	137.4707	'CHINA - CHINA - JACNTO SERIES CAPACITOR 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0416	137.4707	'CHINA-JACINT'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0494	137.4433	'JACKSONVILLE (SWE-RC.ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0416	137.4372	'CHINA - JACNTO SERIES CAPACITOR - JACINTO 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	137.3931	'GEN300003 1-THOMAS HILL UNIT 3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04135	137.3868	'DEER - DOUCETTE 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04277	137.3358	'HARTBURG 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04277	137.3041	'HARTBURG - INLAND-ORANGE 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04334	137.3028	'DOLET HILLS - MANCOMP 6 230.00 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04325	137.2938	'BAXTER WILSON SES - PERRYVILLE 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	137.1393	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	137.1333	'GEN303007 1-1BC2 U2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04312	137.0816	'LEACH - TOLEDO BEND 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04383	137.0808	'SCOTTSVILLE - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04334	137.0359	'FISHER - MANCOMP 6 230.00 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04366	137.0323	'CARROLL - DOLET HILLS 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04312	137.0266	'NEWTON BULK'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	137.0258	'GEN640009 1-COOPER NUCLEAR STATION'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04334	137.0227	'FISHER 230/138KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04312	137.0223	'LEACH - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	137.0139	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04289	136.9767	'BEVIL - CYPRESS 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	136.9741	'GEN336191 1-LITTLE GYPSY UNIT#3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	136.9594	'GEN303006 1-1BC2 U1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04383	136.9534	'LONGWOOD - SCOTTSVILLE 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0431	136.9483	'COLY - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	136.8921	'GEN303024 1-1G3INTHB 18.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04325	136.8633	'COCODRIE - VILLE PLATTE 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	136.8598	'GEN303008 1-1BC2 U3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04311	136.7907	'EAST LEESVILLE - RODEMACHER 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04316	136.785	'DBL-THIS-WWR'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	135.1452	'BASE CASE'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	135.1452	'BASE CASE'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	134.3965	'RIVTRIN 138KV SWITCHED SHUNT'
FDNSLock	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	134.3965	'RIVTRIN 138KV SWITCHED SHUNT'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04135	133.6846	'CORRIGAN BUL'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04135	133.6846	'T195'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04316	133.5945	'4CONROE2 138.00 - LINE 523 TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04135	133.5343	'STALEY TO CO'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04293	133.5169	'4GOSLIN1 138.00 - ALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04228	133.4814	'REEK-RIVTRIN'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04316	133.4248	'CONAIR - LINE 523 TAP 138KV CKT 1'
FDNS	10ALL		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.05883	133.4137	'BASE CASE'
FDNS	10ALL		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.05883	133.4137	'BASE CASE'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04293	133.4109	'4GOSLIN1 138.00 - GOSLIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0675	133.2962	'G14-018T 345.00 - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	133.2588	'OKLAUN 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04299	133.2219	'8CAJUN2 - FANCY POINT 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04106	133.2176	'CARLISLE - ONALASKA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03981	133.1969	'LACON - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.043	133.1437	'EAK-SECURITY'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	132.9711	'GEN520947 1-HUGO1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.043	132.9341	'8BYLBUT - WEBRE 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	132.9097	'GEN635212 2-NEAL UNIT 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	132.8945	'GEN337692 1-LAKE CATHERINE UNIT #4'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	132.8169	'SPSCONT-01'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04319	132.6627	'RICH-POCO'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04319	132.6627	'T170'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04106	132.6227	'CARLISLE - GULF TRINITY 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04317	132.5964	'SPP-AEPW-40'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04106	132.4846	'GULF TRINITY - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04136	132.4026	'NELSON - RICHARD 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04316	132.3734	'SPP-AEPW-35'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	132.2425	'GEN506753 1-LEBROCK GAS 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	132.2384	'GEN506752 1-LEBROCK GAS 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	132.1546	'GEN509409 1-WILKES #3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04106	132.0671	'T183'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04135	131.9593	'RIVTRIN - STALEY 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	131.7851	'GEN635213 3-NEAL UNIT 3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	131.6765	'GEN509408 1-WILKES #2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04456	131.6425	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04456	131.6325	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	131.5665	'GEN344895 2-1LAB G2 20.000'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04456	131.5473	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	131.5343	'GEN344896 3-1LAB G3 20.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	131.5332	'GEN344897 4-1LAB G4 20.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	131.5323	'GEN344894 1-1LAB G1 20.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04293	131.5158	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04219	131.3136	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04316	131.2946	'4CANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	131.2001	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0422	131.1794	'RICHARD - WELLS 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04346	131.1638	'COLFAX - MONTGOMERY 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	130.9541	'GEN509416 1-TURK GENERATION'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04346	130.9502	'WINNFIELD TO'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04316	130.8977	'4CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	130.8264	'GEN509398 1-KNOXLEE #5'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	130.7704	'GEN509405 1-WELSH #2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04306	130.7296	'GOSLIN-OAK R'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	130.6525	'GEN506745 1-TENASKA GATEWAY STEAM 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04346	130.5823	'COLFAX - RODEMACHER 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	130.3573	'GEN635214 4-NEAL UNIT 4'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0423	130.3376	'4PELCNRD 138.00 - JACINTO 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	130.2604	'GEN636641 1-LOUISA UNIT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04058	130.1162	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04058	130.1062	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04058	130.0316	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04095	129.9546	'WEBRE - WELLS 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	129.932	'GEN509404 1-WELSH #1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	129.931	'GEN509406 1-WELSH #3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04493	129.6298	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	129.4894	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03981	129.3276	'LACON - LNG 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04493	129.2519	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04493	129.2421	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04316	129.229	'T141'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03981	128.3481	'LNG - TEMCO 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	128.2963	'GEN52658 1-G14_018 3 18.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	127.4832	'GEN344225 1-1CAL G1 25.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04087	126.4608	'GRIMES 345/138KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04087	126.4608	'GRIMES 345/138KV TRANSFORMER CKT 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04455	126.4422	'DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	125.1102	'GEN506748 1-TENASKA GATEWAY GAS 3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	123.2643	'GEN509403 1-PIRKEY GENERATION'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	120.85	'GEN334030 1-FRONTIER UNIT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	120.85	'GEN334031 1-FRONTIER UNIT 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	120.85	'GEN334032 1-FRONTIER UNIT 3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	120.6292	'GEN52657 1-G14_018 2 23.500'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03851	119.7439	'T104'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03507	119.6603	'T104'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03851	119.6463	'BRYAN-GRIMES'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03507	119.5558	'BRYAN-GRIMES'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03457	119.1333	'HUNTSVILLE-L'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03444	118.8618	'GEORGIA - TEMCO 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03444	118.3444	'GEORGIA - HUNTSVILLE 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03883	118.3246	'T104'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03883	118.2151	'BRYAN-GRIMES'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03457	117.5178	'T136'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03938	117.2957	'4BENTWATER! 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0345	116.6496	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03788	116.4336	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03587	116.1362	'4BENTWATER! 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03971	115.1588	'4BENTWATER! 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03819	115.1061	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03938	114.0278	'4BENTWATER! 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03671	113.5668	'4PONDEROSA! 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0403	113.4797	'4PONDEROSA! 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03587	113.4591	'4BENTWATER! 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0351	112.588	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03971	112.3355	'4BENTWATER! 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03526	112.2679	'LINE 558/91 TAP - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03526	112.2574	'HUNTSVILLE-R'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03526	112.2527	'HUNTSVILLE - LINE 558/91 TAP 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04064	112.138	'4PONDEROSA! 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03854	112.1045	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04494	112.0266	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04722	110.9584	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03886	110.4766	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04954	110.3218	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 25SP	G14_							

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03675	109.5714	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04951	109.5397	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03347	109.2995	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.05149	108.6279	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03651	108.5592	'GRIMES TO NA'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03651	108.5592	'T153'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04318	108.4078	'GEN334033 1-FRONTIER UNIT 4'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03651	108.3924	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03651	108.3757	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.02972	108.3361	'LACON - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03971	108.2477	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03326	108.106	'GRIMES TO NA'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03326	108.106	'T153'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03706	108.0272	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03326	107.9567	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03326	107.9509	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03587	107.8333	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03651	107.801	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	107.7104	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03326	107.5497	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	107.5356	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03938	107.4665	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03262	107.2203	'LACON - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03276	107.0814	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03682	106.901	'GRIMES TO NA'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03682	106.901	'T153'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	106.8507	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03719	106.7984	'4MOCKINGBIRD138.00 - NAVSOTA 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03719	106.7977	'4MOCKINGBIRD138.00 - TUBULAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	106.7732	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03682	106.7587	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03682	106.7526	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	106.7333	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	106.652	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03587	106.6065	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03611	106.5374	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	106.4566	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03388	106.4431	'4MOCKINGBIRD138.00 - NAVSOTA 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03388	106.4425	'4MOCKINGBIRD138.00 - TUBULAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03719	106.3903	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03759	106.3748	'SPP-AEPW-01'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03682	106.2702	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	106.2182	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03388	106.0413	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	106.002	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03971	105.9332	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	105.8857	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03289	105.8412	'LACON - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	105.7505	'GEN335206 1-NELSON UNIT 6'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03938	105.7331	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	105.6468	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03587	105.6053	'4PONDEROSA% 138.00 - WOODHAVEN 138KV CKT 1'
FDNSLock	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0351	105.4305	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03297	105.4166	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	105.4116	'GEN335206 1-NELSON UNIT 6'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03647	105.3379	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	105.2526	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	105.2172	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	105.1343	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0375	104.9376	'4MOCKINGBIRD138.00 - NAVSOTA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0375	104.937	'4MOCKINGBIRD138.00 - TUBULAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	104.8837	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	104.7485	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0369	104.7364	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	104.7285	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	104.5744	'LINE 558 TAP - WYNTX 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	104.5552	'LINE 558 TAP - WYNTX 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0375	104.533	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03318	104.5152	'CYPRESS - HONEY 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03971	104.4874	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03478	104.4731	'4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0342	104.4103	'HOLLY SPRINGS - NEWTON BULK 138KV CKT 1'
FDNSLock	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0351	104.4074	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03819	104.374	'ZSAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03854	104.3645	'BISHOP - PEE DEE 138KV CKT 1'
FDNSLock	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.033	104.3321	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	104.3223	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03819	104.2172	'4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03938	104.207	'4PONDEROSA% 138.00 - WOODHAVEN 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.02972	104.2002	'LACON - LNG 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03023	104.1861	'CYPRESS - HONEY 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03515	104.1631	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03114	104.1602	'HOLLY SPRINGS - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03091	104.1498	'4COLEYCREEK 138.00 - APELCNRD 138.00 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03318	104.1052	'BRAGG - HONEY 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03659	104.0403	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03318	103.9931	'BRAGG - MENARD 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03318	103.9753	'T147'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.033	103.9698	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03515	103.9225	'GEN335206 1-NELSON UNIT 6'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03662	103.9067	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03091	103.8626	'4COLEYCREEK 138.00 - SHEPHERD 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03299	103.8271	'DIANA - PIRKEY 345KV CKT 1'
FDNSLock	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.0351	103.7618	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03458	103.7359	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03388	103.6569	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.0342	103.6397	'HOLLY SPRINGS - JASPER 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	103.6264	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03023	103.62	'BRAGG - HONEY 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.033	103.5854	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03395	103.5189	'SPP-AEPW-01'
FDNSLock	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03334	103.5161	'FORK CREEK - SAM RAYBURN 4 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03794	103.509	'SPP-AEPW-01'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03023	103.5086	'BRAGG - MENARD 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03318	103.5035	'GULF LIVINGSTON - MENARD 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03515	103.4966	'LINE 558 TAP - WYNTEX 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03023	103.4883	'T147'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03687	103.4627	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03673	103.4572	'SPP-AEPW-05'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03346	103.4191	'SPP-AEPW-05'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03626	103.4125	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03003	103.4098	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03515	103.4032	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03115	103.3982	'GOREE - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03719	103.3926	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.033	103.3853	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03324	103.3626	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	103.361	'GEN336153 1-WATERFORD UNIT#3'
FDNS	10ALL		4	20SP	G14_018	'TO->FROM'	206	206	0.04617	103.321	'BASE CASE'
FDNS	10ALL		4	20SP	G14_018	'TO->FROM'	206	206	0.04617	103.321	'BASE CASE'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03971	103.2249	'4PONDEROSA% 138.00 - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03393	103.175	'4COLEYCREEK 138.00 - APELCNRD 138.00 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.02972	103.1596	'LNG - TEMCO 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03114	103.1354	'HOLLY SPRINGS - JASPER 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03339	103.112	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03318	103.0856	'GULF LIVINGSTON - POCO 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03626	103.0814	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03854	103.074	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	103.0563	'GEN336251 1-NINEMILE POINT UNIT#4'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03241	103.0352	'SPP-AEPW-04'
FDNS	10ALL		4	25SP	G14_018	'TO->FROM'	206	206	0.04622	103.0343	'BASE CASE'
FDNS	10ALL		4	25SP	G14_018	'TO->FROM'	206	206	0.04622	103.0343	'BASE CASE'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03318	103.0158	'T169'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03393	102.9709	'4COLEYCREEK 138.00 - SHEPHERD 138KV CKT 1'
FDNSLock	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.0351	102.959	'PEE DEE-RIVT'
FDNSLock	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.0351	102.959	'T167'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	102.9573	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	102.9559	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03673	102.9351	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.033	102.9289	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03023	102.9012	'GULF LIVINGSTON - MENARD 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	102.8843	'GEN336252 1-NINEMILE POINT UNIT#5'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	102.8522	'GEN501813 1-RODEMACHEM UNIT 3'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03318	102.8414	'CYPRESS-POCO'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.0386	102.8212	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03515	102.796	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	102.7809	'GEN336252 1-NINEMILE POINT UNIT#5'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03851	102.7777	'4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03339	102.7161	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	102.7144	'GEN336251 1-NINEMILE POINT UNIT#4'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	102.6935	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	102.6921	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03626	102.6769	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03886	102.6667	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	102.6577	'GEN334232 1-1PELCNRD U1 13.800'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	102.6577	'GEN334233 1-1PELCNRD U2 13.800'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.033	102.6353	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03346	102.5712	'CYPRESS - HONEY 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03472	102.5555	'SDANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03472	102.5394	'8DANIEL8 500.00 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03115	102.514	'GOREE - RIVTRIN 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.0342	102.5125	'GOREE - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03268	102.5107	'BOLD SPRINGS - POCO 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03449	102.4928	'HOLLY SPRINGS - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03163	102.4916	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03163	102.4753	'SDANIEL8 500.00 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03626	102.4556	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03169	102.4336	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	102.4306	'GEN501813 1-RODEMACHER UNIT 3'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03023	102.4193	'GULF LIVINGSTON - POCO 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03479	102.3557	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.02977	102.355	'BOLD SPRINGS - POCO 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03023	102.3381	'T169'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	102.3287	'GEN501812 1-RODEMACHER UNIT 2'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	102.3212	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	102.3137	'GEN336191 1-LITTLE GYPSY UNIT#3'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.033	102.298	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03606	102.285	'SPP-AEPW-04'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03495	102.2843	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03115	102.2831	'REEK-RIVTRIN'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03854	102.2728	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03723	102.2715	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	102.2469	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03039	102.243	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	102.2404	'GEN303007 1-1BC2 U2'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	102.236	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	102.2294	'GEN336821 1-GRAND GULF UNIT'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03035	102.2121	'FORK CREEK - SAM RAYBURN 4 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03346	102.1819	'BRAGG - HONEY 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03318	102.1754	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03645	102.1478	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	102.1246	'GEN334232 1-1PELNRD U1 13.800'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	102.1246	'GEN334233 1-1PELNRD U2 13.800'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	102.1241	'GEN336464 1-MICHOUD UNIT #3'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03695	102.1196	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03023	102.1179	'CYPRESS-POCO'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03702	102.117	'SPP-AEPW-05'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03346	102.0703	'BRAGG - MENARD 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03215	102.0676	'CONROE BULK - GOSLIN 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03478	102.0671	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03334	102.0639	'4TURKEYCRK 138.00 - FORK CREEK 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03343	102.0581	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03349	102.0552	'4CONROE2 138.00 - CONROE BULK 138KV CKT Z1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03346	102.0525	'T147'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03325	102.0034	'6BATISTE% 230.00 - CHINA 230KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	101.9969	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03325	101.9882	'6BATISTE% 230.00 - CHINA - JACINTO SERIES CAPACITOR 230KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03626	101.9822	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	101.9787	'GEN336191 1-LITTLE GYPSY UNIT#3'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03325	101.9726	'CHINA - JACINTO SERIES CAPACITOR - JACINTO 230KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	101.9695	'GEN335178 5-RS Cogen R5'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.0353	101.9604	'CONROE BULK - GOSLIN 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	101.9296	'GEN501812 1-RODEMACHER UNIT 2'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.0322	101.9193	'CARROLL - DOLET HILLS 230KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	101.8886	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	101.8783	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	101.8759	'GEN336464 1-MICHOUD UNIT #3'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	101.8706	'GEN501823 1-TECHE UNIT 3'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03158	101.8669	'LEACH - TOLEDO BEND 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03645	101.8336	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.03449	101.8127	'HOLLY SPRINGS - JASPER 138KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	206	206	0.0375	101.8118	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03158	101.8033	'NEWTON BULK.'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03158	101.7982	'LEACH - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	101.7967	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03478	101.7875	'EGYPT - PANORAMA 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03388	101.7836	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	101.7764	'GEN303008 1-1BC2 U3'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	101.7722	'GEN336222 1-LITTLE GYPSY UNIT#2'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	101.7718	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	101.7717	'GEN303006 1-1BC2 U1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03182	101.7644	'WELSH - WILKES 345KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.0351	101.748	'CINCINNATI - WALKER 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03486	101.7325	'GEN336821 1-GRAND GULF UNIT'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03626	101.7192	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	206	206	0.03542	101.7103	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	206	206	0.03175	101.695	'GEN590010 1-ERCOT EQUIVALENCE'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03268	101.6889	'BLANCHARD - BOLD SPRINGS 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03421	101.6772	'ACOLEYCREEK 138.00 - 4PELGNRD 138.00 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03222	101.6661	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	101.6642	'GEN335178 5-RS Cogen R5'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	101.661	'GEN303006 1-1BC2 U1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	101.6609	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	101.6587	'GEN303007 1-1BC2 U2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03334	101.6523	'4TURKEYCRK 138.00 - DOUCETTE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	101.6495	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.02973	101.62	'HARTBURG - LAYFLD8 500.00 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	101.6142	'GEN501811 1-RODEMAGHER UNIT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03542	101.6137	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03469	101.6119	'LEACH - TOLEDO BEND 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03346	101.6037	'GULF LIVINGSTON - MENARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	101.5997	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0318	101.5901	'DOLET HILLS - MANCOMP 6 230.00 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03886	101.5843	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03222	101.5789	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	101.5743	'GEN303008 1-1BC2 U3'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03179	101.5707	'BAXTER WILSON SES - PERRYVILLE 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03334	101.5619	'DOUCETTE-SAM'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03334	101.5619	'T122'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	101.5598	'EASTDC - ERCOT EQUIVALENCE 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03695	101.5549	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03469	101.5506	'NEWTON BULK-'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03703	101.5499	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03469	101.5459	'LEACH - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	101.5008	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	101.4868	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03421	101.4836	'ACOLEYCREEK 138.00 - SHEPHERD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03555	101.4766	'HUGO - SUNNYSIDE 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03541	101.4701	'CARROLL - DOLET HILLS 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03645	101.4553	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	101.4489	'GEN336222 1-LITTLE GYPSY UNIT#2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03626	101.4379	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0342	101.434	'GOREE - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03677	101.4172	'4CONROE2 138.00 - CONROE BULK 138KV CKT Z1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03819	101.384	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03362	101.3771	'FORK CREEK - SAM RAYBURN 4 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	101.3735	'GEN335075 1-DYNEGY#1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	101.3727	'GEN335076 1-DYNEGY UNIT2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03479	101.3625	'COLY - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03549	101.3386	'NORTHWEST TEXARKANA - WELSH 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03854	101.3115	'PEE DEE RIVT'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03854	101.3115	'T167'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03721	101.2971	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	101.2959	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03492	101.2908	'DOLET HILLS - MANCOMP 6 230.00 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	101.2563	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	101.2549	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03645	101.2434	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	101.2184	'GEN336252 1-NINEMILE POINT UNIT#5'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03346	101.2046	'GULF LIVINGSTON - POCO 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03449	101.1987	'GOREE - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03501	101.16	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	101.1556	'GEN336251 1-NINEMILE POINT UNIT#4'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0342	101.1421	'REEK-RIVTRIN'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03501	101.1418	'8DANIEL8 500.00 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03346	101.1373	'T169'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03289	101.0891	'LACON - ING 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03508	101.0479	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.9987	'GEN501813 1-RODEMAGHER UNIT 3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03521	100.9791	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03346	100.9698	'CYPRESS-POCO'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03295	100.8276	'BOLD SPRINGS - POCO 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03886	100.8197	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03645	100.7999	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.6988	'GEN334232 1-1PELGNRD U1 13.800'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.6988	'GEN334233 1-1PELGNRD U2 13.800'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03636	100.6984	'SPP-AEPW-04'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.5641	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03645	100.5512	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03362	100.5486	'4TURKEYCRK 138.00 - FORK CREEK 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.0356	100.5459	'CONROE BULK - GOSLIN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.5053	'GEN501812 1-RODEMAGHER UNIT 2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.4863	'GEN336191 1-LITTLE GYPSY UNIT#3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.3613	'GEN336464 1-MICHOUD UNIT #3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03645	100.2943	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.2395	'GEN335178 5-RS Cogen R5'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.2314	'GEN303007 1-1BC2 U2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03358	100.2231	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.2202	'GEN501823 1-TECHE UNIT 3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03572	100.2117	'CARROLL - DOLET HILLS 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03449	100.1868	'GORRE - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03574	100.1539	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03362	100.1475	'4TURKEYCRK 138.00 - DOUCETTE 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.1437	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03707	100.1331	'4CONROE2 138.00 - CONROE BULK 138KV CKT 21'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.1323	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.1291	'GEN303008 1-1BC2 U3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03353	100.1221	'6BATISTE% 230.00 - CHINA 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.1179	'GEN336821 1-GRAND GULF UNIT'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03353	100.1069	'6BATISTE% 230.00 - CHINA - JACINTO SERIES CAPACITOR 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03353	100.0928	'CHINA - JACINTO SERIES CAPACITOR - JACINTO 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.0878	'GEN303006 1-1BC2 U1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03851	100.0828	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03498	100.0668	'LEACH - TOLEDO BEND 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.0599	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03574	100.0584	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100.0529	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03886	100	'PEE DEE-RIVT'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03886	100	'T167'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100	'GEN336222 1-LITTLE GYPSY UNIT#2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	100	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03508	100	'COLY - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03498	100	'LEACH - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03498	100	'NEWTON BULK-'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	100	'BASE CASE'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03175	100	'BASE CASE'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	99.9	'EASTDC - ERCOT EQUIVALENCE 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03515	99.9	'GEN335075 1-DYNEGY#1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03449	99.9	'REEK-RIVTRIN'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	99.8	'BASE CASE'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03486	99.8	'BASE CASE'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.0475	132.7854	'GRIMES - MT. ZION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.04761	132.3201	'T133'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.0475	131.8834	'HUNTSVILLE T'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.0475	131.7805	'LINE 558 TAP - MT. ZION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.0475	129.3713	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.04155	108.98	'NAVSOTA - TUBULAR 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.04155	108.3429	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.04155	106.4132	'NAVSOTA-LON'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.04155	106.4132	'T154'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.04155	104.4831	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03826	104.2466	'T104'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03826	104.1495	'BRYAN-GRIMES'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.0508	103.658	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.05281	103.3866	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.04155	103.1898	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03805	102.2525	'GRIMES TO NA'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03805	102.2525	'T153'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03805	102.1254	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03805	102.1202	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.04155	102.029	'4FISHCRK - LONGMIRE 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03581	102.0158	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03581	101.8	'SABINE 230/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03336	101.6891	'CHINA - CHINA PORTER SERIES CAP 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03336	101.6788	'CHINA PORTER SERIES - CHINA PORTER SERIES CAP 230KV CKT 2'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03805	101.5554	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03336	101.5377	'CHINA TO POR'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03336	101.5242	'CHINA PORTER SERIES - PORTER 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03336	101.5137	'PORTER (PORTER) 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03581	101.0458	'EASTDC - ERCOT EQUIVALENCE 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03581	101	'ERCOT EQUIVALENCE 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03764	100.3701	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03585	100.2275	'4CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.0373	99.6	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03581	99.6	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03581	99.5	'LEWIS CREEK SWITCHYARD 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.05527	189.5884	'4BENTWATER1 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.05527	185.0516	'4BENTWATER1 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.05527	184.3682	'T132'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.05527	178.8486	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.05527	175.4989	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.05527	173.5121	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.05527	171.778	'CONROE BULK - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04837	170.1566	'T104'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04837	170.0435	'BRYAN-GRIMES'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04708	163.9528	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04964	162.9914	'NAVSOTA - TUBULAR 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04964	162.2665	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04964	159.8175	'NAVSOTA-LON'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04964	159.8175	'T154'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04787	159.1033	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04641	158.4833	'GRIMES TO NA'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04641	158.4833	'T153'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04641	158.4435	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04641	158.4358	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04635	158.3773	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.06133	157.8604	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04964	157.851	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04641	157.6243	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.06375	157.5289	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04964	156.3753	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04964	155.0509	'4FISHCRK - LONGMIRE 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	154.5643	'EASTDC - ERCOT EQUIVALENCE 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04014	154.4891	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	153.1058	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	152.8119	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04455	151.5595	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	151.175	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04787	150.8009	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04835	150.3051	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04787	149.7574	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	149.5816	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04787	148.9749	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	148.7239	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04523	148.6402	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04118	148.4734	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04684	148.2732	'SPP-AEPW-01'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	148.1834	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04787	148.113	'PEE DEE-RIVT'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04787	148.113	'T167'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	147.5874	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04533	147.5587	'SPP-AEPW-05'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04494	147.4852	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04143	147.4428	'CYPRESS - HONEY 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04964	147.2683	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	147.1781	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04592	147.1693	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04494	147.1018	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04537	147.0479	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04143	147.0434	'BRAGG - HONEY 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	147.0025	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	146.9999	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04143	146.9262	'BRAGG - MENARD 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04143	146.8928	'T147'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04787	146.8921	'CINCINNATI - WALKER 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04494	146.6311	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04302	146.5913	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04302	146.5845	'8DANIEL8 500.00 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04026	146.5471	'HARTBURG - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04143	146.4391	'GULF LIVINGSTON - MENARD 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04494	146.3761	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04787	146.0793	'RIVTRIN - WALKER 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04289	146.0592	'HOLLY SPRINGS - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04143	146.0341	'GULF LIVINGSTON - POCCO 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04326	146.0287	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04553	146.0282	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04964	146.0029	'EGYPT - PANORAMA 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	145.984	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	145.942	'GEN334232 1-1PELCLNRD U1 13.800'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	145.942	'GEN334233 1-1PELCLNRD U2 13.800'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04143	145.9137	'T169'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04494	145.8363	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04273	145.8034	'CHINA - SABINE 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	145.7047	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	145.6871	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04143	145.6147	'CYPRESS-POCO'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04964	145.6119	'EEL-LONGMIRE'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04964	145.6119	'T142'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04588	145.5816	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	145.5788	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04204	145.5737	'AMELIA BULK - CHINA 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04289	145.5622	'HOLLY SPRINGS - JASPER 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0431	145.5438	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04494	145.5407	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04472	145.501	'SPP-AEPW-04'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	145.4618	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	145.4459	'GEN335178 S-RS Cogen RS'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04383	145.4269	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04251	145.401	'CYPRESS 500/138KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04383	145.3099	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0416	145.2676	'CHINA - CHINA - JACNTO SERIES CAPACITOR 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0416	145.2676	'CHINA-JACINT'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0494	145.2373	'JACKSONVILLE (SWE-RC.ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0416	145.2342	'CHINA - JACNTO SERIES CAPACITOR - JACINTO 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04135	145.2292	'DEER - DOUCETTE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	145.1868	'GEN300003 1-THOMAS HILL UNIT 3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04277	145.1304	'HARTBURG 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04277	145.0988	'HARTBURG - INLAND-ORANGE 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04334	145.0962	'DOLET HILLS - MANCOMP 6 230.00 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04325	145.0876	'BAXTER WILSON SES - PERRYVILLE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0423	145.0612	'4COLEVCREEK 138.00 - APELCNRD 138.00 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	144.9332	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	144.9272	'GEN303007 1-1BC2 U2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04312	144.8752	'LEACH - TOLEDO BEND 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04383	144.8746	'SCOTTSVILLE - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04334	144.8294	'FISHER - MANCOMP 6 230.00 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04366	144.826	'CARROLL - DOLET HILLS 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04312	144.8201	'NEWTON BULK.'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	144.8198	'GEN640009 1-COOPER NUCLEAR STATION'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04334	144.8163	'FISHER 230/138KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04312	144.8159	'LEACH - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	144.8079	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04289	144.7734	'BEVIL - CYPRESS 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	144.7681	'GEN336191 1-LITTLE GYPSY UNIT#3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	144.7533	'GEN303006 1-1BC2 U1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04383	144.7473	'LONGWOOD - SCOTTSVILLE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0431	144.7423	'COLY - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	144.686	'GEN303024 1-1G3INTHB 18.000'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04325	144.6578	'COCODRIE - VILLE PLATTE 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	144.6539	'GEN303008 1-1BC2 U3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04311	144.5844	'EAST LEESVILLE - RODEMACHER 230KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	142.9403	'BASE CASE'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	142.9403	'BASE CASE'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	142.9314	'RIVTRIN 138KV SWITCHED SHUNT'
FDNS	Lock		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	142.9314	'RIVTRIN 138KV SWITCHED SHUNT'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04316	141.3878	'4CONROE2 138.00 - LINE 523 TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.03981	141.3617	'LACON - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04135	141.353	'STALEY TO CO'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04228	141.3166	'REEK-RIVTRIN'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04293	141.3113	'4GOSLIN1 138.00 - ALDEN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04316	141.2177	'CONAIR - LINE 523 TAP 138KV CKT 1'
FDNS	10ALL		4	15SP	G14_018	'TO->FROM'	206	206	0.05883	141.2101	'BASE CASE'
FDNS	10ALL		4	15SP	G14_018	'TO->FROM'	206	206	0.05883	141.2101	'BASE CASE'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04293	141.2062	'4GOSLIN1 138.00 - GOSLIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.0675	141.0928	'G14-018T 345.00 - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	141.0553	'OKLAUN 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04106	141.0215	'CARLISLE - ONALASKA 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04299	141.0184	'8CAJUN2 - FANCY POINT 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.043	140.9406	'EEK-SECURITY'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	140.7678	'GEN520947 1-HUGO1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.043	140.7308	'8BYLBT - WEBRE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	140.7064	'GEN635212 2-NEAL UNIT 2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	140.6912	'GEN337692 1-LAKE CATHERINE UNIT #4'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	140.6137	'SPSCONT-01'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04106	140.4035	'CARLISLE - GULF TRINITY 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04319	140.3981	'RICH-POCO'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04319	140.3981	'T170'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04317	140.3934	'SPP-AEPW-40'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04106	140.2691	'GULF TRINITY - RIVTRIN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	140.2259	'LINE 558 TAP - WYNTEX 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04136	140.1997	'NELSON - RICHARD 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04316	140.1705	'SPP-AEPW-35'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	140.0399	'GEN506753 1-LEBROCK GAS 2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	140.0357	'GEN506752 1-LEBROCK GAS 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	139.9519	'GEN509409 1-WILKES #3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04106	139.8488	'T183'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04135	139.7293	'RIVTRIN - STALEY 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	139.5827	'GEN635213 3-NEAL UNIT 3'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	139.4743	'GEN509408 1-WILKES #2'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	139.3643	'GEN344895 2-1LAB G2 20.000'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	139.3321	'GEN344896 3-1LAB G3 20.000'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	139.3311	'GEN344897 4-1LAB G4 20.000'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	206	206	0.04318	139.3302	'GEN344894 1-1LAB G1 20.000'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04293	139.3099	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04219	139.1117	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04316	139.0869	'CANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	138.9983	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0422	138.9775	'RICHARD - WELLS 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04346	138.9621	'COLFAX - MONTGOMERY 230KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04456	138.8832	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04456	138.8737	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04456	138.7885	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	138.7525	'GEN509416 1-TURK GENERATION'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04346	138.7486	'WINFIELD TO'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04316	138.6894	'CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	138.6249	'GEN509398 1-KNOXLEE #5'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	138.569	'GEN509405 1-WELSH #2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04306	138.5309	'GOSLIN-OAK R'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	138.4513	'GEN506745 1-TENASKA GATEWAY STEAM 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04346	138.3814	'COLFAX - RODEMACHER 230KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	138.1562	'GEN635214 4-NEAL UNIT 4'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0423	138.1346	'4PELCONRD 138.00 - JACINTO 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	138.0593	'GEN636641 1-LOUISA UNIT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04095	137.7542	'WEBRE - WELLS 500KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	137.7314	'GEN509404 1-WELSH #1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	137.7303	'GEN509406 1-WELSH #3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03981	137.3656	'LACON - LNG 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04493	137.3487	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	137.2891	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04316	137.0272	'T141'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04493	136.9753	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04493	136.9659	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04058	136.9427	'6PONDEROSA 230.00 - GRIMES AUTOTRANSFORMER BUS 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04058	136.9332	'6PONDEROSA 230.00 () 230/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04058	136.8584	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03981	136.3493	'LNG - TEMCO 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	136.0975	'GEN562658 1-G14_018_3 18.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	135.285	'GEN344225 1-ICAL G1 25.000'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04455	134.2461	'DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04087	134.2326	'GRIMES 345/138KV TRANSFORMER CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04087	134.2326	'GRIMES 345/138KV TRANSFORMER CKT 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	132.9156	'GEN506748 1-TENASKA GATEWAY GAS 3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	131.0719	'GEN509403 1-PIRKEY GENERATION'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	128.6606	'GEN334030 1-FRONTIER UNIT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	128.6606	'GEN334031 1-FRONTIER UNIT 2'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	128.6606	'GEN334032 1-FRONTIER UNIT 3'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	128.4407	'GEN562657 1-G14_018_2 23.500'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03457	127.2533	'HUNTSVILLE-L'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03851	127.0105	'T104'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03444	126.9386	'GEORGIA - TEMCO 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03851	126.9152	'BRYAN-GRIMES'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03507	126.4918	'T104'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03444	126.4193	'GEORGIA - HUNTSVILLE 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03507	126.3876	'BRYAN-GRIMES'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03883	126.0852	'T104'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03883	125.9756	'BRYAN-GRIMES'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03457	125.5981	'T136'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03938	124.5724	'4BENTWATER 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03788	123.7096	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0345	123.4878	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03587	122.995	'4BENTWATER 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03971	122.9194	'4BENTWATER 138.00 - GRIMES 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03819	122.8749	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03938	121.3047	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0403	120.7479	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03671	120.4208	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03526	120.4075	'LINE 558/91 TAP - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03526	120.4015	'HUNTSVILLE-R'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03526	120.3966	'HUNTSVILLE - LINE 558/91 TAP 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03587	120.3183	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03971	120.0966	'4BENTWATER 138.00 - WALDEN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04064	119.8902	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0351	119.4786	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03854	119.4252	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04494	118.8785	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03886	118.283	'BRYAN - PEE DEE 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04722	117.8122	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04954	117.5886	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.05127	117.4293	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04951	117.2899	'LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03938	117.1775	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03675	116.8427	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03587	116.718	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.05149	116.3805	'DIANA -G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04318	116.2412	'GEN334033 1-FRONTIER UNIT 4'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03347	116.1453	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03971	116.004	'APRIL - WALDEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03651	115.8392	'GRIMES TO NA'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03651	115.8392	'T153'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03706	115.7835	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03651	115.6747	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03651	115.6566	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.02972	115.4127	'LACON - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03651	115.082	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03326	114.9639	'GRIMES TO NA'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03326	114.9639	'T153'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03326	114.8157	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03262	114.8136	'LACON - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03326	114.809	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	114.8066	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03938	114.7344	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03587	114.6848	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03682	114.6663	'GRIMES TO NA'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03682	114.6663	'T153'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	114.5656	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03682	114.5264	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03682	114.5192	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03326	114.4089	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03719	114.0735	'4MOCKINGBIRD138.00 - NAVSOTA 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03719	114.0728	'4MOCKINGBIRD138.00 - TUBULAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	114.046	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03682	114.0369	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03276	113.942	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	113.9239	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03289	113.9168	'LACON - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03611	113.8119	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	113.7588	'GEN334440 1-SABINE UNIT 4'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	113.6972	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03971	113.6852	'APRIL - LAKE FOREST 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03719	113.666	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03759	113.6482	'SPP-AEPW-01'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	113.58	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	113.4902	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03587	113.4576	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	113.3117	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03388	113.3018	'4MOCKINGBIRD138.00 - NAVSOTA 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03388	113.3011	'4MOCKINGBIRD138.00 - TUBULAR 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03647	113.0988	'DOLET HILLS 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03938	113.0119	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	113.0044	'GEN334070 1-LEWIS CREEK 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	112.9201	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03388	112.9004	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	112.8863	'GEN334071 1-LEWIS CREEK 2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	112.7422	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0375	112.698	'4MOCKINGBIRD138.00 - NAVSOTA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0375	112.6973	'4MOCKINGBIRD138.00 - TUBULAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03297	112.688	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	112.6864	'GEN335206 1-NELSON UNIT 6'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	112.6101	'GEN335206 1-NELSON UNIT 6'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	112.4864	'GEN334441 1-SABINE UNIT 5'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03587	112.4564	'4PONDEROSA% 138.00 - WOODHAVEN 138KV CKT 1'
FDNSLock	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0351	112.3178	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0375	112.2939	'DOBBIN - TUBULAR 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03971	112.2517	'LAKE FOREST - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	112.1593	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	112.0773	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0369	112.0125	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	111.9221	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03318	111.8655	'CYPRESS - HONEY 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0342	111.7233	'HOLLY SPRINGS - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	111.6838	'GEN335206 1-NELSON UNIT 6'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03854	111.6699	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03819	111.6507	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	111.6095	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	111.5995	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03819	111.4934	'4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03938	111.484	'4PONDEROSA% 138.00 - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03318	111.4485	'BRAGG - HONEY 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03318	111.336	'BRAGG - MENARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03478	111.3318	'4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03318	111.3182	'T147'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03659	111.3174	'DIANA - PIRKEY 345KV CKT 1'
FDNSLock	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0351	111.2905	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03794	111.2703	'SPP-AEPW-01'
FDNSLock	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.033	111.1935	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03662	111.1843	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	111.1653	'GEN335204 1-NELSON UNIT 4'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.02972	111.1533	'LACON - LNG 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03324	111.1183	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03023	111.1122	'CYPRESS - HONEY 138KV CKT 1'
FDNS	10ALL		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04617	111.0827	'BASE CASE'
FDNS	10ALL		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04617	111.0827	'BASE CASE'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03091	111.055	'4COLEYCREEK 138.00 - 4PELNRD 138.00 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03114	111.0499	'HOLLY SPRINGS - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03971	110.9879	'4PONDEROSA% 138.00 - WOODHAVEN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0342	110.941	'HOLLY SPRINGS - JASPER 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	110.9048	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03318	110.8337	'GULF LIVINGSTON - MENARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.033	110.8316	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNSLock	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03334	110.7812	'FORK CREEK - SAM RAYBURN 4 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03091	110.7588	'4COLEYCREEK 138.00 - SHEPHERD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03687	110.7411	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03673	110.7361	'SPP-AEPW-05'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03626	110.6918	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03299	110.6881	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03719	110.6729	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNSLock	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0351	110.644	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03458	110.5973	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0386	110.5837	'7SAREPT 345.00 - LONGWOOD 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	110.5592	'GEN335831 1-RIVERBEND UNIT#1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03851	110.5394	'4PONDEROSA% 138.00 - LONGMIRE 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03023	110.5335	'BRAGG - HONEY 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03393	110.5204	'4COLEYCREEK 138.00 - 4PELNRD 138.00 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03388	110.5191	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03886	110.4571	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.033	110.4476	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03023	110.4217	'BRAGG - MENARD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03318	110.411	'GULF LIVINGSTON - POCO 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03346	110.4092	'CYPRESS - HONEY 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03023	110.4013	'T147'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03395	110.3806	'SPP-AEPW-01'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03854	110.3676	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03626	110.3612	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03318	110.3412	'T169'
FDNS	10ALL		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04622	110.3134	'BASE CASE'
FDNS	10ALL		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04622	110.3134	'BASE CASE'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03393	110.3111	'4COLEYCREEK 138.00 - SHEPHERD 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03449	110.2852	'HOLLY SPRINGS - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03346	110.281	'SPP-AEPW-05'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03003	110.2642	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.033	110.2477	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03115	110.2249	'GOREE - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	110.2233	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03673	110.2147	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03318	110.1673	'CYPRESS-POCO'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.02972	110.0767	'LNG - TEMCO 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	110.0608	'GEN336252 1-NINEMILE POINT UNIT#5'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03114	110.0535	'HOLLY SPRINGS - JASPER 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03723	110.035	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03346	110.0131	'BRAGG - HONEY 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.9944	'GEN336251 1-NINEMILE POINT UNIT#4'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03339	109.9742	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.9727	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.9713	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03626	109.9574	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	109.919	'GEN336251 1-NINEMILE POINT UNIT#4'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03645	109.9122	'CROCKETT (CROCKETT) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03346	109.9012	'BRAGG - MENARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03241	109.8975	'SPP-AEPW-04'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03346	109.8834	'T147'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03695	109.883	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03268	109.8828	'BOLD SPRINGS - POCO 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03702	109.8809	'SPP-AEPW-05'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03472	109.8356	'8DANIELS 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03472	109.8195	'8DANIELS 500.00/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	109.8182	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	109.8168	'GEN334431 1-SABINE UNIT 1'
FDNSLock	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0351	109.8149	'PEE DEE-RIVT'
FDNSLock	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0351	109.8149	'T167'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03023	109.8042	'GULF LIVINGSTON - MENARD 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0342	109.8013	'GOREE - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.033	109.7918	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	109.7472	'GEN336252 1-NINEMILE POINT UNIT#5'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03626	109.7365	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	109.7176	'GEN501813 1-RODEMACHER UNIT 3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.7126	'GEN501813 1-RODEMACHER UNIT 3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03479	109.6361	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.6017	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03645	109.5986	'CROCKETT - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03449	109.5897	'HOLLY SPRINGS - JASPER 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03339	109.5788	'LYDIA - WELSH 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0375	109.5779	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03606	109.5657	'SPP-AEPW-04'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03495	109.5651	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03854	109.5644	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.5275	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.5213	'GEN303007 1-1BC2 U2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	109.5184	'GEN334232 1-1PELNRD U1 13.800'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	109.5184	'GEN334233 1-1PELNRD U2 13.800'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03421	109.5033	'4COLEYCREEK 138.00 - 4PELNRD 138.00 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.033	109.4987	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03262	109.4749	'LACON - LNG 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03346	109.422	'GULF LIVINGSTON - MENARD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.4076	'GEN334232 1-1PELNRD U1 13.800'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.4076	'GEN334233 1-1PELNRD U2 13.800'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03334	109.4072	'4TURKEYCRK 138.00 - FORK CREEK 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03886	109.3643	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03163	109.3547	'8DANIELS 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03163	109.3384	'8DANIELS 500.00/203KV TRANSFORMER CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03695	109.3199	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03023	109.3171	'GULF LIVINGSTON - POCO 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03703	109.3148	'DIANA - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03115	109.3083	'GOREE - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03421	109.3046	'4COLEYCREEK 138.00 - SHEPHERD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03169	109.2968	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.02977	109.2915	'BOLD SPRINGS - POCO 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03325	109.2851	'6BATISTE% 230.00 - CHINA 230KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.279	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03325	109.2699	'6BATISTE% 230.00 - CHINA - JACNTO SERIES CAPACITOR 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	109.2662	'GEN336153 1-WATERFORD UNIT#3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03626	109.2639	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.2601	'GEN336191 1-LITTLE GYPSY UNIT#3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03325	109.254	'CHINA - JACNTO SERIES CAPACITOR - JACINTO 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03362	109.2495	'FORK CREEK - SAM RAYBURN 4 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0353	109.2432	'CONROE BULK - GOSLIN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03023	109.236	'T169'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03645	109.221	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.2121	'GEN501812 1-RODEMACHER UNIT 2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	109.1939	'GEN501812 1-RODEMACHER UNIT 2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	109.1773	'GEN336191 1-LITTLE GYPSY UNIT#3'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.033	109.1618	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.1575	'GEN336464 1-MICHOUD UNIT #3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.1522	'GEN501823 1-TECHE UNIT 3'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03035	109.1489	'FORK CREEK - SAM RAYBURN 4 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03039	109.1063	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	109.1027	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	109.0936	'GEN336821 1-GRAND GULF UNIT'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03115	109.0781	'REEK-RIVTRIN'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03721	109.0626	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.0534	'GEN303006 1-1BC2 U1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03318	109.0388	'LYDIA - VALLIANT 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03268	109.0319	'BLANCHARD - BOLD SPRINGS 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	109.021	'GEN334432 1-SABINE UNIT 2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	109.0196	'GEN334431 1-SABINE UNIT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03346	109.0182	'GULF LIVINGSTON - POCO 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03023	109.0161	'CYPRESS-POCO'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	109.0148	'GEN336821 1-GRAND GULF UNIT'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03289	109.01	'LACON - LNG 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03645	109.0095	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03626	109.0014	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03542	108.9921	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	108.988	'GEN336464 1-MICHOUD UNIT #3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	108.9843	'GEN336252 1-NINEMILE POINT UNIT#5'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03334	108.9763	'4TURKEYCRK 138.00 - DOUCETTE 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03449	108.9633	'GOREE - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03346	108.951	'T169'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	108.9459	'GEN335178 5-RS Cogen R5'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	108.9427	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03215	108.9319	'CONROE BULK - GOSLIN 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	108.9313	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03478	108.9278	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03501	108.9258	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03343	108.9217	'PITTSBURG - VALLIANT 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	108.9216	'GEN336251 1-NINEMILE POINT UNIT#4'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03349	108.9182	'4CONROE2 138.00 - CONROE BULK 138KV CKT Z1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03501	108.9076	'8DANIEL8 500.00 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03469	108.8992	'LEACH - TOLEDO BEND 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	108.8972	'GEN501811 1-RODEMACHER UNIT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03542	108.8956	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03334	108.8861	'DOUCETTE-SAM'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03334	108.8861	'T122'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	108.8564	'GEN303008 1-1BC2 U3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03469	108.8378	'NEWTON BULK-'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	108.8332	'GEN335178 5-RS Cogen R5'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03469	108.8331	'LEACH - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03508	108.814	'FRANKLIN - GRAND GULF 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03346	108.784	'CYPRESS-POCO'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0322	108.7834	'CARROLL - DOLET HILLS 230KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	108.769	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	108.7661	'GEN501813 1-RODEMACHER UNIT 3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03555	108.7588	'HUGO - SUNNYSIDE 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	108.7524	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03541	108.752	'CARROLL - DOLET HILLS 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03521	108.7451	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	108.7421	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03158	108.7389	'LEACH - TOLEDO BEND 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	108.7312	'GEN336222 1-LITTLE GYPSY UNIT#2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03626	108.7207	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03677	108.6982	'4CONROE2 138.00 - CONROE BULK 138KV CKT Z1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03295	108.6898	'BOLD SPRINGS - POCO 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0342	108.6821	'GOREE - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03158	108.6761	'NEWTON BULK-'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03158	108.6711	'LEACH - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	108.6608	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	108.6558	'GEN335075 1-DYNEGY#1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	108.655	'GEN335076 1-DYNEGY UNIT2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03478	108.6485	'EGYPT - PANORAMA 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03388	108.6482	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03479	108.6449	'COLY - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	108.6406	'GEN303008 1-1BC2 U3'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	108.6364	'GEN336222 1-LITTLE GYPSY UNIT#2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	108.6358	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03182	108.6284	'WELSH - WILKES 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03549	108.6211	'NORTHWEST TEXARKANA - WELSH 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0351	108.6157	'CINCINNATI - WALKER 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03886	108.598	'CEDAR - CINCINNATI 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	108.5784	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03645	108.5668	'ALTO (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03854	108.5599	'PEE DEE-RIVT'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03854	108.5599	'T167'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	108.5591	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03222	108.5302	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	108.5253	'GEN303006 1-1BC2 U1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	108.523	'GEN303007 1-1BC2 U2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.02973	108.4844	'HARTBURG - LAYFLD8 500.00 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	108.4678	'GEN334232 1-1PELNRD U1 13.800'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	108.4678	'GEN334233 1-1PELNRD U2 13.800'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03636	108.465	'SPP-AEPW-04'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	108.4634	'GEN335203 1-NELSON UNIT 3'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0318	108.4578	'DOLET HILLS - MANCOMP 6 230.00 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03222	108.4431	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03179	108.435	'BAXTER WILSON SES - PERRYVILLE 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0342	108.391	'REEK-RIVTRIN'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03362	108.381	'4TURKEYCRK 138.00 - FORK CREEK 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	108.3333	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03645	108.3187	'ALTO (ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0356	108.3143	'CONROE BULK - GOSLIN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	108.2732	'GEN501812 1-RODEMACHER UNIT 2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	108.2536	'GEN336191 1-LITTLE GYPSY UNIT#3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	108.1289	'GEN336464 1-MICHOUD UNIT #3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03645	108.0624	'JACKSONVILLE (SWE-RC-ETEC) - PINE GROVE (ETEC) 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	108.0072	'GEN335178 5-RS Cogen R5'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	107.9992	'GEN303007 1-1BC2 U2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03358	107.9908	'ELDORADO EHV - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	107.988	'GEN501823 1-TECHE UNIT 3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03572	107.9794	'CARROLL - DOLET HILLS 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03362	107.9601	'4TURKEYCRK 138.00 - DOUCETTE 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03574	107.9216	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	107.9114	'GEN300006 1-NEW MADRID UNIT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03449	107.9089	'GOREE - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	107.9001	'GEN300007 1-NEW MADRID UNIT 2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03707	107.8995	'4CONROE2 138.00 - CONROE BULK 138KV CKT Z1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	107.8971	'GEN303008 1-1BC2 U3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03353	107.8901	'6BATISTE% 230.00 - CHINA 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03362	107.8874	'DOUCETTE-SAM'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03362	107.8874	'T122'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	107.8863	'GEN336821 1-GRAND GULF UNIT'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03353	107.8747	'6BATISTE% 230.00 - CHINA - JACNTO SERIES CAPACITOR 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03353	107.8604	'CHINA - JACNTO SERIES CAPACITOR - JACINTO 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	107.8559	'GEN303006 1-1BC2 U1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03851	107.8475	'LONGMIRE - PANORAMA 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03498	107.8416	'LEACH - TOLEDO BEND 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	107.8279	'GEN501910 1-ACADIA UNIT ST1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03574	107.8263	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	107.8208	'GEN590011 2-ERCOT EQUIVALENCE'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03498	107.7835	'NEWTON BULK-3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03498	107.7777	'LEACH - NEWTON BULK 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	107.7486	'GEN336222 1-LITTLE GYPSY UNIT#2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03886	107.7467	'PEE DEE-RIVT'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03886	107.7467	'T167'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	107.746	'GEN590010 1-ERCOT EQUIVALENCE'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03508	107.7367	'COLY - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	107.7202	'GEN335075 1-DYNEGY#1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03449	107.6472	'REEK-RIVTRIN'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	107.036	'BASE CASE'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	107.036	'BASE CASE'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	106.9034	'BASE CASE'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	106.9034	'BASE CASE'
FDNSLock	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	106.23	'RIVTRIN 138KV SWITCHED SHUNT'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	106.2286	'RIVTRIN 138KV SWITCHED SHUNT'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	106.13	'BASE CASE'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	106.13	'BASE CASE'
FDNSLock	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	105.9889	'RIVTRIN 138KV SWITCHED SHUNT'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	105.9874	'RIVTRIN 138KV SWITCHED SHUNT'
FDNS	10ALL		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04596	105.7127	'BASE CASE'
FDNS	10ALL		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.04596	105.7127	'BASE CASE'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03489	105.4809	'ELDORADO EHV - STERLINGTON 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0347	105.4554	'8CAJUN2 - FANCY POINT 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03334	105.4219	'CORRIGAN - LINE 111 TAP 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.4112	'GEN345670 1-1RUSH G1 18.000'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.3553	'GEN506750 1-EASTMAN GENERATION B'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.3486	'GEN520947 1-HUGO1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	105.3318	'RIVTRIN 138KV SWITCHED SHUNT'
FDNSLock	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	105.3318	'RIVTRIN 138KV SWITCHED SHUNT'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03176	105.2657	'SPSCONT-01'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.2216	'GEN337652 1-WHITE BLUFF UNIT #1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.2149	'GEN345671 2-1RUSH G2 18.000'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	105.1997	'GEN337652 1-WHITE BLUFF UNIT #1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03173	105.1942	'COLFAX - MONTGOMERY 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03174	105.1882	'GOSLIN-OAK R'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.1758	'GEN635213 3-NEAL UNIT 3'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	105.1539	'GEN345671 2-1RUSH G2 18.000'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	105.1356	'GEN337653 1-WHITE BLUFF UNIT #2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.1298	'GEN338146 1-INDEPENDENCE UNIT #2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.1278	'GEN337653 1-WHITE BLUFF UNIT #2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	105.124	'GEN338146 1-INDEPENDENCE UNIT #2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	105.1125	'GEN338143 1-INDEPENDENCE UNIT #1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.1052	'GEN338143 1-INDEPENDENCE UNIT #1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03081	105.1026	'4EVGRNSW 138.00 - TEMCO 138KV CKT Z1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03081	105.1021	'4DORRELL 138.00 - 4EVGRNSW 138.00 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03035	105.0847	'DOUCETTE TO'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.0768	'GEN344895 2-1LAB G2 20.000'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.0683	'SPP-AEPW-40'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	105.0656	'GEN344895 2-1LAB G2 20.000'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.0605	'GEN344896 3-1LAB G3 20.000'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.0586	'GEN344897 4-1LAB G4 20.000'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	105.058	'GEN344894 1-1LAB G1 20.000'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03268	105.0527	'T183'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03173	105.0525	'WINFIELD TO'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	105.0133	'GEN344896 3-1LAB G3 20.000'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	105.0126	'GEN344897 4-1LAB G4 20.000'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	105.0119	'GEN344894 1-1LAB G1 20.000'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03471	104.9749	'8BYLBT - WEBRE 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	104.9581	'GEN636641 1-LOUISA UNIT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03489	104.9406	'RICH-POCO'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03489	104.9406	'T170'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03485	104.9334	'GOSLIN-OAK R'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03485	104.9244	'SPP-AEPW-35'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03173	104.8902	'COLFAX - RODEMACHER 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03162	104.8845	'8BYLBUT - WEBRE 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03178	104.8582	'RICH-POCO'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03178	104.8582	'T170'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.05368	104.835	'G14-018T 345.00 - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03334	104.817	'LINE 111 TAP - MAGNOLIA GROVETON 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	104.8022	'GEN506753 1-LEBROCK GAS 2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	104.7994	'GEN506752 1-LEBROCK GAS 1'
FDNSLock	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03462	104.7122	'8CHOCTAW MS 500.00 - 8CLAY 500.00 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03198	104.6513	'4CANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	104.6246	'LINE 558 TAP - WYNTEX 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	104.6026	'LINE 558 TAP - WYNTEX 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03154	104.5636	'8CHOCTAW MS 500.00 - 8CLAY 500.00 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	104.5477	'GEN635214 4-NEAL UNIT 4'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	104.5289	'GEN506753 1-LEBROCK GAS 2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	104.5257	'GEN506752 1-LEBROCK GAS 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.05405	104.4674	'G14-018T 345.00 - TENASKA RUSK COUNTY 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	104.465	'GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	104.463	'GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.4582	'GEN506750 1-EASTMAN GENERATION B'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03511	104.4204	'4CANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03035	104.4128	'CORRIGAN - LINE 111 TAP 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.02977	104.3977	'CARLISLE - GULF TRINITY 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03362	104.3759	'CORRIGAN - LINE 111 TAP 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	104.3745	'GEN636641 1-LOUISA UNIT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03162	104.3546	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03112	104.3473	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	104.3421	'GEN635213 3-NEAL UNIT 3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.3388	'GEN520947 1-HUGO1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	104.2957	'GEN635214 4-NEAL UNIT 4'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03485	104.2887	'COLFAX - MONTGOMERY 230KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.02977	104.2473	'GULF TRINITY - RIVTRIN 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03472	104.2391	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.2314	'GEN345670 1-1RUSH G1 18.000'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.2273	'GEN345671 2-1RUSH G2 18.000'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.2252	'SPP-AEPW-40'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.1985	'GEN337652 1-WHITE BLUFF UNIT #1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.1808	'GEN635213 3-NEAL UNIT 3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03514	104.1557	'GOSLIM-OAK R'
FDNSLock	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03334	104.1407	'MAGNOLIA GROVETON - STALEY 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03485	104.1326	'WINFIELD TO'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.11	'GEN337653 1-WHITE BLUFF UNIT #2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.1019	'GEN338146 1-INDEPENDENCE UNIT #2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.0976	'GEN344895 2-1LAB G2 20.000'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.0795	'GEN344896 3-1LAB G3 20.000'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.0794	'GEN338143 1-INDEPENDENCE UNIT #1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.0788	'GEN344897 4-1LAB G4 20.000'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	104.0781	'GEN344894 1-1LAB G1 20.000'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03334	104.0763	'CORRIGAN BUL'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03334	104.0763	'T195'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0349	104.0706	'8CHOCTAW MS 500.00 - 8CLAY 500.00 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03295	104.0627	'T183'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03514	104.0616	'SPP-AEPW-35'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.035	104.0433	'8BYLBUT - WEBRE 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03511	104.0372	'4CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03334	104.026	'STALEY TO CO'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03198	104.0193	'4CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	104.0011	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	103.9942	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03485	103.9785	'COLFAX - RODEMACHER 230KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	103.9712	'GEN509409 1-WILKES #3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	103.966	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	103.9476	'GEN635023 3-WALTER SCOTT UNIT 3'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.02977	103.916	'T183'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	103.9007	'GEN509408 1-WILKES #2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03514	103.8958	'COLFAX - MONTGOMERY 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	103.859	'GEN506753 1-LEBROCK GAS 2'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	103.8562	'GEN635023 3-WALTER SCOTT UNIT 3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	103.8561	'GEN506752 1-LEBROCK GAS 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03035	103.7921	'LINE 111 TAP - MAGNOLIA GROVETON 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	103.7638	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03362	103.7631	'LINE 111 TAP - MAGNOLIA GROVETON 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03514	103.7402	'WINFIELD TO'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03514	103.6029	'COLFAX - RODEMACHER 230KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0354	103.5756	'4CANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	103.571	'GEN506745 1-TENASKA GATEWAY STEAM 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	103.5435	'LINE 558 TAP - WYNTEX 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03198	103.498	'T141'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03413	103.497	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	103.4899	'GEN635024 4-WALTER SCOTT UNIT 4'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	103.4314	'GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	103.4065	'GEN506745 1-TENASKA GATEWAY STEAM 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03501	103.3757	'ALDEN - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	103.3715	'GEN635024 4-WALTER SCOTT UNIT 4'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	103.3654	'GEN636641 1-LOUISA UNIT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03511	103.3607	'T141'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	103.3088	'GEN635214 4-NEAL UNIT 4'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0354	103.2074	'4CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03401	103.1843	'RICHARD - WELLS 500KV CKT 1'
FDNSLock	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03362	103.0804	'MAGNOLIA GROVETON - STALEY 138KV CKT 1'
FDNSLock	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03035	103.0777	'MAGNOLIA GROVETON - STALEY 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	103.0574	'GEN509408 1-WILKES #2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	103.0444	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03441	103.0381	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03362	103.0244	'CORRIGAN BUL'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03362	103.0244	'T195'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03035	103.015	'CORRIGAN BUL'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03035	103.015	'T195'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	102.9998	'GEN509409 1-WILKES #3'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03035	102.9746	'STALEY TO CO'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03362	102.9703	'STALEY TO CO'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03393	102.9521	'4PELCNRD 138.00 - JACINTO 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	102.9111	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	102.8599	'GEN635023 3-WALTER SCOTT UNIT 3'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	102.6926	'GEN344225 1-1CAL G1 25.000'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	102.6363	'GEN344225 1-1CAL G1 25.000'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	102.6208	'GEN506745 1-TENASKA GATEWAY STEAM 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	102.6033	'GEN509398 1-KNOXLEE #5'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	102.6014	'GEN509416 1-TURK GENERATION'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.0354	102.5992	'T141'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03091	102.575	'4PELCNRD 138.00 - JACINTO 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03326	102.5359	'NELSON - RICHARD 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	102.4529	'GEN509416 1-TURK GENERATION'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	102.3616	'GEN635024 4-WALTER SCOTT UNIT 4'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03099	102.0345	'RICHARD - WELLS 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03421	101.9329	'4PELCNRD 138.00 - JACINTO 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03334	101.9316	'RIVTRIN - STALEY 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	101.737	'GEN562658 1-G14_018 3 18.000'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	101.6755	'GEN509404 1-WELSH #1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	101.6742	'GEN509406 1-WELSH #3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	101.6433	'GEN344225 1-1CAL G1 25.000'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	101.5913	'GEN509416 1-TURK GENERATION'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03429	101.5821	'RICHARD - WELLS 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	101.52	'GEN562658 1-G14_018 3 18.000'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	101.5083	'GEN509404 1-WELSH #1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	101.5069	'GEN509406 1-WELSH #3'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	101.3693	'GEN501801 1-DOLET HILLS UNIT1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03294	101.3684	'WEBRE - WELLS 500KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	101.3671	'GEN501801 1-DOLET HILLS UNIT1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03362	100.9767	'RIVTRIN - STALEY 138KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	100.782	'GEN562658 1-G14_018 3 18.000'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	100.6785	'GEN509404 1-WELSH #1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	100.6771	'GEN509406 1-WELSH #3'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03353	100.6215	'NELSON - RICHARD 500KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03032	100.5718	'NELSON - RICHARD 500KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03515	100.4109	'GEN501801 1-DOLET HILLS UNIT1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03276	100.3842	'DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03035	100.3576	'RIVTRIN - STALEY 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03611	100	'DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'LONGMIRE - PANORAMA 138KV CKT 1'	206	206	0.06969	117.6038	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 20WP	G14_018	'FROM->TO'	'LONGMIRE - PANORAMA 138KV CKT 1'	206	206	0.06292	117.265	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'LONGMIRE - PANORAMA 138KV CKT 1'	206	206	0.06911	117.2126	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'	272	272	0.04802	114.8114	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'	272	272	0.05069	113.5815	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4 20SP	G14_018	'FROM->TO'	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'	272	272	0.05348	102.5629	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		4 25SP	G14_018	'FROM->TO'	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'	272	272	0.03393	100.1	'ARSENAL HILL - STALL GENERATION 138KV CKT 1'
FDNS	00NR		4 15SP	G14_018	'FROM->TO'	'SABINE MINING CO. T - SOUTHEAST MARSHALL 138KV CKT 1'	272	272	0.04318	100	'SPP-AEPW-05'
FDNS	00NR		4 15SP	G14_018	'TO->FROM'	'SCOTTSVILLE - SOUTHEAST MARSHALL 138KV CKT 1'	272	272	0.04802	100.0667	'DIANA - PIRKEY 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 15G	G14_065		Non-Converged Contingency	0	0	0.3606	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		0 15G	G14_065		Non-Converged Contingency	956	1052	0.20863	-	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 15G	G14_065		Non-Converged Contingency	1420	1775	0.19558	-	'POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 15G	G14_065		Non-Converged Contingency	956	994	0.1803	-	'OKLAUNION - TUCO INTERCHANGE 345KV CKT 1'
FDNSLock-Blown up	06NR		0 15G	G14_065		Non-Converged Contingency	956	1052	0.15877	-	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 15SP	G14_065		Non-Converged Contingency	0	0	0.37187	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		0 15SP	G14_065		Non-Converged Contingency	956	1052	0.21134	-	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 20SP	G14_065		Non-Converged Contingency	956	1052	0.18879	-	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNSLock-Blown up	06ALL		0 20WP	G14_065		Non-Converged Contingency	0	0	0.37104	-	'SPSCONT-01'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	06ALL		0 20WP	G14_065		Non-Converged Contingency	987	1083	0.18967	-	'CROSSROADS 345.00 - TOLK STATION 345KV CRT 1'
FDNSLock-Blown up	06ALL		0 20WP	G14_065		Non-Converged Contingency	1033	1071	0.18552	-	'OKLAUNION - TUCO INTERCHANGE 345KV CRT 1'
FDNSLock-Blown up	06ALL		0 25SP	G14_065		Non-Converged Contingency	956	1052	0.18931	-	'CROSSROADS 345.00 - TOLK STATION 345KV CRT 1'
FDNSLock-Blown up	06ALL		2 15G	G14_065		Non-Converged Contingency	0	0	0.35752	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		2 15G	G14_065		Non-Converged Contingency	1420	1775	0.20388	-	'POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CRT 1'
FDNSLock-Blown up	06ALL		2 15G	G14_065		Non-Converged Contingency	956	994	0.17876	-	'OKLAUNION - TUCO INTERCHANGE 345KV CRT 1'
FDNSLock-Blown up	06ALL		2 15SP	G14_065		Non-Converged Contingency	0	0	0.36871	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		2 20WP	G14_065		Non-Converged Contingency	0	0	0.36664	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		2 20WP	G14_065		Non-Converged Contingency	1033	1071	0.1832	-	'OKLAUNION - TUCO INTERCHANGE 345KV CRT 1'
FDNSLock-Blown up	06ALL		3 15G	G14_065		Non-Converged Contingency	0	0	0.33107	-	'SPSCONT-01'
FDNSLock-Blown up	06ALL		3 15G	G14_065		Non-Converged Contingency	956	994	0.16553	-	'OKLAUNION - TUCO INTERCHANGE 345KV CRT 1'
FDNS	06ALL		0 15G	G14_065	'TO->FROM'	'AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CRT 1'	319	351	0.22962	106.1941	'TUCO INTERCHANGE - YOAKUM 345 345.00 345KV CRT 1'
FDNS	06ALL		0 15G	G14_065	'FROM->TO'	'CROSSROADS 345.00 - TOLK STATION 345KV CRT 1'	717	926	0.20863	109.1413	'BASE CASE'
FDNS	10ALL		0 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.34157	132.8138	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	00NR		0 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.33801	125.3102	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.3416	124.6233	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.30212	117.3795	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.30212	117.0627	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	00NR		0 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.29893	115.9077	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	00NR		0 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.29893	115.5814	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	10ALL		0 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.30209	114.13	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	10ALL		0 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.30209	113.7271	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	00NR		0 20SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.33797	109.546	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	06ALL		0 20SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.34156	109.3782	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	06ALL		0 20SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.30208	107.8227	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	10ALL		0 20SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.34156	107.589	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	06ALL		0 20SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.30208	107.4432	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	00NR		0 20SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.29891	105.5414	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	00NR		0 20SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.29891	105.1579	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	10ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.34157	153.14	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.33801	146.6487	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.3416	146.0865	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.30212	138.9287	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.30212	138.6181	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	00NR		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.29893	137.3169	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	00NR		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.29893	136.9979	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	10ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.30209	134.736	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	10ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.30209	134.3392	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	00NR		0 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.33797	125.7365	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	06ALL		0 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.34156	125.5854	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	06ALL		0 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.30208	124.0636	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	06ALL		0 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.30208	123.6861	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	10ALL		0 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.34156	123.1646	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	00NR		0 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.29891	121.765	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	00NR		0 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.29891	121.3834	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	10ALL		0 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.30209	113.6356	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	10ALL		0 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.30209	113.3466	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.3895	113.142	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CRT 1'
FDNS	06ALL		0 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.38942	110.7171	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.39503	109.2444	'LAGARTO 3115.00 - National Enrichment Plant Tap 115KV CRT 1'
FDNS	00NR		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.38165	106.0899	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CRT 1'
FDNS	00NR		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.39012	105.1779	'LAGARTO 3115.00 - National Enrichment Plant Tap 115KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.37042	103.8827	'LIVSTNRIDGE3115.00 - WIPP SUB 115KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.37042	102.6122	'SAND DUNES SUB - WIPP SUB 115KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.39503	102.1653	'LAGARTO 3115.00 - SAGE BRUSH 3115.00 115KV CRT 1'
FDNS	00NR		0 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.38163	101.548	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CRT 1'
FDNS	06ALL		0 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.39498	101.0163	'LAGARTO 3115.00 - National Enrichment Plant Tap 115KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.56533	100.9107	'SPP-SWPS-T85'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.37639	100.8028	'G14-069T 115.00 - IMC #1_TP 3115.00 115KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.38206	100.6857	'DOLLARHIDE SUB - TOBOSOFLATS3115.00 115KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.38126	100.0942	'KIOWA 7345.00 - NLOV PIT 7345.00 345KV CRT 1'
FDNS	06ALL		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.37639	99.8	'IMC #1_TP 3115.00 - LIVSTNRIDGE3115.00 115KV CRT 1'
FDNS	00NR		0 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CRT 1'	141	141	0.3661	99.8	'LIVSTNRIDGE3115.00 - WIPP SUB 115KV CRT 1'
FDNS	10ALL		2 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.34157	132.8148	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	06ALL		2 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.33889	127.1065	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	00NR		2 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.33801	125.3114	'HOBBS - KIOWA 7345.00 345KV CRT 1'
FDNS	06ALL		2 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.30281	116.5564	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	06ALL		2 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.30281	116.2687	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	00NR		2 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.29893	115.9079	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	00NR		2 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.29893	115.5815	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	10ALL		2 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.30209	114.1299	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CRT 1'
FDNS	10ALL		2 25SP	G14_065	'TO->FROM'	'OCHOA SUB - PNDEROSATP 3115.00 115KV CRT 1'	141	141	0.30209	113.7274	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CRT 1'
FDNS	06ALL		2 20SP	G14							

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATE (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	10ALL		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.34157	153.141	'HOBBS - KIOWA 7345.00 345KV CKT 1'
FDNS	06ALL		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.33889	148.5795	'HOBBS - KIOWA 7345.00 345KV CKT 1'
FDNS	00NR		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.33801	146.6499	'HOBBS - KIOWA 7345.00 345KV CKT 1'
FDNS	06ALL		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.30281	138.1119	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CKT 1'
FDNS	06ALL		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.30281	137.8299	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CKT 1'
FDNS	00NR		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.29893	137.317	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CKT 1'
FDNS	00NR		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.29893	136.998	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CKT 1'
FDNS	10ALL		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.30209	134.7358	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CKT 1'
FDNS	10ALL		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.30209	134.3395	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL		2 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.33886	127.477	'HOBBS - KIOWA 7345.00 345KV CKT 1'
FDNS	00NR		2 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.33797	125.7379	'HOBBS - KIOWA 7345.00 345KV CKT 1'
FDNS	06ALL		2 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.30277	123.4817	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CKT 1'
FDNS	10ALL		2 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.34156	123.1658	'HOBBS - KIOWA 7345.00 345KV CKT 1'
FDNS	06ALL		2 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.30277	123.098	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CKT 1'
FDNS	00NR		2 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.29891	121.765	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CKT 1'
FDNS	00NR		2 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.29891	121.3834	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CKT 1'
FDNS	10ALL		2 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.30209	113.6358	'KIOWA 7345.00 - RDRUNNER 7345.00 345KV CKT 1'
FDNS	10ALL		2 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.30209	113.3468	'RDRUNNER 7345.00 (UPDATE LATER) 345/115/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.39698	107.1695	'LAGARTO 3115.00 - National Enrichment Plant Tap 115KV CKT 1'
FDNS	00NR		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.38165	106.0888	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	00NR		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.39012	105.1778	'LAGARTO 3115.00 - National Enrichment Plant Tap 115KV CKT 1'
FDNS	06ALL		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.39513	103.4719	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL		2 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.39504	102.5347	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	00NR		2 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.38163	101.5468	'HOBBS (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06ALL		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.37277	101.5137	'LIVSTNRIDGE3115.00 - WIPP SUB 115KV CKT 1'
FDNS	06ALL		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.37277	100.2555	'SAND DUNES SUB - WIPP SUB 115KV CKT 1'
FDNS	06ALL		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.39698	100.1686	'LAGARTO 3115.00 - SAGE BRUSH 3115.00 115KV CKT 1'
FDNS	00NR		2 25SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.3661	99.8	'LIVSTNRIDGE3115.00 - WIPP SUB 115KV CKT 1'
FDNS	06ALL		2 20SP	G14_065	'TO->FROM'	'PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.39693	99.5	'LAGARTO 3115.00 - National Enrichment Plant Tap 115KV CKT 1'

H: Power Flow Analysis (Other Constraints Not Requiring Mitigation)

See next page.

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	06ALL		0 15G	G14_008		Non-Converged Contingency	0	0	0.25766	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		0 15G	G14_008		Non-Converged Contingency	0	0	0.25766	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		0 15G	G14_008		Non-Converged Contingency	0	0	0.25766	-	'DBL-G1407-TU'
FDNSLock-Blown up	06ALL		0 15G	G14_008		Non-Converged Contingency	0	0	0.20409	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		0 15G	G14_008		Non-Converged Contingency	0	0	0.18768	-	'DBL-BVR-G111'
FDNSLock-Blown up	06ALL		0 15G	G14_008		Non-Converged Contingency	0	0	0.18768	-	'DBL-G1114-WW'
FDNSLock-Blown up	06ALL		0 15SP	G14_008		Non-Converged Contingency	0	0	0.26582	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		0 15SP	G14_008		Non-Converged Contingency	0	0	0.26582	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		0 20WP	G14_008		Non-Converged Contingency	0	0	0.26336	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		0 20WP	G14_008		Non-Converged Contingency	0	0	0.26336	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		0 20WP	G14_008		Non-Converged Contingency	0	0	0.2108	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		2 15G	G14_008		Non-Converged Contingency	0	0	0.26898	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		2 15G	G14_008		Non-Converged Contingency	0	0	0.26898	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		2 15G	G14_008		Non-Converged Contingency	0	0	0.26898	-	'DBL-G1407-TU'
FDNSLock-Blown up	06ALL		2 15G	G14_008		Non-Converged Contingency	0	0	0.2089	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		2 15G	G14_008		Non-Converged Contingency	0	0	0.18221	-	'DBL-BVR-G111'
FDNSLock-Blown up	06ALL		2 15G	G14_008		Non-Converged Contingency	0	0	0.18221	-	'DBL-G1114-WW'
FDNSLock-Blown up	06ALL		2 15SP	G14_008		Non-Converged Contingency	0	0	0.27709	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		2 15SP	G14_008		Non-Converged Contingency	0	0	0.27709	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		2 15SP	G14_008		Non-Converged Contingency	0	0	0.2188	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		2 20WP	G14_008		Non-Converged Contingency	0	0	0.27378	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		2 20WP	G14_008		Non-Converged Contingency	0	0	0.27378	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		2 20WP	G14_008		Non-Converged Contingency	0	0	0.21728	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		3 15G	G14_008		Non-Converged Contingency	0	0	0.33195	-	'DBL-G1407-TU'
FDNSLock-Blown up	06ALL		3 15G	G14_008		Non-Converged Contingency	0	0	0.21848	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		3 15G	G14_008		Non-Converged Contingency	0	0	0.21848	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		3 15G	G14_008		Non-Converged Contingency	0	0	0.20872	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		3 15G	G14_008		Non-Converged Contingency	0	0	0.19826	-	'DBL-G1114-WW'
FDNSLock-Blown up	06ALL		4 15G	G14_008		Non-Converged Contingency	0	0	0.33204	-	'DBL-G1407-TU'
FDNSLock-Blown up	06ALL		4 15G	G14_008		Non-Converged Contingency	0	0	0.21853	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		4 15G	G14_008		Non-Converged Contingency	0	0	0.20879	-	'SPP-SWPS-01'
FDNS	06ALL		0 15G	G14_008	'TO->FROM'	'AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.07917	106.1941	'TUCO INTERCHANGE - YOAKUM 345 345.00 345KV CKT 1'
FDNS	06NR		0 15G	G14_008	'FROM->TO'	'TOLK STATION EAST 230/24.0KV TRANSFORMER CKT 1'	728	728	0.15708	99	'G12-020 230.00 230/34.5KV TRANSFORMER CKT 2'
FDNS	06ALL		2 15G	G14_008	'TO->FROM'	'AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.16201	109.9244	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL		2 15SP	G14_008	'TO->FROM'	'AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.16439	103.985	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL		2 15G	G14_008	'TO->FROM'	'AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.13647	103.1541	'TUCO INTERCHANGE - YOAKUM 345 345.00 345KV CKT 1'
FDNS	06ALL		3 15G	G14_008	'TO->FROM'	'AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.16053	107.1495	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL		3 15G	G14_008	'TO->FROM'	'AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.13718	103.2087	'TUCO INTERCHANGE - YOAKUM 345 345.00 345KV CKT 1'
FDNS	06ALL		3 15SP	G14_008	'TO->FROM'	'AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.16289	102.6013	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL		4 15G	G14_008	'TO->FROM'	'AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.16052	106.5658	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL		4 15G	G14_008	'TO->FROM'	'AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.13718	102.9933	'TUCO INTERCHANGE - YOAKUM 345 345.00 345KV CKT 1'
FDNS	06ALL		4 15SP	G14_008	'TO->FROM'	'AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.16288	102.3552	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03392	99.3	'COLFAX - RODEMACHER 230KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03392	99.3	'GEN506754 1-LEBROCK STEAM 1'
FDNS	00NR		0 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03392	99.3	'GEN509398 1-KNOXLEE #5'
FDNS	00NR		0 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03392	99	'GEN509404 1-WELSH #1'
FDNS	00NR		0 15SP	G14_018	'TO->FROM'	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'	112	112	0.03392	99	'GEN509406 1-WELSH #3'
FDNS	00NR		0 25SP	G14_018	'FROM->TO'	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'	382	382	0.10357	99.2	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		0 25SP	G14_018	'FROM->TO'	'4PONDEROSA% 138.00 - CONROE BULK 138KV CKT 1'	382	382	0.07777	99	'4CANEYCREEK 138.00 - LEWIS CREEK SWITCHYARD 138KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'TO->FROM'	'4SPRINGBRNCH138.00 - DOBBIN 138KV CKT 1'	112	112	0.03392	99	'GEN509403 1-PIRKEY GENERATION'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.05288	99.4	'DOLET HILLS 345/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		0 20WP	G14_018	'TO->FROM'	'APRIL - WALDEN 138KV CKT 1'	206	206	0.047	99.4	'GRIMES 345/230KV TRANSFORMER CKT 1'
FDNS	00NR		0 15SP	G14_018	'TO->FROM'	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'	206	206	0.03248	99.1	'CONROE BULK - WOODHAVEN 138KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08438	99.4	'GEN520947 1-HUGO1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08437	99.4	'RICH-POCO'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08437	99.4	'T170'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08409	99.4	'8CAJUN2 - FANCY POINT 500KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.0826	99.4	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08204	99.4	'GEORGIA - HUNTSVILLE 138KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08204	99.4	'GEORGIA - TEMCO 138KV CKT 1'
FDNS	10ALL		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.10729	99.3	'BASE CASE'
FDNS	10ALL		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.10729	99.3	'BASE CASE'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08438	99.3	'GEN635212 2-NEAL UNIT 2'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08438	99.3	'SPSCONT-01'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08411	99.3	'8BYLBUT - WEBRE 500KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08396	99.3	'EEK-SECURITY'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08288	99.3	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08279	99.3	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.0826	99.3	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.0826	99.3	'HUNTSVILLE - LINE 558/91 TAP 138KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.0826	99.3	'HUNTSVILLE-R'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.0826	99.3	'LINE 558/91 TAP - RIVTRIN 138KV CKT 1'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08191	99.2	'HUNTSVILLE-L'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08437	99.1	'SPP-AEPW-40'
FDNS	00NR		0 15SP	G14_018	'FROM->TO'	'GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08435	99	'SPP-AEPW-35'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	T%LOADING (% MVA)	CONTINGENCY	
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08254	99	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08254	99	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 1'	525	525	0.08254	99	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08438	99.4	'GEN520947 1-HUGO1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08437	99.4	'RICH-POCO'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08437	99.4	'T170'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08409	99.4	'8CAJUN2 - FANCY POINT 500KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.0826	99.4	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08204	99.4	'GEORGIA - HUNTSVILLE 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08204	99.4	'GEORGIA - TEMCO 138KV CKT 1'
FDNS	10ALL		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.10729	99.3	'BASE CASE'
FDNS	10ALL		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.10729	99.3	'BASE CASE'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08438	99.3	'GEN635212 2-NEAL UNIT 2'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08438	99.3	'SPSCONT-01'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08411	99.3	'8BYLBUT - WEBRE 500KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08396	99.3	'EEK-SECURITY'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08288	99.3	'BRYAN - COLLEGE STATION TAP 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08279	99.3	'COLLEGE STATION TAP - GRIMES 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.0826	99.3	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.0826	99.3	'HUNTSVILLE - LINE 558/91 TAP 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.0826	99.3	'HUNTSVILLE-R'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.0826	99.3	'LINE 558/91 TAP - RIVTRIN 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08191	99.2	'HUNTSVILLE-L'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08437	99.1	'SPP-AEPW-40'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08435	99	'SPP-AEPW-35'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08254	99	'GRIMES - MAGNOLIA ANDERSON 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08254	99	'MAGNOLIA ANDERSON - SOTA 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	GRIMES 345/138KV TRANSFORMER CKT 2'	525	525	0.08254	99	'NAVSOTA - SOTA 138KV CKT 1'
FDNS	00NR		0	20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04785	99.2	'GRIMES 345/138KV TRANSFORMER CKT 1'
FDNS	00NR		0	20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04728	99.2	'GEN334030 1-FRONTIER UNIT 1'
FDNS	00NR		0	20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04728	99.2	'GEN334031 1-FRONTIER UNIT 2'
FDNS	00NR		0	20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04728	99.2	'GEN334032 1-FRONTIER UNIT 3'
FDNS	00NR		0	20SP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.05155	99	'GEN509403 1-PIRKEY GENERATION'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	'HUNTSVILLE - LINE 558/91 TAP 138KV CKT 1'	206	206	0.05126	99.4	'T136'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	'HUNTSVILLE - LINE 558/91 TAP 138KV CKT 1'	206	206	0.05106	99.4	'GEORGIA - TEMCO 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.05288	99.4	'PIRKEY 138/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.05067	99.2	'WEBRE - WELLS 500KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.05288	99	'GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	'LINE 558/91 TAP - RIVTRIN 138KV CKT 1'	206	206	0.05126	99.4	'T136'
FDNS	00NR		0	15SP	G14_018	'FROM->TO'	'LINE 558/91 TAP - RIVTRIN 138KV CKT 1'	206	206	0.05106	99.3	'GEORGIA - TEMCO 138KV CKT 1'
FDNS	00NR		0	15SP	G14_018	'TO->FROM'	'NAVSOTA - SOTA 138KV CKT 1'	206	206	0.03147	99.3	'COLLEGE STATION TAP - SPEEDWAY 138KV CKT 1'
FDNS	00NR		0	20WP	G14_018	'FROM->TO'	'PIRKEY - SABINE MINING CO. T 138KV CKT 1'	345	383	0.10023	99	'DIANA - PIRKEY 345KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'4BENTWATERI 138.00 - WALDEN 138KV CKT 1'	206	206	0.03591	99	'GEN334033 1-FRONTIER UNIT 4'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03736	99.4	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03735	99.4	'LNG - TEMCO 138KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03577	99.4	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03577	99.4	'8DANIEL8 500.00/500/230KV TRANSFORMER CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03346	99.4	'HARTBURG - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03736	99.2	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03631	99.2	'4GOSLIN1 138.00 - GOSLIN 138KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03591	99.2	'8CAJUN2 500/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03591	99.2	'EXXON MOBIL IPP 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03591	99.2	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03591	99.2	'GRAND GULF 500/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.04167	99.1	'EGYPT - PANORAMA 138KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03767	99.1	'BISHOP - CEDAR 138KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03767	99.1	'PEE DEE-RIVT'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03767	99.1	'T167'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03631	99.1	'4GOSLIN1 138.00 - ALDEN 138KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03735	99	'LACON - LNG 138KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03598	99	'LONGWOOD - WILKES 345KV CKT 1'
FDNS	00NR		2	15SP	G14_018	'TO->FROM'	'CONROE BULK - WOODHAVEN 138KV CKT 1'	206	206	0.04167	99.3	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		2	25SP	G14_018	'TO->FROM'	'DARDANELLE - RUSSELLVILLE SOUTH 161KV CKT 1'	396	396	0.04058	99.1	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		2	20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03524	99.1	'GEN334030 1-FRONTIER UNIT 1'
FDNS	00NR		2	20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03524	99.1	'GEN334031 1-FRONTIER UNIT 2'
FDNS	00NR		2	20SP	G14_018	'FROM->TO'	'GRIMES - MT. ZION 138KV CKT 1'	206	206	0.03524	99.1	'GEN334032 1-FRONTIER UNIT 3'
FDNS	10ALL		2	20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04612	99	'BASE CASE'
FDNS	10ALL		2	20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.04612	99	'BASE CASE'
FDNS	00NR		2	20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03182	99	'RIVTRIN 138KV SWITCHED SHUNT'
FDNSLock	00NR		2	20WP	G14_018	'TO->FROM'	'HUNTSVILLE - LINE 558 TAP 138KV CKT 1'	206	206	0.03182	99	'RIVTRIN 138KV SWITCHED SHUNT'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03591	99.4	'SABINE 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		2	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03395	99.1	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	10ALL		2	25SP	G14_018	'FROM->TO'	'LEBROCK - PIRKEY 345KV CKT 1'	896	986	0.36225	99.4	'LEBROCK - PIRKEY 345KV CKT 2'
FDNS	00NR		2	20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03182	99.2	'GEN506748 1-TENASKA GATEWAY GAS 3'
FDNS	00NR		2	20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03329	99	'WEBRE - WELLS 500KV CKT 1'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	T%LOADING (% MVA)	CONTINGENCY	
FDNS	00NR		2	25SP	G14_018	'FROM->TO'	'RUSSELLVILLE EAST - RUSSELLVILLE SOUTH 161KV CKT 1'	446	446	0.04058	99	'ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03585	99.4	'4CONROE2 138.00 - LINE 523 TAP 138KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	99.4	'8COTNWD2 500.00 - HARTBURG 500KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03757	99.3	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03727	99.3	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03567	99.3	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03567	99.3	'8DANIEL8 500.00 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03725	99.2	'LNG - TEMCO 138KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03337	99.2	'HARTBURG - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03621	99.1	'4GOSLUN1 138.00 - GOSLUN 138KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	99.1	'8CAJUN2 500/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	99.1	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	99.1	'GRAND GULF 500/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03757	99.1	'PEE DEE-RIVT'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03757	99	'T167'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03727	99	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	99	'EXXON MOBIL IPP 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		3	15SP	G14_018	'TO->FROM'	'CONROE BULK - WOODHAVEN 138KV CKT 1'	206	206	0.05281	99.3	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'TO->FROM'	'CONROE BULK - WOODHAVEN 138KV CKT 1'	206	206	0.04155	99.1	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03585	99.3	'4CANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03581	99.3	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03581	99.2	'SABINE 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		3	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03386	99	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		3	20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03647	99.4	'DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		3	20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03005	99.4	'WEBRE - WELLS 500KV CKT 1'
FDNS	00NR		3	25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	99.3	'GEN506748 1-TENASKA GATEWAY GAS 3'
FDNS	00NR		3	20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	99.1	'GEN506748 1-TENASKA GATEWAY GAS 3'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03585	99.4	'4CONROE2 138.00 - LINE 523 TAP 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	99.4	'8COTNWD2 500.00 - HARTBURG 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03757	99.3	'BISHOP - PEE DEE 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03727	99.3	'GRAPELAND (ETEC) - LATEXO (ETEC) 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03567	99.3	'8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03567	99.3	'8DANIEL8 500.00 500/230KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03725	99.2	'LNG - TEMCO 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03337	99.2	'HARTBURG - MOUNT OLIVE 500KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03621	99.1	'4GOSLUN1 138.00 - GOSLUN 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	99.1	'8CAJUN2 500/24.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	99.1	'GEN334392 1-EXXON MOBIL IPP 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	99.1	'GRAND GULF 500/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03757	99	'PEE DEE-RIVT'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03757	99	'T167'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03727	99	'GRAPELAND (ETEC) - SLOCUM 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'APRIL - LAKE FOREST 138KV CKT 1'	206	206	0.03581	99	'EXXON MOBIL IPP 138/18.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'CONROE BULK - WOODHAVEN 138KV CKT 1'	206	206	0.05281	99.3	'DIANA - G14-018T 345.00 345KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'TO->FROM'	'CONROE BULK - WOODHAVEN 138KV CKT 1'	206	206	0.04155	99.1	'4FISHCRK - 4SPRINGBRNCH138.00 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03585	99.3	'4CANEYCREEK 138.00 - CONAIR 138KV CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03581	99.3	'GEN334433 1-SABINE UNIT 3'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03581	99.2	'SABINE 138/22.0KV TRANSFORMER CKT 1'
FDNS	00NR		4	15SP	G14_018	'FROM->TO'	'LAKE FOREST - WOODHAVEN 138KV CKT 1'	206	206	0.03386	99	'CYPRESS - HARTBURG 500KV CKT 1'
FDNS	00NR		4	20SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03647	99.4	'DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03005	99.4	'WEBRE - WELLS 500KV CKT 1'
FDNS	00NR		4	25SP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03486	99.3	'GEN506748 1-TENASKA GATEWAY GAS 3'
FDNS	00NR		4	20WP	G14_018	'TO->FROM'	'LINE 558 TAP - MT. ZION 138KV CKT 1'	206	206	0.03175	99.1	'GEN506748 1-TENASKA GATEWAY GAS 3'
FDNSLock-Blown up	06ALL		0	15G	G14_065		Non-Converged Contingency	0	0	0.27958	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		0	15G	G14_065		Non-Converged Contingency	0	0	0.27958	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		0	15G	G14_065		Non-Converged Contingency	0	0	0.27958	-	'DBL-G1407-TU'
FDNSLock-Blown up	06ALL		0	15G	G14_065		Non-Converged Contingency	0	0	0.23	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		0	15G	G14_065		Non-Converged Contingency	0	0	0.17697	-	'DBL-BVR-G111'
FDNSLock-Blown up	06ALL		0	15G	G14_065		Non-Converged Contingency	0	0	0.17697	-	'DBL-G1114-WW'
FDNSLock-Blown up	06ALL		0	15SP	G14_065		Non-Converged Contingency	0	0	0.28778	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		0	15SP	G14_065		Non-Converged Contingency	0	0	0.28778	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		0	20WP	G14_065		Non-Converged Contingency	0	0	0.28762	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		0	20WP	G14_065		Non-Converged Contingency	0	0	0.28762	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		0	20WP	G14_065		Non-Converged Contingency	0	0	0.23519	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		2	15G	G14_065		Non-Converged Contingency	0	0	0.27607	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		2	15G	G14_065		Non-Converged Contingency	0	0	0.27607	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		2	15G	G14_065		Non-Converged Contingency	0	0	0.27607	-	'DBL-G1407-TU'
FDNSLock-Blown up	06ALL		2	15G	G14_065		Non-Converged Contingency	0	0	0.22851	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		2	15G	G14_065		Non-Converged Contingency	0	0	0.17867	-	'DBL-BVR-G111'
FDNSLock-Blown up	06ALL		2	15G	G14_065		Non-Converged Contingency	0	0	0.17867	-	'DBL-G1114-WW'
FDNSLock-Blown up	06ALL		2	15SP	G14_065		Non-Converged Contingency	0	0	0.28419	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		2	15SP	G14_065		Non-Converged Contingency	0	0	0.28419	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		2	15SP	G14_065		Non-Converged Contingency	0	0	0.23841	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		2	20WP	G14_065		Non-Converged Contingency	0	0	0.28228	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		2	20WP	G14_065		Non-Converged Contingency	0	0	0.28228	-	'DBL-G1407-BD'

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	06ALL		2	20WP	G14_065	Non-Converged Contingency	0	0	0.23195	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		3	15G	G14_065	Non-Converged Contingency	0	0	0.34211	-	'DBL-G1407-TU'
FDNSLock-Blown up	06ALL		3	15G	G14_065	Non-Converged Contingency	0	0	0.22829	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		3	15G	G14_065	Non-Converged Contingency	0	0	0.22305	-	'DBL-BDR-CSM'
FDNSLock-Blown up	06ALL		3	15G	G14_065	Non-Converged Contingency	0	0	0.22305	-	'DBL-G1407-BD'
FDNSLock-Blown up	06ALL		3	15G	G14_065	Non-Converged Contingency	0	0	0.19549	-	'DBL-G1114-WW'
FDNSLock-Blown up	06ALL		4	15G	G14_065	Non-Converged Contingency	0	0	0.34219	-	'DBL-G1407-TU'
FDNSLock-Blown up	06ALL		4	15G	G14_065	Non-Converged Contingency	0	0	0.22836	-	'SPP-SWPS-01'
FDNSLock-Blown up	06ALL		4	15G	G14_065	Non-Converged Contingency	0	0	0.22311	-	'DBL-BDR-CSM'
FDNS	06ALL		0	25SP	G14_065	'TO->FROM' PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.38041	99.1	'CHINA_DRAW 7345.00 - NLOV_PLT 7345.00 345KV CKT 1'
FDNS	06ALL		0	25SP	G14_065	'TO->FROM' PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.37547	99.1	'CHINA_DRAW 3115.00 - WOOD_DRAW 3115.00 115KV CKT 1'
FDNS	06NR		0	15G	G14_065	'FROM->TO' TOLK STATION EAST 230/24.0KV TRANSFORMER CKT 1'	728	728	0.15708	99	'G12-020 230.00 230/34.5KV TRANSFORMER CKT 2'
FDNS	06ALL		2	15G	G14_065	'TO->FROM' AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.1701	109.9244	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL		2	15SP	G14_065	'TO->FROM' AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.17249	103.985	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL		2	15G	G14_065	'TO->FROM' AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.19144	103.1541	'TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1'
FDNS	06ALL		2	25SP	G14_065	'TO->FROM' PNDEROSATP 3115.00 - WHITTEN SUB 115KV CKT 1'	141	141	0.56694	99.4	'SPP-SWPS-T85'
FDNS	06ALL		3	15G	G14_065	'TO->FROM' AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.16861	107.1495	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL		3	15G	G14_065	'TO->FROM' AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.19214	103.2087	'TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1'
FDNS	06ALL		3	15SP	G14_065	'TO->FROM' AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.17098	102.6013	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL		4	15G	G14_065	'TO->FROM' AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.16861	106.5658	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'
FDNS	06ALL		4	15G	G14_065	'TO->FROM' AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.19214	102.9933	'TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1'
FDNS	06ALL		4	15SP	G14_065	'TO->FROM' AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1'	319	351	0.17098	102.3552	'CROSSROADS 345.00 - TOLK STATION 345KV CKT 1'

I: Power Flow Analysis (Constraints from Multi-Contingencies)

To be performed; results will be available upon request. Contact SPP Generator Interconnection Studies for details.

J: Group 6 Dynamic Stability Analysis Report

See report on next page.



Group 6 Stability Impact Study

PISIS-2014-002

February 2015
Generator Interconnection



Executive Summary

PISIS-2014-002 Interconnection Customers have requested a Preliminary Interconnection System Impact Study detailing the impacts of interconnecting the generation projects shown below.

- GEN-2014-008 – 300.0 MW wind farm generation facility using one hundred twenty (120) G.E. 2.5MW WTG generators interconnecting to the Southwestern Public Service (SPS) transmission system at a new switching station on Tolk – Eddy County 345kV transmission line.
- GEN-2014-065 – 99.0 MW solar farm using 110 SMA Sunny central 900CP-US Inverters interconnecting to the Southwestern Public Service (SPS) transmission system at Whitten 115kV.

A stability cluster impact analysis was performed for the generation projects from the PISIS-2014-002 Group 6 study. The analysis was performed on three (3) seasonal models including 2015 summer peak (15SP), the 2015 winter peak (15WP), and the 2025 summer peak (25SP) cases. These cases are modified versions of the 2014 model series of Model Development Working Group (MDWG) dynamic study models. A total of eighty-seven (87) contingencies were evaluated for the three (3) seasonal cases.

The stability analysis has determine with all BASE Case network upgrades and previously assigned network upgrades, the Group 6 projects were found to have voltage violations and instability for multiple contingencies listed below .

- FLT_57_CROSSROADS_TOLK7_345kV_3PH (15SP, 15WP, 25SP)
- FLT_70_TOLK7_POTTER7_345kV_3PH (15SP, 15WP)
- FLT_71_TUCOINT7_OKU7_345kV_3PH (15SP, 15WP)
- FLT_73_G14007TAP_TUCO2_345kV_3PH (15SP, 15WP)

In order to mitigate voltage violations and system instability during contingency the following upgrades were needed:

- Disable relay (SLNOS1) for TUCO – Oklaunion 345kV circuit¹
- Build approximately fifty-eight (58) miles of 345kV from GEN-2014-008 Tap – Hobbs Interchange 345kV
- Build approximately one hundred – ten (110) miles of 345kV from GEN-2014-007 Tap – Grapevine 345kV² with approximately two hundred (200) Mvars of switchable capacitor bank(s) at Grapevine.

¹ Out-of-step relays will be further evaluated during the Interconnection Facilities Study

² GEN-2014-007 Tap is a proposed switching station located approximately forty (40) miles from TUCO Interchange on the TUCO Interchange – Border 345kV transmission line. Grapevine is a proposed switching station located in Gray County, Texas. Grapevine 345kV switching station along with Potter – Grapevine – Chisholm 345kV circuit #1 was assigned to DISIS-2014-002 Group 6.

[DISIS-2014-002 study posting link: http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2014_Generation_Studies/DISIS-2014-002_FINAL.pdf](http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2014_Generation_Studies/DISIS-2014-002_FINAL.pdf)

After implementing the network upgrades mentioned above in upgrade simulation scenarios, all generators in the monitored areas remained stable and within the pre-contingency, voltage recovery, and post fault voltage recovery criterion of 0.7pu to 1.2pu for the entire modeled disturbances.

GEN-2014-065 was modeled using the SMASC dynamic dyr model instead of the customer provided SMAUPS dynamic model. It was discovered by SPP Generation Interconnection Staff that the two SMA dynamic models have parameter commonalities that the Clod4 compiler cannot handle properly. Since various higher queued solar projects in the SPP GI queue already use the SMASC dynamic model, GEN-2014-065 SMAUPS dynamic model was converted to a corresponding SMASC dynamic model. If GEN-2014-065 proceeds to the Definitive Interconnection System Impact Study (DISIS) with the SMAUPS dynamic model, GEN-2014-065 will need to work with the vendor to resolve this dynamic model issue.

In addition to the cluster impact stability analysis, power factor analysis for each generation project was performed on the current study upgrade 2015 summer peak, the 2015 winter peak, and the 2025 summer peak cases. Short Circuit analysis was conducted using the current study upgrade 2025 summer peak case.

A reduced generation analysis was conducted for wind farms to determine reactor inductive amounts to compensate the capacitive effects on the transmission system during low or reduced wind conditions cause by the interconnecting project's generator lead transmission line and collector systems.

Nothing in this study should be construed as a guarantee of delivery or transmission service. If the customer wishes to sell power from the facility, a separate request for transmission service must be requested on Southwest Power Pool's OASIS by the Customer.

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1. Introduction

PISIS-2014-002 Interconnection Customers have requested a Preliminary Interconnection System Impact Study detailing the impacts of interconnecting the generation projects shown **Table 1-1** below.

Table 1-1: Group 6 Interconnection Requests

Request	Capacity (MW)	Generator Model	Point of Interconnection
GEN-2014-008	300.0	GE 2.5MW WTG	Tap Tolk - Eddy County 345kV (560008)
GEN-2014-065	99.0	SC 900CP-US 0.9MVA inverter	Whitten 115kV (528540)

The previously queued generation projects in the Group 6 area are listed in **Table 1-2** below.

Table 1-2: Group 6 Prior Queued Interconnection Requests

Request	Capacity (MW)	Generator Model	Point of Interconnection
GEN-2001-033	180.0	Mitsubishi 1000	San Juan Mesa 230kV (524885)
GEN-2001-036	80.0	Mitsubishi 1000	Norton 115kV (524502)
GEN-2006-018	170.0	GENSAL	TUCO 230kV (525830)
GEN-2006-026	502.0	GENROU (527901, 527902, 527903)	Hobbs 115kV(527891) Hobbs 230kV (527894)
GEN-2008-022	300.0	GE 2.5MW	Tap on Eddy County – Tolk 345kV line (G08-022-POI, 560007)
GEN-2010-006	180.0 Summer 205.0 Winter	GENROU	Jones_bus2 230kV(526337)
ASGI-2010-010	42.0	GENSAL	Lovington 115kV (528334)
ASGI-2010-020	30.0	Nordex 2.5MW	Tap LE-Tatum to LE-Crsroads 69kV (AS10-020-POI, 560360)
ASGI-2010-021	15.0	Mitsubishi MPS-1000A 1.0MW	Tap LE-Saundrtp to LE-Anderson 69kV (ASGI-021-POI, 560364)
GEN-2010-046	56.0	GENSAL	TUCO 230kV (525830)
ASGI-2011-001	27.3	Suzlon 2.1MW	Lovington 115kV (528334)
ASGI-2011-003	10.0	Sany 2.0MW	Hendricks 69kV (525943)
ASGI-2011-004	19.8	Sany 1.8MW	Crosby 69kV (525915)
GEN-2011-025	80.0	GE 1.6MW	Tap on Floyd County - Crosby County 115kV line (G11-025-POI, 562004)
GEN-2011-045	180.0 Summer 205.0 Winter	GENROU	Jones_bus2 230kV (526337)
GEN-2011-046	23.0 Summer 27.0 Winter	GENROU	Quay County 115kV (524472)
GEN-2011-048	165.0 Summer 175.0 Winter	GENROU	Mustang 230kV (527151)
GEN-2012-001	61.2	CCWE 3.6MW (WT4)	Tap Grassland to Borden 230kV (526679)
ASGI-2012-002	18.0	Vestas 1.65MW V82	Clovis 115kV (524808)
GEN-2012-009	15.0 MW increase (Pgen=165.0 MW)	GENROU	Mustang 230kV (527151)
GEN-2012-010	15.0 MW increase (Pgen=165.0 MW)	GENROU	Mustang 230kV (527151)
GEN-2012-020	478.0	GE 1.68MW	TUCO 230kV (525830)
GEN-2012-034	7.0 MW increase (Pgen=172.0 MW)	GENROU	Mustang 230kV (527151)
GEN-2012-035	7.0 MW increase (Pgen=172.0 MW)	GENROU	Mustang 230kV (527151)
GEN-2012-036	7.0 MW increase 172.0 Summer 185.0 Winter	GENROU	Mustang 230kV (527151)
GEN-2012-037	196.0 Summer 203.0 Winter	GENROU	TUCO 345kV (525832)
ASGI-2012-002	18.0	Vestas 1.65MW V82	Clovis 115kV (524808)
GEN-2013-016	191.0 Summer 203.0 Winter	GENROU (583456)	TUCO 345kV (525832)
ASGI-2013-002	18.4	Siemens 2.3MW VS (583613)	Tucumcari 115kV (524509)

Table 1-2: Group 6 Prior Queued Interconnection Requests

Request	Capacity (MW)	Generator Model	Point of Interconnection
ASGI-2013-003	18.4	Siemens 2.3MW VS (583623)	Clovis 115kV (524808)
ASGI-2013-005	19.8	Vestas V82 1.65MW (583283)	FE-Clovis 115kV (524808)
ASGI-2013-006	2.0	Gamesa G114 2MW (583813)	Erskine 115kV (526109)
GEN-2013-022	25.0	Solaron 500kW (583313)	Caprock 115kV (524486)
GEN-2014-012	186.0 Summer 225.0 Winter	GENROU (527001,527002, 527003)	Tap Hobbs (527896) to Andrews (528604) 230kV (562493)
ASGI-2014-001	2.3	GE 107m 2.3MW (583816)	Erskine 69kV (526109)
GEN-2013-027	150.0	Alstom ECO1222 3.0MW WTG (583843,583846)	Tap Tolk to Yoakum 230kV (562480)
GEN-2014-007	399.6	GE 87m 1.85MW WTG (583813,583816)	Tap Tuco to Border 345kV (562487)
GEN-2014-033	70.0	SC 500HE/CP 0.5MVA inverter	Chaves County 115kV
GEN-2014-034	70.0	SC 500HE/CP 0.5MVA inverter	Chaves County 115kV
GEN-2014-035	30.0	SC 500HE/CP 0.5MVA inverter	Chaves County 115kV
GEN-2014-046	125.4	SMAPPC 0.25MW PV inverter	Chaves County 115kV
GEN-2014-047	40.0	AE 500NX 0.5 MW PV inverters	Tap Tolk - Eddy County (Crossroads) 345kV
GEN-2014-053	80.0	GE 2.0MW WTG	Carlisle 230kV
GEN-2014-054	120.0	GE 2.0MW WTG	Carlisle 230kV
GEN-2014-062	200.1	GE 2.3MW-107 WTG	Tap Tolk - Eddy County (Crossroads) 345kV
GEN-2014-063	381.0	GE 1.79 MW WTG	Hobbs 230kV
GEN-2014-066	30.0	AE 1000NX 1.0MW PV inverter	Norton 115kV
GEN-2014-069	96.0	GE 4.0MW inverter	Tap Postash Junction - Livingston Ridge 115kV
GEN-2014-070	116.0	GE 4.0MW inverter	Tap Hobbs - Yoakum 230kV
ASGI-2014-002	49.6	SMA 1.6MVA 630CP-US inverters	Santa Rosa tap - Tucumcari 69kV line
ASGI-2014-004	10.0	Solar PV inverter	Livingston Ridge 69 kV - bus 52752
ASGI-2014-005	10.0	Solar PV inverter	Strata 69 kV - bus 528046
ASGI-2014-008	10.0	Solar PV inverter	South Loving 69 kV - bus 528218
ASGI-2014-009	10.0	Solar PV inverter	Wood Draw 115 kV - bus 528228
ASGI-2014-010	10.0	Solar PV inverter	Ochoa 115 kV - bus 528232
ASGI-2014-011	10.0	Solar PV inverter	Zia 115 kV - bus 528420
ASGI-2014-012	10.0	Solar PV inverter	Cooper Ranch 115 kV - bus 528554
ASGI-2014-013	2.0	GE 2.0MW WTG	Erskine-Wolfforth-Reese sub in Lubbock TX (South Plains Elec Coop)

A stability analysis was performed for the addition of the generation projects in Group 6. The analysis was performed on three (3) seasonal models including 2015 summer peak (15SP), the 2015 winter peak (15WP), and the 2025 summer peak (25SP) cases. These cases are modified versions of the 2014 model series of Model Development Working Group (MDWG) dynamic study models.

The stability analysis determines the impacts of the new interconnecting project on the stability and voltage recovery of the nearby systems and the ability of the interconnecting project to meet FERC Order 661A. If problems with stability or voltage recovery are identified, the need for reactive compensation or system upgrades is investigated. The contingencies listed in **Table 3-1** were used in the stability analysis.

The power factor analysis determines the power factor at the point of interconnection (POI) for the wind interconnection projects for pre-contingency and post-contingency conditions. The contingencies used in the power factor analysis are a subset of the stability analysis contingencies shown in **Table D-1** for GEN-2014-008 and **Table D-2** for GEN-2014-065. The point of interconnection for GEN-2014-065 is electrically close to previously assigned reactive power network upgrades assigned in the SPP 2015 Integrated Transmission Plan (ITP) Near Term (NT) study, therefore were accounted for in an additional the 25SP seasonal case power factor analysis shown in **Table D-3**. The 2015 ITPNT reactive power support upgrades were also analyzed prior to adding the current study network upgrades to check voltage violations and system instability, however the violations and instability issues were not resolved by these network upgrades.

Please note that the 2015 ITPNT Upgrades for the Southwestern Public Service (SPS) area have been approved by the SPP Board of Directors and are currently in the process of having Notifications To Construct (NTC) issued³.

A reduced generation analysis was conducted for wind farms to determine reactor inductive amounts to compensate the capacitive effects on the transmission system during low or reduced wind conditions cause by the interconnecting project's generator lead transmission line and collector systems. **Table 5-1** displays the minimum reactor inductive amount requirement to compensate capacitive effects from GEN-2014-008 facilities. GEN-2014-008 reduced wind generation analysis was conducted using SPP typical 345kV transmission line data (R: resistance, X: reactance, and B: charging current) for the generator lead from the GEN-2014-008 customer substation to the Tap on Tolk – Eddy County. If GEN-2014-008 proceeds to the Definitive Interconnection System Impact Study (DISIS), reduced wind generation analysis results could vary depending on the refined and updated generator lead line and collector system parameters provided by the customer.

Short Circuit analysis was conducted using the current study upgrade 2025 summer peak case. The results from the Short circuit analysis are show in **Table F-1** for GEN-2014-008 and **Table F-2** for GEN-2014-065.

Nothing in this System Impact Study constitutes a request for transmission service or grants the Interconnection Customer any rights to transmission service. If the customer wishes to sell power from the facility, a separate request for transmission service must be requested on Southwest Power Pool's OASIS by the Customer.

³ 2015 SPP Integrated Transmission Plan Near-Term (ITPNT) Assessment Report:
http://www.spp.org/publications/Final_2015_ITPNT_Assessment_BOD_Approved.pdf

2. Facilities

A one-line PSS/E slider drawings for each of the generation interconnection requests in this study is shown in **Figure 2-1** and **Figure 2-2**.

Figure 2-3: GEN-2014-008 One-line Diagram

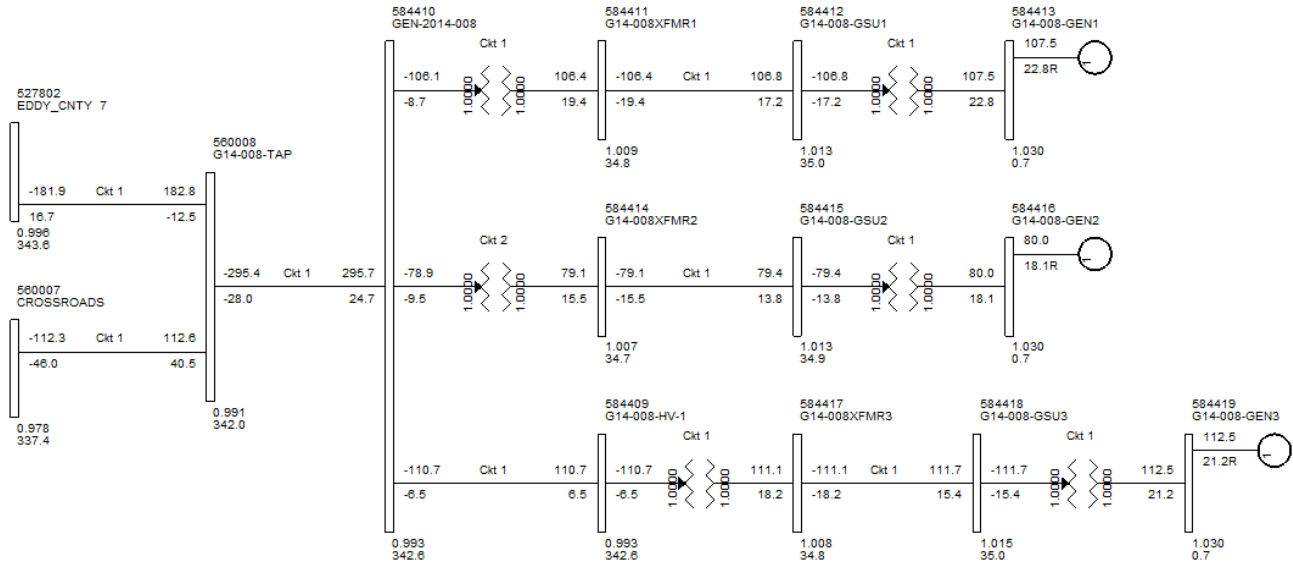
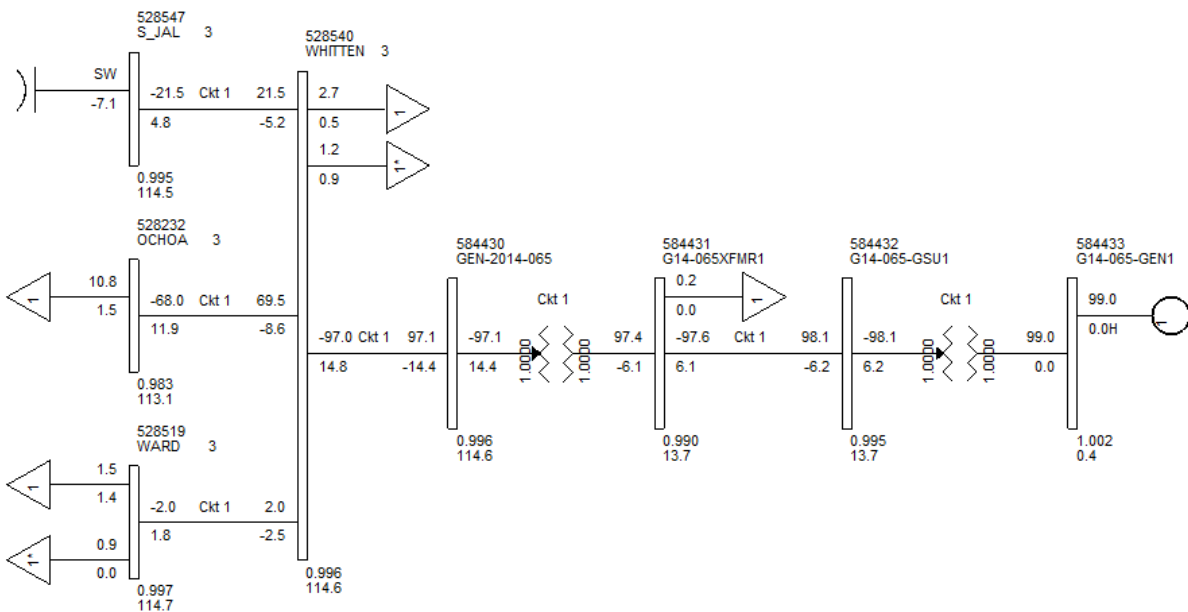


Figure 2-4: GEN-2014-065 One-line Diagram



3. Stability Analysis

Transient stability analysis is used to determine if the transmission system can maintain angular stability and ensure bus voltages stay within planning criteria bandwidth during and after a disturbance while considering the addition of a generator interconnection request.

Model Preparation

Transient stability analysis was performed using modified versions of the 2014 series of Model Development Working Group (MDWG) dynamic study models including the 2015 summer peak, 2015 winter peak, and the 2025 summer peak seasonal models. The cases are then loaded with prior queued interconnection requests and network upgrades assigned to those interconnection requests. Finally the prior queued and study generation are dispatched into the SPP footprint. Initial simulations are then carried out for a no-disturbance run of twenty (20) seconds to verify the numerical stability of the model.

GEN-2014-065 was modeled using the SMASC dynamic model instead of the customer provided SMAUPS dynamic model. It was discovered by SPP Generation Interconnection Staff that the two SMA dynamic models have parameter commonalities that the Clod4 compiler cannot handle properly. Since varies higher queued solar projects in the SPP GI queue already use the SMASC dynamic dyr model, GEN-2014-065 SMAUPS dynamic dyr model was converted to a corresponding SMASC dynamic dyr model. If GEN-2014-065 proceeds to the Definitive Interconnection System Impact Study (DISIS) with the SMAUPS dynamic model, GEN-2014-065 will need to work with the vendor to resolve this dynamic model issue.

Disturbances

Eighty-seven (87) contingencies were identified for use in this study and are listed in **Table 3-1**. These contingencies are faults at locations defined by SPP Generation Interconnection Staff. These contingencies include three-phase N-1, single-phase stuck breaker, and three-phase prior outage faults. Single-phase line faults were simulated by applying fault impedance to the positive sequence network at the fault location to represent the effect of the negative and zero sequence networks on the positive sequence network. The fault impedance was computed to give a positive sequence voltage at the specified fault location of approximately 60% of pre-fault voltage. This method is in agreement with SPP current practice.

Except for transformer faults, the typical sequence of events for a three-phase fault is as follows:

1. apply fault at particular location
2. continue fault for five (5) cycles, clear the fault by tripping the faulted facility
3. after an additional twenty (20) cycles, re-close the previous facility back into the fault
4. continue fault for five (5) additional cycles
5. trip the faulted facility and remove the fault

Transformer faults are typically modeled as three-phase faults, unless otherwise noted. The sequence of events for a transformer fault is as follows:

1. apply fault for five (5) cycles
2. clear the fault by tripping the affected transformer facility (unless otherwise noted there will be no re-closing into a transformer fault)

The SPP areas monitored during the stability analysis were:

- 520: American Electric Power West (AEPW)
- 524: Oklahoma Gas and Electric Company (OKGE)
- 525: Western Farmers Electric Cooperative (WFEC)
- 526: Southwestern Public Service Company (SPS)
- 531: Midwest Energy, Inc. (MIDW)
- 534: Sunflower Electric Power Corp. (SUNC)
- 536: Westar Energy, Inc. (WERE)

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
0	FLT_00_NoFault	No Fault Conditions
1	FLT_01_WHITTEN3_OCHOA3_115kV_3PH	3 phase fault on Whitten (528540) to Ochoa (528232) 115kV transmission line circuit #1, near Whitten. a. Apply fault at the Whitten 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
2	FLT_02_WHITTEN3_PNDEROSATP3_115kV_3PH	3 phase fault on Whitten (528540) to Ponderosa (528239) 115kV transmission line circuit #1, near Whitten. a. Apply fault at the Whitten 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
3	FLT_03_OCHOA3_PNDEROSATP3_115kV_3PH	3 phase fault on Ochoa (528232) to Ponderosa (528239) 115kV transmission line circuit #1, near Ochoa. a. Apply fault at the Ochoa 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
4	FLT_04_OCHOA3_AGAVERHILL3_115kV_3PH	3 phase fault on Ochoa (528232) to Agave Redhills (528230) 115kV transmission line circuit #1, near Ochoa. a. Apply fault at the Ochoa 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
5	FLT_05_AGAVERHILL3_REDBLUFF3_115kV_3PH	3 phase fault on Agave Redhills (528230) to Red Bluff (528018) 115kV transmission line circuit #1, near Agave Redhills. a. Apply fault at the Agave Redhills 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
6	FLT_06_AGAVERHILL3_RDRUNNER3_115kV_3PH	3 phase fault on Agave Redhills (528230) to Roadrunner (528025) 115kV transmission line circuit #1, near Agave Redhills. a. Apply fault at the Agave Redhills 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
7	FLT_07_RDRUNNER3_BATTLEAXLE3_115kV_3PH	3 phase fault on Roadrunner (528025) to Battle Axe (528040) 115kV transmission line circuit #1, near Roadrunner. a. Apply fault at the Roadrunner 115kV bus. b. Clear fault after 5 cycles and trip the faulted line along with disconnecting Battle Axe bus and load.
8	FLT_08_RDRUNNER3_REDBLUFF3_115kV_3PH	3 phase fault on Roadrunner (528025) to Red Bluff (528018) 115kV transmission line circuit #1, near Roadrunner. a. Apply fault at the Roadrunner 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
9	FLT_09_REDBLUFF3_BOPCOPKRLK3_115kV_3PH	3 phase fault on Red Bluff (528018) to Bopo (528020) 115kV transmission line circuit #1, near Red Bluff. a. Apply fault at the Red Bluff 115kV bus. b. Clear fault after 5 cycles and trip the faulted line along with disconnecting island system
10	FLT_10_BOPCOPKRLK3_WOODDRAW3_115kV_3PH	3 phase fault on Bopo (528020) to Wood Draw (528288) 115kV transmission line circuit #1, near Bopo. a. Apply fault at the Bopo 115kV bus. b. Clear fault after 5 cycles and trip the faulted line along with disconnecting island system
11	FLT_11_REDBLUFF3_SANDDUNES3_115kV_3PH	3 phase fault on Red Bluff (528018) to Sand Dunes (528016) 115kV transmission line circuit #1, near Red Bluff. a. Apply fault at the Red Bluff 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
12	FLT_12_SANDDUNES3_WIPP3_115kV_3PH	3 phase fault on Sand Dunes (528016) to WIPP (528009) 115kV transmission line circuit #1, near Sand Dunes. a. Apply fault at the Sand Dunes 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
13	FLT_13_WIPP3_IMC1TP3_115kV_3PH	3 phase fault on WIPP (528009) to IMC #1 Tap (528035) 115kV transmission line circuit #1, near WIPP. a. Apply fault at the WIPP 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
14	FLT_14_WIPP3_LIVSTNRIDGE3_115kV_3PH	3 phase fault on WIPP (528009) to Livingston Ridge (527953) 115kV transmission line circuit #1, near WIPP. a. Apply fault at the WIPP 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
15	FLT_15_LIVSTNRIDGE3_IMC1TP3_115kV_3PH	3 phase fault on Livingston Ridge (527953) to IMC #1 Tap (528035) 115kV transmission line circuit #1, near Livingston Ridge. a. Apply fault at the Livingston Ridge 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
16	FLT_16_LIVSTNRIDGE3_SAGEBRUSH3_115kV_3PH	3 phase fault on Livingston Ridge (527953) to Sage Brush (527955) 115kV transmission line circuit #1, near Livingston Ridge. a. Apply fault at the Livingston Ridge 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
17	FLT_17_SAGEBRUSH3_LAGARTO3_115kV_3PH	3 phase fault on Sage Brush (527955) to Lagarto (527957) 115kV transmission line circuit #1, near Sage Brush. a. Apply fault at the Sage Brush 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
18	FLT_18_LAGARTO3_CARDINAL3_115kV_3PH	3 phase fault on Lagarto (527957) to Cardinal (528596) 115kV transmission line circuit #1, near Lagarto. a. Apply fault at the Lagarto 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
19	FLT_19_CARDINAL3_TEAGUE3_115kV_3PH	3 phase fault on Cardinal (528596) to Teague (528526) 115kV transmission line circuit #1, near Cardinal. a. Apply fault at the Cardinal 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
20	FLT_20_CARDINAL3_TARGA3_115kV_3PH	3 phase fault on Cardinal (528596) to Targa (528605) 115kV transmission line circuit #1, near Cardinal. a. Apply fault at the Cardinal 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
21	FLT_21_WHITTEN3_WARD3_115kV_3PH	3 phase fault on Whitten (528540) to Ward (528519) 115kV transmission line circuit #1, near Whitten. a. Apply fault at the Whitten 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
22	FLT_22_WARD3_LEAROAD3_115kV_3PH	3 phase fault on Ward (528519) to Lea Road (528505) 115kV transmission line circuit #1, near Ward. a. Apply fault at the Ward 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
23	FLT_23_LEAROAD3_OILCENTER3_115kV_3PH	3 phase fault on Lea Road (528505) to Oil Center (528552) 115kV transmission line circuit #1, near Lea Road. a. Apply fault at the Lea Road 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
24	FLT_24_WHITTEN3_SJAL3_115kV_3PH	3 phase fault on Whitten (528540) to S JAL (528547) 115kV transmission line circuit #1, near Whitten. a. Apply fault at the Whitten 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
25	FLT_25_SJAL3_TEAGUE3_115kV_3PH	3 phase fault on S JAL (528547) to Teague (528526) 115kV transmission line circuit #1, near S JAL. a. Apply fault at the S JAL 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
26	FLT_26_SJAL3_DOLLARHIDE3_115kV_3PH	3 phase fault on S JAL (528547) to Dollarhide (528561) 115kV transmission line circuit #1, near S JAL. a. Apply fault at the S JAL 115kV bus. b. Clear fault after 5 cycles and trip the faulted line along with disconnecting island system
27	FLT_27_TARGA3_NAENRICH3_115kV_3PH	3 phase fault on Targa (528605) to National Enrichment (528603) 115kV transmission line circuit #1, near Targa. a. Apply fault at the Targa 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
28	FLT_28_NAENRICH3_DRINKARD3_115kV_3PH	3 phase fault on National Enrichment (528603) to Drinkard (528589) 115kV transmission line circuit #1, near National Enrichment. a. Apply fault at the National Enrichment 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
29	FLT_29_NAENRICH3_ANDREWS3_115kV_3PH	3 phase fault on National Enrichment (528603) to Andrews (528602) 115kV transmission line circuit #1, near National Enrichment. a. Apply fault at the National Enrichment 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
30	FLT_30_ANDREWS3_ANDREWS6_115_230kV_3PH	3 phase fault on the Andrews 115kV (528602) to Andrews 230kV (528604)/Andrews 13.2kV (528601) transformer circuit #1, near Andrews 115kV. a. Apply fault at the Andrews 115kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
31	FLT_31_ANDREWS6_G14012TAP_230kV_3PH	3 phase fault on Andrews (528604) to GEN-2014-012 Tap (528611) 230kV transmission line circuit #1, near Andrews. a. Apply fault at the Andrews 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
32	FLT_32_G14012TAP_HOBBSINT6_230kV_3PH	3 phase fault on GEN-2014-012 Tap (528611) to Hobbs Interchange (527894) 230kV transmission line circuit #1, near GEN-2014-012 Tap. a. Apply fault at the GEN-2014-012 Tap 230kV bus. b. Clear fault after 5 cycles and trip the faulted line.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
33	FLT_33_ANDREWS6_HOBBSINT6_230kV_3PH	3 phase fault on Andrews (528604) to Hobbs Interchange (527894) 230kV transmission line circuit #1, near Andrews. a. Apply fault at the Andrews 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
34	FLT_34_HOBBSINT6_HOBBSINT3_230_115kV_3PH	3 phase fault on the Hobbs Interchange 230kV (527894) to Hobbs Interchange 115kV (528604)/Hobbs Interchange 13.2kV (527889) transformer circuit #1, near Hobbs Interchange 230kV. a. Apply fault at Hobbs Interchange 230kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
35	FLT_35_HOBBSINT6_HOBBSINT7_230_345kV_3PH	3 phase fault on the Hobbs Interchange 230kV (527894) to Hobbs Interchange 345kV (527896)/Hobbs Interchange 13.2kV (527895) transformer circuit #1, near Hobbs Interchange 230kV. a. Apply fault at Hobbs Interchange 230kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
36	FLT_36_HOBBSINT7_YOAKUM345_345kV_3PH	3 phase fault on Hobbs Interchange (527896) to Yoakum (526936) 345kV transmission line circuit #1, near Hobbs Interchange. a. Apply fault at the Hobbs Interchange 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
37	FLT_37_RDRUNNER3_RDRUNNER7_115_345kV_3PH	3 phase fault on the Roadrunner 115kV (528025) to Roadrunner 345kV (528027)/Roadrunner 13.2kV (528023) transformer circuit #1, near Roadrunner 115kV. a. Apply fault at Roadrunner 115kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
38	FLT_38_RDRUNNER7_POTASHJCT_230kV_3PH	3 phase fault on Roadrunner (528027) to Potash Junction (527963) 230kV transmission line circuit #1, near Roadrunner. a. Apply fault at the Roadrunner 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
39	FLT_39_RDRUNNER7_KIOWA_345kV_3PH	3 phase fault on Roadrunner (528027) to Kiowa (527965) 345kV transmission line circuit #1, near Roadrunner. a. Apply fault at the Roadrunner 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
40	FLT_40_KIOWA_HOBBSINT_345kV_3PH	3 phase fault on Kiowa (527965) to Hobbs Interchange (527896) 345kV transmission line circuit #1, near Kiowa. a. Apply fault at the Kiowa 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
41	FLT_41_KIOWA_NLOVPLT_345kV_3PH	3 phase fault on Kiowa (527965) to North Loving (528185) 345kV transmission line circuit #1, near Kiowa. a. Apply fault at the Kiowa 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
42	FLT_42_G14008TAP_CROSSROADS_345kV_3PH	3 phase fault on GEN-2014-008 Tap (560008) to Crossroads (560007) 345kV transmission line circuit #1, near GEN-2014-008 Tap. a. Apply fault at the GEN-2014-008 Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
43	FLT_43_G14008TAP_EDDYCNTY7_345kV_3PH	3 phase fault on GEN-2014-008 Tap (560008) to Eddy County (527802) 345kV transmission line circuit #1, near GEN-2014-008 Tap. a. Apply fault at the GEN-2014-008 Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
44	FLT_44_EDDYCNTY7_EDDYNORTH6_345_230kV_3PH	3 phase fault on the Eddy County 345kV (527802) to Eddy County 230kV (527799)/Eddy County 13.2kV (527796) transformer circuit #1, near Eddy County 345kV. a. Apply fault at Eddy County 345kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
45	FLT_45_EDDYNORTH6_EDDYSTH3_230_115kV_3PH	3 phase fault on the Eddy County North 230kV (527799) to Eddy County North 115kV (527793)/Eddy County 13.2kV (527795) transformer circuit #1, near Eddy County North 230kV. a. Apply fault at Eddy County North 230kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
46	FLT_46_EDDYNORTH6_CHAVESCNTY6_230kV_3PH	3 phase fault on Eddy County North (527799) to Chaves County (527483) 230kV transmission line circuit #1, near on Eddy County North. a. Apply fault at the on Eddy County North 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
47	FLT_47_EDDYNORTH6_EDDYSOUTH6_230kV_3PH	3 phase fault on Eddy County North (527799) to Eddy County South (527793) 230kV transmission line circuit #1, near on Eddy County North. a. Apply fault at the on Eddy County North 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
48	FLT_48_EDDYNORTH6_EPTNPD6_230kV_3PH	3 phase fault on Eddy County North (527799) to EPTNP (599960) 230kV transmission line circuit #1, near on Eddy County North. a. Apply fault at the on Eddy County North 230kV bus. b. Clear fault after 5 cycles and trip the faulted line along with disconnecting island system
49	FLT_49_EDDYSOUTH6_CUNNINGHAM6_230kV_3PH	3 phase fault on Eddy County South (527800) to Cunningham (527865) 230kV transmission line circuit #1, near on Eddy County South. a. Apply fault at the on Eddy County South 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
50	FLT_50_EDDYSOUTH6_7RIVERS6_230kV_3PH	3 phase fault on Eddy County South (527800) to 7-Rivers (528095) 230kV transmission line circuit #1, near on Eddy County South. a. Apply fault at the on Eddy County South 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
51	FLT_51_EDDYSOUTH6_EDDYNTH3_230_115kV_3PH	3 phase fault on the Eddy County South 230kV (527800) to Eddy County 115kV (527798)/Eddy County 13.2kV (528897) transformer circuit #1, near Eddy County South 230kV. a. Apply fault at Eddy County South 230kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
52	FLT_52_EDDYSTH3_PECOS3_115kV_3PH	3 phase fault on Eddy County South (527993) to Pecos (528178) 115kV transmission line circuit #1, near on Eddy County South. a. Apply fault at the on Eddy County South 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
53	FLT_53_EDDYSTH3_CVDAYTON3_115kV_3PH	3 phase fault on Eddy County South (527993) to CV Dayton (527821) 115kV transmission line circuit #1, near on Eddy County South. a. Apply fault at the on Eddy County South 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
54	FLT_54_EDDYNTH3_TWEEDY3_115kV_3PH	3 phase fault on Eddy County South (527993) to Tweedy (527597) 115kV transmission line circuit #1, near on Eddy County South. a. Apply fault at the on Eddy County South 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
55	FLT_55_EDDYNTH3_CV12MH_115kV_3PH	3 phase fault on Eddy County North (527798) to CV-12MH (527828) 115kV transmission line circuit #1, near on Eddy County South. a. Apply fault at the on Eddy County South 115kV bus. b. Clear fault after 5 cycles and trip the faulted line along with disconnecting CV-12MH bus and load

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
56	FLT_56_EDDYINTH3_EDDYSTH3_115kV_3 PH	3 phase fault on Eddy County North (527998) to Eddy County South (527793) 115kV transmission line circuit #1, near on Eddy County North. a. Apply fault at the on Eddy County North 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
57	FLT_57_CROSSROADS_TOLK7_345kV_3PH	3 phase fault on Crossroads (560007) to Tolk (525549) 345kV transmission line circuit #1, near on Crossroads. a. Apply fault at the Crossroads 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
58	FLT_58_TOLK7_TUCO2_345kV_3PH	3 phase fault on Tolk (525549) to TUCO2 (560021) 345kV transmission line circuit #1, near on Tolk. a. Apply fault at the Tolk 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
59	FLT_59_TOLK7_TOLKTAP6_345_230kV_3 PH	3 phase fault on the Tolk 345kV (525549) to Tolk Tap 230kV (525543)/Tolk 13.2kV (525537) transformer circuit #1, near Tolk 345kV. a. Apply fault at Tolk 345kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
60	FLT_60_TOLKTAP6_TOLKEAST6_230kV_3 PH	3 phase fault on Tolk Tap (525543) to Tolk East (525524) 230kV transmission line circuit #1, near on Tolk Tap. a. Apply fault at the Tolk Tap 230kV bus. b. Clear fault after 5 cycles and trip the faulted line.
61	FLT_61_TOLKTAP6_TOLKWEST6_230kV_3 PH	3 phase fault on Tolk Tap (525543) to Tolk West (525531) 230kV transmission line circuit #1, near on Tolk Tap. a. Apply fault at the Tolk Tap 230kV bus. b. Clear fault after 5 cycles and trip the faulted line.
62	FLT_62_TOLKEAST6_ROSEVELTS6_230kV_3PH	3 phase fault on Tolk East (525524) to Roosevelt County (524911) 230kV transmission line circuit #1, near on Tolk East. a. Apply fault at the Tolk East 230kV bus. b. Clear fault after 5 cycles and trip the faulted line.
63	FLT_63_TOLKEAST6_TUCOINT6_230kV_3 PH	3 phase fault on Tolk East (525524) to TUCO Interchange (525830) 230kV transmission line circuit #1, near on Tolk East. a. Apply fault at the Tolk East 230kV bus. b. Clear fault after 5 cycles and trip the faulted line.
64	FLT_64_TOLKEAST6_PLANTX6_230kV_3PH	3 phase fault on Tolk East (525524) to Plant X (525481) 230kV transmission line circuit #1, near on Tolk East. a. Apply fault at the Tolk East 230kV bus. b. Clear fault after 5 cycles and trip the faulted line.
65	FLT_65_TOLKWEST6_ROSEVELTN6_230kV_3PH	3 phase fault on Tolk West (525531) to Plant X (524909) 230kV transmission line circuit #1, near on Tolk West. a. Apply fault at the Tolk West 230kV bus. b. Clear fault after 5 cycles and trip the faulted line.
66	FLT_66_TOLKWEST6_LAMBCNTY6_230kV_3PH	3 phase fault on Tolk West (525531) to Lamb County (525637) 230kV transmission line circuit #1, near on Tolk West. a. Apply fault at the Tolk West 230kV bus. b. Clear fault after 5 cycles and trip the faulted line.
67	FLT_67_TOLKWEST6_PLANTX6_230kV_3 PH	3 phase fault on Tolk West (525531) to Plant X (525481) 230kV transmission line circuit #1, near on Tolk West. a. Apply fault at the Tolk West 230kV bus. b. Clear fault after 5 cycles and trip the faulted line.
68	FLT_68_TOLKWEST6_G13027TAP2_230kV_3PH	3 phase fault on Tolk West (525531) to GEN-2013-027 Tap (562480) 230kV transmission line circuit #1, near on Tolk West. a. Apply fault at the Tolk West 230kV bus. b. Clear fault after 5 cycles and trip the faulted line.
69	FLT_69_TUCO2_TUCOINT7_345kV_3PH	3 phase fault on TUCO2 (560021) to TUCO Interchange (525832) 345kV transmission line circuit #1, near on TUCO2. a. Apply fault at the TUCO2 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
70	FLT_70_TOLK7_POTTER7_345kV_3PH	3 phase fault on Tolk (525549) to Potter Interchange (525549) 345kV transmission line circuit #1, near on Tolk. a. Apply fault at the Tolk 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
71	FLT_71_TUCOINT7_OKU7_345kV_3PH	3 phase fault on the TUCO Interchange (525832) to OKU (511456) 345kV transmission line circuit #1, near TUCO Interchange. a. Apply fault at the TUCO Interchange 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
72	FLT_72_TUCO_G14007TAP_345kV_3PH	3 phase fault on the TUCO Interchange (525832) to GEN-2014-007Tap (562487) 345kV transmission line circuit #1, near TUCO Interchange. a. Apply fault at the TUCO Interchange 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
73	FLT_73_G14007TAP_TUCO2_345kV_3PH	3 phase fault on the GEN-20114-007 Tap (562487) to TUCO2 (560021) 345kV transmission line circuit #1, near GEN-2014-007 Tap. a. Apply fault at the GEN-2014-007 Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
74	FLT_74_TUCOINT7_TUCOINT6_345_230kV_3PH	3 phase fault on the TUCO Interchange (525832) 345kV to TUCO Interchange (525830) 230kV/(525824) 13.2kV transformer circuit #1 at the 345kV bus. a. Apply fault at the TUCO Interchange 345kV bus. b. Clear fault after 5 cycles by tripping the transformer
75	FLT_75_YOAKUM7_YOAKUM6_345_230kV_3PH	3 phase fault on the Yoakum (526936) 345kV to Yoakum (526935) 230kV/ (526937) 13.2kV ckt 1 transformer at the 345kV bus. a. Apply fault at the Yoakum 345kV bus. b. Clear fault after 5 cycles by tripping the transformer
76	FLT_76_TOLKWEST6_ROSEVELTN6_230kV_1PH_SB	Single phase fault with stuck breaker on the Tolk West (525531) to Roosevelt N (524909) 230 kV line, near Tolk West. a. Apply fault at the Tolk West 230kV bus. b. Run 5 cycles, and then open Roosevelt N end of the faulted line. c. Run 10 cycles, and then clear the fault and disconnect Tolk West (525531) 230 kV bus.
77	FLT_77_TOLKWEST6_PLANTX6_230kV_1PH_SB	Single phase fault with stuck breaker on the Tolk West (525531) to Plant X (525481) 230 kV circuit #1 line, near Tolk West. a. Apply fault at the Tolk West 230kV bus. b. Run 5 cycles, and then open Plant X end of the faulted line. c. Run 10 cycles, and then clear the fault and disconnect Tolk West (525531) 230 kV bus.
78	FLT_78_TOLKWEST6_LAMBCNTY6_230kV_1PH_SB	Single phase fault with stuck breaker on the Tolk West (525531) to Lamb Co (525637) 230 kV line, near Tolk West. a. Apply fault at the Tolk West 230kV bus. b. Run 5 cycles, and then open Lamb Co end of the faulted line. c. Run 10 cycles, and then clear the fault and disconnect Tolk West (525531) 230 kV bus.
79	FLT_79_TOLKEAST6_PLANTX6_230kV_1PH_SB	Single phase fault with stuck breaker on the Tolk East (525524) to Plant X (525481) 230 kV line circuit #2, near Tolk East. a. Apply fault at the Tolk East 230kV bus. b. Run 5 cycles, and then open Plant X end of the faulted line. c. Run 10 cycles, and then clear the fault and disconnect Tolk East (525524) 230 kV bus.
80	FLT_80_EDDYNORTH6_CHAVESCNTY6_230kV_1PH_SB	Single phase fault with stuck breaker on the Eddy North (527799) to Chaves County (527483) 230 kV line circuit #1, near Eddy North. a. Apply fault at the Eddy North 230kV bus. b. Run 5 cycles, and then open Chaves County end of the faulted line. c. Run 10 cycles, and then clear the fault and disconnect Eddy North (527799) 230 kV bus.
81	FLT_81_EDDYSOUTH6_CUNNINGHAM6_230kV_1PH_SB	Single phase fault with stuck breaker on the Eddy South (527800) to Cunningham (527865) 230 kV line circuit #1, near Eddy South. a. Apply fault at the Eddy South 230kV bus. b. Run 5 cycles, and then open Cunningham end of the faulted line. c. Run 10 cycles, and then clear the fault and disconnect Eddy South (527800) 230 kV bus.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
82	FLT_82_TOLKEAST6_PLANTX6_230kV_3PH_PO	<p>(Prior Outage) Tolk West (525531) – Plant X (525481) 230 kV circuit #1 out of service then 3 phase fault on the Tolk East 230 kV (525524) to Plant X (525481) 230 kV circuit #2, near Tolk East.</p> <p>a. Prior outage Tolk West (525531) – Plant X (525481) 230 kV circuit #1 then solve case for steady state solution.</p> <p>b. Apply fault at the Tolk East 230kV bus.</p> <p>c. Clear fault after 5 cycles by tripping the faulted line.</p>
83	FLT_83_TUCOINT3_TUCOINT6_115_230kV_3PH_PO	<p>(Prior Outage) TUCO (525830) 230kV to TUCO (525828) 115kV/(525819) 13.2kV transformer CKT 2. Then 3 phase fault on the TUCO (525830) 230kV to TUCO (525828) 115kV/(525821) 13.2kV transformer CKT 1, near TUCO 115kV.</p> <p>a. Prior outage TUCO (525830) 230kV to TUCO (525828) 115kV/(525819) 13.2kV transformer CKT 2 then solve case for steady state solution.</p> <p>b. 3 phase fault on the TUCO (525830) 230kV to TUCO (525828) 115kV/(525821) 13.2kV transformer CKT 1, near TUCO 115kV.</p> <p>c. Leave fault on for 5 cycles, then trip the faulted transformer.</p>
84	FLT_84_EDDYXF_TOLKXF_345_230kV_3PH_PO ⁴	<p>(Prior Outage) Eddy County (527802) 345kV/Eddy County (527799) 230 kV/ (527796) 13.2kV transformer circuit #1 out of service then 3 phase fault on the Tolk (525549) 345kV/ Tolk (525543) 230kV/ Tolk (525537) 13.2 kV transformer circuit #1, near Tolk.</p> <p>a. Prior outage Eddy County (527802) 345kV/Eddy County (527799) 230 kV/ (527796) 13.2kV transformer circuit #1 then solve case for steady state solution.</p> <p>b. Apply fault at the Tolk 345kV bus.</p> <p>c. Clear fault after 5 cycles by tripping the faulted transformer and remove fault.</p>
85	FLT_85_WHITTEN_OCHOA_115kV_3PH_PO	<p>(Prior Outage) Whitten (528540) to Ochoa (528232) 115kV transmission line circuit #1 out of service then 3 phase fault on the Whitten (528540) to Ward (528519) 115kV circuit #1, near Whitten.</p> <p>a. Prior outage Whitten (528540) to Ochoa (528232) 115kV line circuit #1 then solve case for steady state solution.</p> <p>b. Apply fault at the Whitten 115kV bus.</p> <p>c. Clear fault after 5 cycles by tripping the faulted line and remove fault.</p>
86	FLT_86_WHITTEN_PNDEROSATP3_115kV_3PH_PO	<p>(Prior Outage) Whitten (528540) to Ponderosa (528239) 115kV transmission line circuit #1 out of service then 3 phase fault on the Whitten (528540) to Ward (528519) 115kV circuit #1, near Whitten.</p> <p>a. Prior outage Whitten (528540) to Ponderosa (528239) 115kV line circuit #1 then solve case for steady state solution.</p> <p>b. Apply fault at the Whitten 115kV bus.</p> <p>c. Clear fault after 5 cycles by tripping the faulted line and remove fault.</p>
87	FLT_87_WHITTEN_WARD_115kV_3PH_PO	<p>(Prior Outage) Whitten (528540) to Ward (528519) 115kV transmission line circuit #1 out of service then 3 phase fault on the Whitten (528540) to Sjal (528547) 115kV circuit #1, near Whitten.</p> <p>a. Prior outage Whitten (528540) to Ward (528519) 115kV line circuit #1 then solve case for steady state solution.</p> <p>b. Apply fault at the Whitten 115kV bus.</p> <p>c. Clear fault after 5 cycles by tripping the faulted line and remove fault.</p>

Results

The stability analysis was performed and the results are summarized in **Table 3-2**. System instability issues were observed on faults numbers 57, 70, 71, and 73. The stability plots will be available upon customer request.

⁴ FLT_84_EDDYXF_TOLKXF_345_230kV_3PH_PO is only valid and applicable in upgrade scenario case were GEN-2014-008 Tap – Hobbs 345kV circuit #1 is needed

During the analysis it was observed that Fault 57 would cause non-damping oscillatory responses for generation interconnection requests on the Eddy County – Tolk 345kV line. A similar behavior was seen for the system angular response during this fault.

SPS system instability and voltage violations are caused by Faults 70, 71, and 73 in the 15SP and 15WP seasonal cases.

In order to mitigate voltage violations and system instability during contingency the following upgrades/mitigations were needed:

- Disable relay (SLNOS1) for TUCO – Oklaunion 345kV circuit⁵
- Build approximately fifty-eight (58) miles of 345kV from GEN-2014-008 Tap – Hobbs Interchange 345kV
- Build approximately one hundred – ten (110) miles of 345kV from GEN-2014-007 Tap – Grapevine 345kV⁶ with approximately two hundred (200) Mvars of switchable capacitor bank(s) at Grapevine.

These upgrades/mitigations were added to the models and simulations were run again. These results are shown in Table 3-3.

Table 3-2: Stability Analysis Results

Contingency Number and Name		2015SP	2015WP	2025SP
0	FLT_00_NoFault	STABLE	STABLE	STABLE
1	FLT_01_WHITTEN3_OCHOA3_115kV_3PH	STABLE	STABLE	N/A
2	FLT_02_WHITTEN3_PNDEROSATP3_115kV_3PH	N/A	N/A	STABLE
3	FLT_03_OCHOA3_PNDEROSATP3_115kV_3PH	N/A	N/A	STABLE
4	FLT_04_OCHOA3_AGAVERHILL3_115kV_3PH	STABLE	STABLE	STABLE
5	FLT_05_AGAVERHILL3_REDBLUFF3_115kV_3PH	STABLE	N/A	N/A
6	FLT_06_AGAVERHILL3_RDRUNNER3_115kV_3PH	N/A	STABLE	STABLE
7	FLT_07_RDRUNNER3_BATTLEAXLE3_115kV_3PH	N/A	N/A	STABLE
8	FLT_08_RDRUNNER3_REDBLUFF3_115kV_3PH	N/A	STABLE	STABLE
9	FLT_09_REDBLUFF3_BOPCOPKRLK3_115kV_3PH	STABLE	STABLE	STABLE
10	FLT_10_BOPCOPKRLK3_WOODDRAW3_115kV_3PH	STABLE	STABLE	STABLE
11	FLT_11_REDBLUFF3_SANDDUNES3_115kV_3PH	STABLE	STABLE	STABLE
12	FLT_12_SANDDUNES3_WIPP3_115kV_3PH	STABLE	STABLE	STABLE
13	FLT_13_WIPP3_IMC1TP3_115kV_3PH	STABLE	STABLE	N/A
14	FLT_14_WIPP3_LIVSTNRIDGE3_115kV_3PH	N/A	N/A	STABLE
15	FLT_15_LIVSTNRIDGE3_IMC1TP3_115kV_3PH	N/A	N/A	STABLE
16	FLT_16_LIVSTNRIDGE3_SAGEBRUSH3_115kV_3PH	N/A	N/A	STABLE
17	FLT_17_SAGEBRUSH3_LAGARTO3_115kV_3PH	N/A	N/A	STABLE
18	FLT_18_LAGARTO3_CARDINAL3_115kV_3PH	STABLE	STABLE	STABLE
19	FLT_19_CARDINAL3_TEAGUE3_115kV_3PH	STABLE	STABLE	STABLE
20	FLT_20_CARDINAL3_TARGA3_115kV_3PH	STABLE	STABLE	STABLE
21	FLT_21_WHITTEN3_WARD3_115kV_3PH	STABLE	STABLE	STABLE

⁵ Out-of-step relays will be further evaluated during the Interconnection Facilities Study

⁶ GEN-2014-007 Tap is a proposed switching station located approximately forty (40) miles from TUCO Interchange on the TUCO Interchange – Border 345kV transmission line. Grapevine is a proposed switching station located in Gray County, Texas. Grapevine 345kV switching station along with Potter – Grapevine – Chisholm 345kV circuit #1 was assigned to DISIS-2014-002 Group 6.

[DISIS-2014-002 study posting link: http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2014_Generation_Studies/DISIS-2014-002_FINAL.pdf](http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2014_Generation_Studies/DISIS-2014-002_FINAL.pdf)

Table 3-2: Stability Analysis Results

	Contingency Number and Name	2015SP	2015WP	2025SP
22	FLT_22_WARD3_LEAROAD3_115kv_3PH	STABLE	STABLE	STABLE
23	FLT_23_LEAROAD3_OILCENTER3_115kv_3PH	STABLE	STABLE	STABLE
24	FLT_24_WHITTEN3_SJAL3_115kv_3PH	STABLE	STABLE	STABLE
25	FLT_25_SJAL3_TEAGUE3_115kv_3PH	STABLE	STABLE	STABLE
26	FLT_26_SJAL3_DOLLARHIDE3_115kv_3PH	STABLE	STABLE	STABLE
27	FLT_27_TARGA3_NAENRICH3_115kv_3PH	STABLE	STABLE	STABLE
28	FLT_28_NAENRICH3_DRINKARD3_115kv_3PH	STABLE	STABLE	STABLE
29	FLT_29_NAENRICH3_ANDREWS3_115kv_3PH	STABLE	STABLE	STABLE
30	FLT_30_ANDREWS3_ANDREWS6_115_230kv_3PH	STABLE	STABLE	STABLE
31	FLT_31_ANDREWS6_G14012TAP_230kv_3PH	N/A	N/A	STABLE
32	FLT_32_G14012TAP_HOBBSINT6_230kv_3PH	N/A	N/A	STABLE
33	FLT_33_ANDREWS6_HOBBSINT6_230kv_3PH	STABLE	STABLE	N/A
34	FLT_34_HOBBSINT6_HOBBSINT3_230_115kv_3PH	STABLE	STABLE	STABLE
35	FLT_35_HOBBSINT6_HOBBSINT7_230_345kv_3PH	STABLE	STABLE	STABLE
36	FLT_36_HOBBSINT7_YOAKUM345_345kv_3PH	STABLE	STABLE	STABLE
37	FLT_37_RDRUNNER3_RDRUNNER7_115_345kv_3PH	N/A	N/A	STABLE
38	FLT_38_RDRUNNER7_POTASHJCT_230kv_3PH	N/A	STABLE	N/A
39	FLT_39_RDRUNNER7_KIOWA_345kv_3PH	N/A	N/A	STABLE
40	FLT_40_KIOWA_HOBBSINT_345kv_3PH	N/A	N/A	STABLE
41	FLT_41_KIOWA_NLOVPLT_345kv_3PH	N/A	N/A	STABLE
42	FLT_42_G14008TAP_CROSSROADS_345kv_3PH	STABLE	STABLE	STABLE
43	FLT_43_G14008TAP_EDDYCNTY7_345kv_3PH	STABLE	STABLE	STABLE
44	FLT_44_EDDYCNTY7_EDDYNORTH6_345_230kv_3PH	STABLE	STABLE	STABLE
45	FLT_45_EDDYNORTH6_EDDYSTH3_230_115kv_3PH	STABLE	STABLE	STABLE
46	FLT_46_EDDYNORTH6_CHAVESCNTY6_230kv_3PH	STABLE	STABLE	STABLE
47	FLT_47_EDDYNORTH6_EDDYSOUTH6_230kv_3PH	STABLE	STABLE	STABLE
48	FLT_48_EDDYNORTH6_EPTNPD6_230kv_3PH	STABLE	STABLE	STABLE
49	FLT_49_EDDYSOUTH6_CUNNINGHAM6_230kv_3PH	STABLE	STABLE	STABLE
50	FLT_50_EDDYSOUTH6_7RIVERS6_230kv_3PH	STABLE	STABLE	STABLE
51	FLT_51_EDDYSOUTH6_EDDYNTH3_230_115kv_3PH	STABLE	STABLE	STABLE
52	FLT_52_EDDYSTH3_PECOS3_115kv_3PH	STABLE	STABLE	STABLE
53	FLT_53_EDDYSTH3_CVDAYTON3_115kv_3PH	STABLE	STABLE	STABLE
54	FLT_54_EDDYNTH3_TWEEDY3_115kv_3PH	STABLE	STABLE	STABLE
55	FLT_55_EDDYNTH3_CV12MH_115kv_3PH	STABLE	STABLE	STABLE
56	FLT_56_EDDYNTH3_EDDYSTH3_115kv_3PH	STABLE	STABLE	STABLE
57	FLT_57_CROSSROADS_TOLK7_345kv_3PH	UNSTABLE	UNSTABLE	UNSTABLE
58	FLT_58_TOLK7_TUCO2_345kv_3PH	STABLE	STABLE	STABLE
59	FLT_59_TOLK7_TOLKTAP6_345_230kv_3PH	STABLE	STABLE	STABLE
60	FLT_60_TOLKTAP6_TOLKEAST6_230kv_3PH	STABLE	STABLE	STABLE
61	FLT_61_TOLKTAP6_TOLKWEST6_230kv_3PH	STABLE	STABLE	STABLE
62	FLT_62_TOLKEAST6_ROSEVELTS6_230kv_3PH	STABLE	STABLE	STABLE
63	FLT_63_TOLKEAST6_TUPOINT6_230kv_3PH	STABLE	STABLE	STABLE
64	FLT_64_TOLKEAST6_PLANTX6_230kv_3PH	STABLE	STABLE	STABLE
65	FLT_65_TOLKWEST6_ROSEVELTN6_230kv_3PH	STABLE	STABLE	STABLE
66	FLT_66_TOLKWEST6_LAMBCNTY6_230kv_3PH	STABLE	STABLE	STABLE
67	FLT_67_TOLKWEST6_PLANTX6_230kv_3PH	STABLE	STABLE	STABLE
68	FLT_68_TOLKWEST6_G13027TAP2_230kv_3PH	STABLE	STABLE	STABLE
69	FLT_69_TUCO2_TUPOINT7_345kv_3PH	STABLE	STABLE	STABLE
70	FLT_70_TOLK7_POTTER7_345kv_3PH	UNSTABLE	UNSTABLE	STABLE
71	FLT_71_TUPOINT7_OKU7_345kv_3PH	UNSTABLE	UNSTABLE	STABLE
72	FLT_72_TUCO_G14007TAP_345kv_3PH	STABLE	STABLE	STABLE
73	FLT_73_G14007TAP_TUCO2_345kv_3PH	UNSTABLE	UNSTABLE	STABLE
74	FLT_74_TUPOINT7_TUPOINT6_345_230kv_3PH	STABLE	STABLE	STABLE
75	FLT_75_YOAKUM7_YOAKUM6_345_230kv_3PH	STABLE	STABLE	STABLE
76	FLT_76_TOLKWEST6_ROSEVELTN6_230kv_1PH_SB	STABLE	STABLE	STABLE
77	FLT_77_TOLKWEST6_PLANTX6_230kv_1PH_SB	STABLE	STABLE	STABLE
78	FLT_78_TOLKWEST6_LAMBCNTY6_230kv_1PH_SB	STABLE	STABLE	STABLE
79	FLT_79_TOLKEAST6_PLANTX6_230kv_1PH_SB	STABLE	STABLE	STABLE
80	FLT_80_EDDYNORTH6_CHAVESCNTY6_230kv_1PH_SB	STABLE	STABLE	STABLE
81	FLT_81_EDDYSOUTH6_CUNNINGHAM6_230kv_1PH_SB	STABLE	STABLE	STABLE
82	FLT_82_TOLKEAST6_PLANTX6_230kv_3PH_PO	STABLE	STABLE	STABLE
83	FLT_83_TUPOINT3_TUPOINT6_115_230kv_3PH_PO	STABLE	STABLE	STABLE

Table 3-2: Stability Analysis Results

Contingency Number and Name		2015SP	2015WP	2025SP
84	FLT_84_EDDYXF_TOLKXF_345_230kv_3PH_PO	STABLE	STABLE	STABLE
85	FLT_85_WHITTEN_OCHOA_115kv_3PH_PO	STABLE	STABLE	N/A
86	FLT_86_WHITTEN_PNDEROSATP3_115kv_3PH_PO	N/A	N/A	STABLE
87	FLT_87_WHITTEN_WARD_115kv_3PH_PO	STABLE	STABLE	STABLE

Table 3-3: Stability Analysis Results with Upgrades/Mitigations

Contingency Number and Name		2015SP	2015WP	2025SP
57	FLT_57_CROSSROADS_TOLK7_345kv_3PH	STABLE	STABLE	STABLE
70	FLT_70_TOLK7_POTTER7_345kv_3PH	STABLE	STABLE	N/A
71	FLT_71_TUCOINT7_OKU7_345kv_3PH	N/A	N/A	STABLE
73	FLT_73_G14007TAP_TUCO2_345kv_3PH			

FERC LVRT Compliance

FERC Order #661A places specific requirements on wind farms through its Low Voltage Ride Through (LVRT) provisions. For Interconnection Agreements signed after December 31, 2006, wind farms shall stay on line for faults at the POI that draw the voltage down at the POI to 0.0 pu.

Table 3-4 LVRT Contingencies

Contingency Number and Name	Description
FLT_42_G14008TAP_CROSSROADS_345kv_3PH	3 phase fault on GEN-2014-008 Tap (560008) to Crossroads (560007) 345kV transmission line circuit #1, near GEN-2014-008 Tap. a. Apply fault at the GEN-2014-008 Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault
FLT_43_G14008TAP_EDDYCNTY7_345kv_3PH	3 phase fault on GEN-2014-008 Tap (560008) to Eddy County (527802) 345kV transmission line circuit #1, near GEN-2014-008 Tap. a. Apply fault at the GEN-2014-008 Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault

4. Power Factor Analysis

The power factor analysis was performed for each project included in this study and is designed to demonstrate the reactive power requirements at the point of interconnection (POI) using the current study upgrade cases. For all projects that require reactive power, the final requirement in the GIA will be the pro-forma 95% lagging to 95% leading at the POI.

Model Preparation

For each project included in this study, as well as previous queued projects modeled at the same POI, the projects were turned off for the power factor analysis. The projects were replaced by an equivalent generator located at the POI producing the total MW of the project at that POI and 0.0 Mvar capability.

A Mvar generator without limits was modeled at the interconnection project POI to hold a voltage schedule at the POI consistent with the greater of the voltage schedule in the base case or unity (1.0 pu) voltage.

Disturbances

Each contingency evaluated in the Stability Analysis found in **Error! Reference source not found.** was also included in the determination of the power factor requirements.

Results

The power factor ranges are summarized in **Table 4-1** and the resultant ranges are shown **Table D-1** for GEN-2014-008 and **Table D-2** for GEN-2014-065. The point of interconnection for GEN-2014-065 is electrically close to previously assigned reactive power network upgrades assigned in the SPP 2015 Integrated Transmission Plan (ITP) Near Term (NT) study, therefore were accounted for in an additional the 25SP seasonal case power factor analysis shown in **Table D-3**. The analysis showed that reactive power is required for one of the study projects, the final requirement in the Generation Interconnection Agreement (GIA) for each project will be the pro-forma 95% lagging to 95% leading at the POI.

For analyzing power factor results a positive Q (Mvar) output indicates that the equivalent generator is supplying reactive power to the system, implying a lagging power factor. A negative Q (Mvar) output indicates that the equivalent generator is absorbing reactive power from the system, implying a leading power factor.

Table 4-1: Summary of Power Factor Analysis at the POI

Request	Capacity (MW)	Point of Interconnection (POI)	Fuel	Generator	Lagging (providing Mvars)	Leading (absorbing Mvars)
GEN-2014-008	300.0	Tap Tolk - Eddy County 345kV (560008)	Wind	GE 2.5MW WTG	0.9550	N/A
GEN-2014-065	99.0	Whitten 115kV (528540)	Solar	SC 900CP-US 0.9MVA inverter	0.7159	0.9772

NOTE: As reactive power is required for all projects, the final requirement in the GIA will be the pro-forma 95% lagging to 95% leading at the point of interconnection.

5. Reduced Wind Generation Analysis

Interconnection requests for wind generation projects that interconnect to a 345kV or 230kV bus on the SPP system are analyzed for the capacitive charging effects during reduced generation conditions (unsuitable wind speeds, curtailment, etc.) at the generation site.

Model Preparation

The project generators and capacitors (if any), and all other wind projects that share the same POI, were turned off in the base case. The resulting reactive power injection into the transmission network comes from the capacitance of the project’s transmission lines and collector cables. This reactive power injection is measured at the POI. Shunt reactors were added at the study project substation low voltage bus to bring the Mvar flow into the POI down to approximately zero.

Results

A final shunt reactor requirement for each of the studied interconnection requests is shown in **Table 5-1**. One line PSS/e slider diagrams used in the analysis are show in **Appendix E – Reduced Wind Generation Analysis Results**

GEN-2014-008 reduced wind generation analysis was conducted using SPP typical 345kV transmission line data (R: resistance , X: reactance, and B: charging current) for the generator lead from the GEN-2014-008 customer substation to the Tap on Tolk – Eddy County. If GEN-2014-008 proceeds to the Definitive Interconnection System Impact Study (DISIS), reduced wind generation analysis results could vary depending on the refined and updated generator lead line and collector system parameters provided by the customer.

Table 5-1: Summary of Shunt Reactor Requirements

Request	Capacity	POI	Approximate Shunt Reactor Required (Mvar)
GEN-2014-018	300.0	GE 2.5MW WTG	15.1
GEN-2014-065	99.0	SC 900CP-US 0.9MVA inverter	N/A

6. Short Circuit Analysis

The short circuit analysis was performed on the current study upgrade 2025 Summer Peak power flow case using the PSS/E ASCC program. Since the power flow model does not contain negative and zero sequence data, only three-phase symmetrical fault current levels were calculated at the point of interconnection up to and including five levels away. The following pages list the results of the analysis.

Results

The results of the short circuit analysis are shown in **Table F-1** for GEN-2014-008 and **Table F-2** for GEN-2014-065 in **Appendix F**.

Short Circuit Analysis was conducting using flat conditions with the following PSS/E ASCCC program settings:

- BUS VOLTAGES SET TO 1 PU AT 0 PHASE ANGLE
- GENERATOR P=0, Q=0
- TRANSFORMER TAP RATIOS=1.0 PU and PHASE ANGLES=0.0
- LINE CHARGING=0.0 IN +/-/0 SEQUENCE
- LOAD=0.0 IN +/- SEQUENCE, CONSIDERED IN ZERO SEQUENCE
- LINE/FIXED/SWITCHED SHUNTS=0.0 AND MAGNETIZING ADMITTANCE=0.0 IN +/-/0 SEQUENCE
- DC LINES AND FACTS DEVICES BLOCKED
- TRANSFORMER ZERO SEQUENCE IMPEDANCE CORRECTIONS IGNORED

7. Conclusion

PISIS-2014-002 Interconnection Customers have requested an Impact Study to determine the impacts of interconnecting generation to the SPP Transmission System.

A stability cluster impact analysis was performed for the generation projects from the PISIS-2014-002 Group 6 study. The analysis was performed on three (3) seasonal models including 2015 summer peak (15SP), the 2015 winter peak (15WP), and the 2025 summer peak (25SP) cases. These cases are modified versions of the 2014 model series of Model Development Working Group (MDWG) dynamic study models. A total of eighty-seven (87) contingencies were evaluated for the three (3) seasonal cases.

The stability analysis has determine with all BASE Case network upgrades and previously assigned network upgrades, the Group 6 projects were found to have voltage violations and instability for multiple contingencies listed below .

- FLT_57_CROSSROADS_TOLK7_345kV_3PH (15SP, 15WP, 25SP)
- FLT_70_TOLK7_POTTER7_345kV_3PH (15SP, 15WP)
- FLT_71_TUCOINT7_OKU7_345kV_3PH (15SP, 15WP)
- FLT_73_G14007TAP_TUCO2_345kV_3PH (15SP, 15WP)

In order to mitigate voltage violations and system instability during contingency the following upgrades were needed:

- Disable relay (SLNOS1) for TUCO – Oklaunion 345kV circuit⁷
- Build approximately fifty-eight (58) miles of 345kV from GEN-2014-008 Tap – Hobbs Interchange 345kV
- Build approximately one hundred – ten (110) miles of 345kV from GEN-2014-007 Tap – Grapevine 345kV⁸ with approximately two hundred (200) Mvars of switchable capacitor bank(s) at Grapevine.

After implementing the network upgrades mentioned above in upgrade simulation scenarios, all generators in the monitored areas remained stable and within the pre-contingency, voltage recovery, and post fault voltage recovery criterion of 0.7pu to 1.2pu for the entire modeled disturbances.

⁷ Out-of-step relays will be further evaluated during the Interconnection Facilities Study

⁸ GEN-2014-007 Tap is a new switching station located approximately forty (40) miles from TUCO Interchange on the TUCO Interchange – Border 345kV transmission line. Grapevine is a switching station located in Gray County, Texas. Grapevine 345kV switching station along with Potter – Grapevine – Chisholm 345kV circuit #1 was assigned to DISIS-2014-002 Group 6.

[DISIS-2014-002 study posting link: http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2014_Generation_Studies/DISIS-2014-002_FINAL.pdf](http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2014_Generation_Studies/DISIS-2014-002_FINAL.pdf)

If GEN-2014-065 proceeds to the Definitive Interconnection System Impact Study (DISIS) with the SMAUPS dynamic model, GEN-2014-065 will need to work with the vendor to resolve the dynamic modeling issue discussed in the body of this report.

In addition to the cluster impact stability analysis, power factor analysis for each generation project was performed on the current study upgrade 2015 summer peak, the 2015 winter peak, and the 2025 summer peak cases. Short Circuit analysis was conducted using the current study upgrade 2025 summer peak case.

A reduced generation analysis was conducted for wind farms to determine reactor inductive amounts to compensate the capacitive effects on the transmission system during low or reduced wind conditions cause by the interconnecting project's generator lead transmission line and collector systems.

Nothing in this study should be construed as a guarantee of delivery or transmission service. If the customer wishes to sell power from the facility, a separate request for transmission service must be requested on Southwest Power Pool's OASIS by the Customer.

Appendix A – 2015 Summer Peak Stability Plots

(Available on request)

Appendix B – 2015 Winter Peak Stability Plots

(Available on request)

Appendix C – 2025 Summer Peak Stability Plots

(Available on request)

Appendix D – Power Factor Analysis Results

Table D-1: GEN-2014-008 Power Factor Analysis Results

PISIS-2014-002 Group 06 GEN-2014-008											
POI: Tap Eddy County – Crossroads 345kV (GEN-2014-008 Tap, 560008) MW at POI = 300.0			2015 Summer Voltage = 1.0000 pu			2015 Winter Voltage = 1.0011 pu			2025 Summer Voltage = 1.0000 pu		
Contingency Name	Mvars at POI	Power Factor	LAG	Mvars at POI	Power Factor	LAG	Mvars at POI	Power Factor	LAG		
0	FLT_00_NoFault	29.25	0.9953	LAG	16.82	0.9984	LAG	76.24	0.9692	LAG	
1	FLT_01_WHITTEN3_OCHOA3_115kV_3PH	29.04	0.9953	LAG	16.38	0.9985	LAG	N/A	N/A	N/A	
2	FLT_02_WHITTEN3_PNDEROSATP3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	92.42	0.9557	LAG	
3	FLT_03_OCHOA3_PNDEROSATP3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	85.22	0.9619	LAG	
4	FLT_04_OCHOA3_AGAVERHILL3_115kV_3PH	29.10	0.9953	LAG	16.34	0.9985	LAG	77.89	0.9679	LAG	
5	FLT_05_AGAVERHILL3_REDBLUFF3_115kV_3PH	28.87	0.9954	LAG	N/A	N/A	N/A	N/A	N/A	N/A	
6	FLT_06_AGAVERHILL3_RDRUNNER3_115kV_3PH	N/A	N/A	N/A	16.34	0.9985	LAG	68.71	0.9748	LAG	
7	FLT_07_RDRUNNER3_BATTLEAXLE3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	72.18	0.9723	LAG	
8	FLT_08_RDRUNNER3_REDBLUFF3_115kV_3PH	N/A	N/A	N/A	16.72	0.9985	LAG	76.52	0.9690	LAG	
9	FLT_09_REDBLUFF3_BOPCOPKRLK3_115kV_3PH	31.35	0.9946	LAG	19.52	0.9979	LAG	78.17	0.9677	LAG	
10	FLT_10_BOPCOPKRLK3_WOODDRAW3_115kV_3PH	29.84	0.9551	LAG	17.98	0.9982	LAG	76.60	0.9689	LAG	
11	FLT_11_REDBLUFF3_SANDDUNES3_115kV_3PH	29.24	0.9953	LAG	16.82	0.9984	LAG	77.16	0.9685	LAG	
12	FLT_12_SANDDUNES3_WIPP3_115kV_3PH	29.53	0.9952	LAG	16.86	0.9984	LAG	79.93	0.9663	LAG	
13	FLT_13_WIPP3_IMC1TP3_115kV_3PH	29.32	0.9953	LAG	16.66	0.9985	LAG	N/A	N/A	N/A	
14	FLT_14_WIPP3_LIVSTNRIDGE3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	79.52	0.9666	LAG	
15	FLT_15_LIVSTNRIDGE3_IMC1TP3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	81.33	0.9652	LAG	
16	FLT_16_LIVSTNRIDGE3_SAGEBRUSH3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	75.41	0.9698	LAG	
17	FLT_17_SAGEBRUSH3_LAGARTO3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	79.83	0.9664	LAG	
18	FLT_18_LAGARTO3_CARDINAL3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	84.76	0.9623	LAG	
19	FLT_19_CARDINAL3_TEAGUE3_115kV_3PH	29.29	0.9953	LAG	16.80	0.9984	LAG	80.40	0.9659	LAG	
20	FLT_20_CARDINAL3_TARGA3_115kV_3PH	29.28	0.9953	LAG	16.79	0.9984	LAG	92.15	0.9559	LAG	
21	FLT_21_WHITTEN3_WARD3_115kV_3PH	29.31	0.9953	LAG	16.83	0.9984	LAG	80.35	0.9660	LAG	
22	FLT_22_WARD3_LEAROAD3_115kV_3PH	29.32	0.9953	LAG	16.84	0.9984	LAG	80.76	0.9656	LAG	
23	FLT_23_LEAROAD3_OILCENTER3_115kV_3PH	29.44	0.9952	LAG	16.93	0.9984	LAG	83.98	0.9630	LAG	
24	FLT_24_WHITTEN3_SJAL3_115kV_3PH	29.16	0.9953	LAG	16.77	0.9984	LAG	76.66	0.9689	LAG	
25	FLT_25_SJAL3_TEAGUE3_115kV_3PH	29.23	0.9953	LAG	16.78	0.9984	LAG	79.90	0.9663	LAG	
26	FLT_26_SJAL3_DOLLARHIDE3_115kV_3PH	30.18	0.9950	LAG	17.56	0.9983	LAG	75.43	0.9698	LAG	
27	FLT_27_TARGA3_NAENRICH3_115kV_3PH	29.44	0.9952	LAG	16.89	0.9984	LAG	95.36	0.9530	LAG	
28	FLT_28_NAENRICH3_DRINKARD3_115kV_3PH	29.33	0.9953	LAG	16.92	0.9984	LAG	77.02	0.9686	LAG	
29	FLT_29_NAENRICH3_ANDREWS3_115kV_3PH	29.18	0.9953	LAG	16.79	0.9984	LAG	86.20	0.9611	LAG	
30	FLT_30_ANDREWS3_ANDREWS6_115_230kV_3PH	29.22	0.9953	LAG	16.80	0.9984	LAG	77.31	0.9684	LAG	
31	FLT_31_ANDREWS6_G14012TAP_230kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	86.27	0.9611	LAG	
32	FLT_32_G14012TAP_HOBBSINT6_230kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	78.44	0.9675	LAG	
33	FLT_33_ANDREWS6_HOBBSINT6_230kV_3PH	29.17	0.9953	LAG	16.79	0.9984	LAG	86.27	0.9611	LAG	
34	FLT_34_HOBBSINT6_HOBBSINT3_230_115kV_3PH	29.57	0.9952	LAG	17.11	0.9984	LAG	78.02	0.9678	LAG	
35	FLT_35_HOBBSINT6_HOBBSINT7_230_345kV_3PH	62.83	0.9788	LAG	49.18	0.9868	LAG	169.77	0.8703	LAG	
36	FLT_36_HOBBSINT7_YOAKUM345_345kV_3PH	29.97	0.9950	LAG	17.81	0.9982	LAG	85.40	0.9618	LAG	
37	FLT_37_RDRUNNER3_RDRUNNER7_115_345kV_3PH	N/A	N/A	N/A	17.69	0.9983	LAG	66.48	0.9763	LAG	
38	FLT_38_RDRUNNER7_POTASHJCT_230kV_3PH	N/A	N/A	N/A	17.69	0.9983	LAG	N/A	N/A	N/A	
39	FLT_39_RDRUNNER7_KIOWA_345kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	74.10	0.9708	LAG	
40	FLT_40_KIOWA_HOBBSINT_345kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	123.02	0.9252	LAG	

PISIS-2014-002 Group 06 GEN-2014-008

**POI: Tap Eddy County – Crossroads 345kV
(GEN-2014-008 Tap, 560008)
MW at POI = 300.0**

**2015 Summer
Voltage = 1.0000 pu**

**2015 Winter
Voltage = 1.0011 pu**

**2025 Summer
Voltage = 1.0000 pu**

	Contingency Name	2015 Summer			2015 Winter			2025 Summer		
		Mvars at POI	Power Factor		Mvars at POI	Power Factor		Mvars at POI	Power Factor	
41	FLT_41_KIOWA_NLOVPLT_345kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	83.90	0.9630	LAG
42	FLT_42_G14008TAP_CROSSROADS_345kV_3PH	3.99	0.9999	LAG	-7.96	0.9996	LEAD	64.04	0.9780	LAG
43	FLT_43_G14008TAP_EDDYCNTY7_345kV_3PH	26.31	0.9962	LAG	22.09	0.9973	LAG	85.97	0.9613	LAG
44	FLT_44_EDDYCNTY7_EDDYNORTH6_345_230kV_3PH	20.78	0.9976	LAG	6.53	0.9998	LAG	70.44	0.9735	LAG
45	FLT_45_EDDYNORTH6_EDDYSTH3_230_115kV_3PH	29.39	0.9952	LAG	16.92	0.9984	LAG	77.32	0.9684	LAG
46	FLT_46_EDDYNORTH6_CHAVESCNTY6_230kV_3PH	26.41	0.9961	LAG	13.35	0.9990	LAG	78.22	0.9676	LAG
47	FLT_47_EDDYNORTH6_EDDYSOUTH6_230kV_3PH	15.03	0.9987	LAG	5.88	0.9998	LAG	81.48	0.9650	LAG
48	FLT_48_EDDYNORTH6_EPTNPD6_230kV_3PH	29.25	0.9953	LAG	16.82	0.9984	LAG	76.24	0.9692	LAG
49	FLT_49_EDDYSOUTH6_CUNNINHAM6_230kV_3PH	30.30	0.9949	LAG	16.82	0.9984	LAG	79.40	0.9667	LAG
50	FLT_50_EDDYSOUTH6_7RIVERS6_230kV_3PH	29.81	0.9951	LAG	17.86	0.9982	LAG	83.26	0.9636	LAG
51	FLT_51_EDDYSOUTH6_EDDYNTH3_230_115kV_3PH	29.42	0.9952	LAG	16.94	0.9984	LAG	77.50	0.9682	LAG
52	FLT_52_EDDYSTH3_PECOS3_115kV_3PH	29.11	0.9953	LAG	16.78	0.9984	LAG	78.03	0.9678	LAG
53	FLT_53_EDDYSTH3_CVDAYTON3_115kV_3PH	29.24	0.9953	LAG	16.76	0.9984	LAG	76.54	0.9690	LAG
54	FLT_54_EDDYNTH3_TWEEDY3_115kV_3PH	28.88	0.9954	LAG	16.47	0.9985	LAG	76.34	0.9691	LAG
55	FLT_55_EDDYNTH3_CV12MH_115kV_3PH	30.60	0.9948	LAG	20.86	0.9976	LAG	77.72	0.9680	LAG
56	FLT_56_EDDYNTH3_EDDYSTH3_115kV_3PH	29.41	0.9952	LAG	16.91	0.9984	LAG	76.01	0.9694	LAG
57	FLT_57_CROSSROADS_TOLK7_345kV_3PH	117.92	0.9307	LAG	129.10	0.9186	LAG	175.87	0.8627	LAG
58	FLT_58_TOLK7_TUCO2_345kV_3PH	33.59	0.9938	LAG	21.14	0.9975	LAG	87.16	0.9603	LAG
59	FLT_59_TOLK7_TOLKTAP6_345_230kV_3PH	65.02	0.9773	LAG	55.06	0.9836	LAG	84.70	0.9624	LAG
60	FLT_60_TOLKTAP6_TOLKEAST6_230kV_3PH	29.14	0.9953	LAG	16.62	0.9985	LAG	75.58	0.9697	LAG
61	FLT_61_TOLKTAP6_TOLKWEST6_230kV_3PH	30.11	0.9950	LAG	16.99	0.9984	LAG	75.23	0.9700	LAG
62	FLT_62_TOLKEAST6_ROSEVELTS6_230kV_3PH	29.44	0.9952	LAG	17.30	0.9983	LAG	76.54	0.9690	LAG
63	FLT_63_TOLKEAST6_TUPOINT6_230kV_3PH	31.47	0.9945	LAG	19.45	0.9979	LAG	78.12	0.9677	LAG
64	FLT_64_TOLKEAST6_PLANTX6_230kV_3PH	30.09	0.9950	LAG	17.94	0.9982	LAG	76.93	0.9687	LAG
65	FLT_65_TOLKWEST6_ROSEVELTN6_230kV_3PH	29.44	0.9952	LAG	17.29	0.9983	LAG	76.54	0.9690	LAG
66	FLT_66_TOLKWEST6_LAMBCNTY6_230kV_3PH	30.03	0.9950	LAG	17.55	0.9983	LAG	78.16	0.9677	LAG
67	FLT_67_TOLKWEST6_PLANTX6_230kV_3PH	30.15	0.9950	LAG	18.02	0.9982	LAG	76.98	0.9686	LAG
68	FLT_68_TOLKWEST6_G13027TAP2_230kV_3PH	37.45	0.9923	LAG	20.90	0.9976	LAG	77.39	0.9683	LAG
69	FLT_69_TUCO2_TUPOINT7_345kV_3PH	34.97	0.9933	LAG	21.93	0.9973	LAG	79.46	0.9667	LAG
70	FLT_70_TOLK7_POTTER7_345kV_3PH	33.35	0.9939	LAG	24.58	0.9967	LAG	85.40	0.9618	LAG
71	FLT_71_TUPOINT7_OKU7_345kV_3PH	56.59	0.9827	LAG	49.68	0.9866	LAG	84.97	0.9621	LAG
72	FLT_72_TUCO_G14007TAP_345kV_3PH	36.64	0.9926	LAG	23.58	0.9969	LAG	79.46	0.9667	LAG
73	FLT_73_G14007TAP_TUCO2_345kV_3PH	33.77	0.9937	LAG	20.80	0.9976	LAG	77.59	0.9681	LAG
74	FLT_74_TUPOINT7_TUPOINT6_345_230kV_3PH	34.62	0.9934	LAG	22.82	0.9971	LAG	77.72	0.9680	LAG
75	FLT_75_YOAKUM7_YOAKUM6_345_230kV_3PH	28.71	0.9955	LAG	17.62	0.9983	LAG	77.18	0.9685	LAG
76	FLT_76_TOLKWEST6_ROSEVELTN6_230kV_1PH_SB	30.31	0.9949	LAG	18.45	0.9981	LAG	77.32	0.9684	LAG
77	FLT_77_TOLKWEST6_PLANTX6_230kV_1PH_SB	39.93	0.9913	LAG	23.94	0.9968	LAG	76.56	0.9689	LAG
78	FLT_78_TOLKWEST6_LAMBCNTY6_230kV_1PH_SB	30.00	0.9950	LAG	19.00	0.9980	LAG	79.21	0.9669	LAG
79	FLT_79_TOLKEAST6_PLANTX6_230kV_1PH_SB	30.09	0.9950	LAG	17.94	0.9982	LAG	76.93	0.9687	LAG
80	FLT_80_EDDYNORTH6_CHAVESCNTY6_230kV_1PH_SB	27.23	0.9959	LAG	10.31	0.9994	LAG	92.26	0.9558	LAG
81	FLT_81_EDDYSOUTH6_CUNNINGHAM6_230kV_1PH_SB	18.80	0.9980	LAG	9.11	0.9995	LAG	92.16	0.9559	LAG
82	FLT_82_TOLKEAST6_PLANTX6_230kV_3PH_PO	38.15	0.9920	LAG	26.20	0.9962	LAG	82.82	0.9639	LAG
83	FLT_83_TUPOINT3_TUPOINT6_115_230kV_3PH_PO	25.49	0.9960	LAG	15.97	0.9986	LAG	75.27	0.9699	LAG
84	FLT_84_EDDYXF_TOLKXF_345_230kV_3PH_PO	56.54	0.9827	LAG	44.36	0.9892	LAG	79.68	0.9665	LAG
85	FLT_85_WHITTEN_OCHOA_115kV_3PH_PO	29.02	0.9954	LAG	16.38	0.9985	LAG	N/A	N/A	N/A
86	FLT_86_WHITTEN_PNDEROSATP3_115kV_3PH_PO	N/A	N/A	N/A	N/A	N/A	N/A	93.15	0.9550	LAG
87	FLT_87_WHITTEN_WARD_115kV_3PH_PO	29.24	0.9953	LAG	16.79	0.9984	LAG	83.40	0.9650	LAG

Table D-2: GEN-2014-065 Power Factor Analysis Results

PISIS-2014-002 Group 06 GEN-2014-065											
POI: Whitten 115kV (528540) MW at POI = 99.0			2015 Summer Voltage = 1.0000 pu			2015 Winter Voltage = 1.0011 pu			2025 Summer Voltage = 1.0000 pu		
Contingency Name	Mvars at POI	Power Factor	LEAD	Mvars at POI	Power Factor	LEAD	Mvars at POI	Power Factor	LEAD		
0	FLT_00_NoFault	-10.33	0.9946	LEAD	-16.24	0.9868	LEAD	104.90	0.6864	LAG	
1	FLT_01_WHITTEN3_OCHOA3_115kV_3PH	-20.42	0.9794	LEAD	-18.87	0.9823	LEAD	N/A	N/A	N/A	
2	FLT_02_WHITTEN3_PNDEROSATP3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	23.84	0.9722	LAG	
3	FLT_03_OCHOA3_PNDEROSATP3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	41.80	0.9213	LAG	
4	FLT_04_OCHOA3_AGAVERHILL3_115kV_3PH	-19.97	0.9803	LEAD	-19.34	0.9815	LEAD	70.09	0.8162	LAG	
5	FLT_05_AGAVERHILL3_REDBLUFF3_115kV_3PH	4.21	0.9991	LAG	N/A	N/A	N/A	N/A	N/A	N/A	
6	FLT_06_AGAVERHILL3_RDRUNNER3_115kV_3PH	N/A	N/A	N/A	3.37	0.9994	LAG	112.07	0.6621	LAG	
7	FLT_07_RDRUNNER3_BATTLEAXLE3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	96.33	0.7167	LAG	
8	FLT_08_RDRUNNER3_REDBLUFF3_115kV_3PH	N/A	N/A	N/A	-11.19	0.9937	LEAD	104.60	0.6874	LAG	
9	FLT_09_REDBLUFF3_BOPCOPKRLK3_115kV_3PH	-19.41	0.9813	LEAD	-21.49	0.9772	LEAD	99.26	0.7062	LAG	
10	FLT_10_BOPCOPKRLK3_WOODDRAW3_115kV_3PH	-15.95	0.9873	LEAD	-18.60	0.9828	LEAD	102.67	0.6941	LAG	
11	FLT_11_REDBLUFF3_SANDDUNES3_115kV_3PH	-7.64	0.9970	LEAD	-19.22	0.9817	LEAD	104.45	0.6879	LAG	
12	FLT_12_SANDDUNES3_WIPP3_115kV_3PH	7.47	0.9972	LAG	-13.17	0.9913	LEAD	109.87	0.6694	LAG	
13	FLT_13_WIPP3_IMC1TP3_115kV_3PH	-2.48	0.9997	LEAD	-20.33	0.9796	LEAD	N/A	N/A	N/A	
14	FLT_14_WIPP3_LIVSTNRIDGE3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	108.33	0.6746	LAG	
15	FLT_15_LIVSTNRIDGE3_IMC1TP3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	127.00	0.6148	LAG	
16	FLT_16_LIVSTNRIDGE3_SAGEBRUSH3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	106.71	0.6801	LAG	
17	FLT_17_SAGEBRUSH3_LAGARTO3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	103.86	0.6900	LAG	
18	FLT_18_LAGARTO3_CARDINAL3_115kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	103.25	0.6921	LAG	
19	FLT_19_CARDINAL3_TEAGUE3_115kV_3PH	-8.29	0.9965	LEAD	-17.68	0.9844	LEAD	102.99	0.6930	LAG	
20	FLT_20_CARDINAL3_TARGA3_115kV_3PH	-8.78	0.9961	LEAD	-18.17	0.9836	LEAD	134.38	0.5931	LAG	
21	FLT_21_WHITTEN3_WARD3_115kV_3PH	-9.99	0.9950	LEAD	-15.90	0.9874	LEAD	89.90	0.7403	LAG	
22	FLT_22_WARD3_LEAROAD3_115kV_3PH	-8.83	0.9960	LEAD	-15.11	0.9886	LEAD	92.30	0.7314	LAG	
23	FLT_23_LEAROAD3_OILCENTER3_115kV_3PH	-2.53	0.9997	LEAD	-9.35	0.9956	LEAD	112.84	0.6595	LAG	
24	FLT_24_WHITTEN3_SJAL3_115kV_3PH	-11.95	0.9928	LEAD	-19.27	0.9816	LEAD	69.20	0.8196	LAG	
25	FLT_25_SJAL3_TEAGUE3_115kV_3PH	-11.09	0.9938	LEAD	-19.71	0.9807	LEAD	98.53	0.7088	LAG	
26	FLT_26_SJAL3_DOLLARHIDE3_115kV_3PH	-14.90	0.9889	LEAD	-20.25	0.9797	LEAD	80.61	0.7755	LAG	
27	FLT_27_TARGA3_NAENRICH3_115kV_3PH	-0.30	1.0000	LEAD	-11.37	0.9935	LEAD	145.60	0.5623	LAG	
28	FLT_28_NAENRICH3_DRINKARD3_115kV_3PH	-4.39	0.9990	LEAD	-13.89	0.9903	LEAD	108.87	0.6728	LAG	
29	FLT_29_NAENRICH3_ANDREWS3_115kV_3PH	-16.04	0.9871	LEAD	-20.26	0.9797	LEAD	118.34	0.6416	LAG	
30	FLT_30_ANDREWS3_ANDREWS6_115_230kV_3PH	-12.33	0.9923	LEAD	-17.82	0.9842	LEAD	104.46	0.6879	LAG	
31	FLT_31_ANDREWS6_G14012TAP_230kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	118.32	0.6417	LAG	
32	FLT_32_G14012TAP_HOBBSINT6_230kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	104.27	0.6885	LAG	
33	FLT_33_ANDREWS6_HOBBSINT6_230kV_3PH	-16.08	0.9871	LEAD	-20.30	0.9796	LEAD	N/A	N/A	N/A	
34	FLT_34_HOBBSINT6_HOBBSINT3_230_115kV_3PH	-10.74	0.9942	LEAD	-16.76	0.9860	LEAD	104.27	0.6885	LAG	
35	FLT_35_HOBBSINT6_HOBBSINT7_230_345kV_3PH	-9.81	0.9951	LEAD	-15.56	0.9879	LEAD	129.79	0.6065	LAG	
36	FLT_36_HOBBSINT7_YOAKUM345_345kV_3PH	-10.70	0.9942	LEAD	-16.60	0.9862	LEAD	106.44	0.6811	LAG	
37	FLT_37_RDRUNNER3_RDRUNNER7_115_345kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	187.91	0.4661	LAG	
38	FLT_38_RDRUNNER7_POTASHJCT_230kV_3PH	N/A	N/A	N/A	14.57	0.9893	LAG	N/A	N/A	N/A	
39	FLT_39_RDRUNNER7_KIOWA_345kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	189.90	0.4623	LAG	
40	FLT_40_KIOWA_HOBBSINT_345kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	227.84	0.3985	LAG	
41	FLT_41_KIOWA_NLOVPLT_345kV_3PH	N/A	N/A	N/A	N/A	N/A	N/A	124.24	0.6232	LAG	
42	FLT_42_G14008TAP_CROSSROADS_345kV_3PH	-10.55	0.9944	LEAD	-16.37	0.9866	LEAD	106.57	0.6806	LAG	
43	FLT_43_G14008TAP_EDDYCNTY7_345kV_3PH	-9.62	0.9953	LEAD	-15.40	0.9881	LEAD	106.99	0.6792	LAG	
44	FLT_44_EDDYCNTY7_EDDYNORTH6_345_230kV_3PH	-9.63	0.9953	LEAD	-15.41	0.9881	LEAD	106.56	0.6807	LAG	

PISIS-2014-002 Group 06 GEN-2014-065

**POI: Whitten 115kV
(528540)
MW at POI = 99.0**

**2015 Summer
Voltage = 1.0000 pu**

**2015 Winter
Voltage = 1.0011 pu**

**2025 Summer
Voltage = 1.0000 pu**

	Contingency Name	2015 Summer			2015 Winter			2025 Summer		
		Mvars at POI	Power Factor	LEAD	Mvars at POI	Power Factor	LEAD	Mvars at POI	Power Factor	LAG
45	FLT_45_EDDYNORTH6_EDDYSTH3_230_115kV_3PH	-10.04	0.9949	LEAD	-16.10	0.9870	LEAD	105.92	0.6828	LAG
46	FLT_46_EDDYNORTH6_CHAVESCNTY6_230kV_3PH	-10.03	0.9949	LEAD	-15.55	0.9879	LEAD	106.23	0.6818	LAG
47	FLT_47_EDDYNORTH6_EDDYSOUTH6_230kV_3PH	-10.00	0.9949	LEAD	-15.50	0.9880	LEAD	105.87	0.6830	LAG
48	FLT_48_EDDYNORTH6_EPTNPD6_230kV_3PH	-10.33	0.9946	LEAD	-16.24	0.9868	LEAD	104.9	0.6864	LAG
49	FLT_49_EDDYSOUTH6_CUNNINHAM6_230kV_3PH	-9.82	0.9951	LEAD	-15.91	0.9873	LEAD	107.47	0.6775	LAG
50	FLT_50_EDDYSOUTH6_7RIVERS6_230kV_3PH	-7.05	0.9975	LEAD	-9.71	0.9952	LEAD	109.42	0.6709	LAG
51	FLT_51_EDDYSOUTH6_EDDYNTH3_230_115kV_3PH	-9.99	0.9950	LEAD	-16.06	0.9871	LEAD	106.05	0.6824	LAG
52	FLT_52_EDDYSTH3_PECOS3_115kV_3PH	-10.73	0.9942	LEAD	-16.66	0.9861	LEAD	105.93	0.6828	LAG
53	FLT_53_EDDYSTH3_CVDAYTON3_115kV_3PH	-10.07	0.9949	LEAD	-16.31	0.9867	LEAD	105.22	0.6853	LAG
54	FLT_54_EDDYNTH3_TWEEYD3_115kV_3PH	-10.38	0.9945	LEAD	-16.43	0.9865	LEAD	105.08	0.6857	LAG
55	FLT_55_EDDYNTH3_CV12MH_115kV_3PH	-10.68	0.9942	LEAD	-16.80	0.9859	LEAD	104.32	0.6884	LAG
56	FLT_56_EDDYNTH3_EDDYSTH3_115kV_3PH	-10.19	0.9947	LEAD	-16.75	0.9860	LEAD	104.81	0.6867	LAG
57	FLT_57_CROSSROADS_TOLK7_345kV_3PH	-10.51	0.9944	LEAD	-16.45	0.9865	LEAD	110.99	0.6657	LAG
58	FLT_58_TOLK7_TUCO2_345kV_3PH	-10.23	0.9947	LEAD	-16.44	0.9865	LEAD	105.46	0.6844	LAG
59	FLT_59_TOLK7_TOLKTAP6_345_230kV_3PH	-10.33	0.9946	LEAD	-16.10	0.9870	LEAD	106.04	0.6824	LAG
60	FLT_60_TOLKTAP6_TOLKEAST6_230kV_3PH	-10.30	0.9946	LEAD	-16.24	0.9868	LEAD	104.88	0.6864	LAG
61	FLT_61_TOLKTAP6_TOLKWEST6_230kV_3PH	-10.34	0.9946	LEAD	-16.20	0.9869	LEAD	104.98	0.6861	LAG
62	FLT_62_TOLKEAST6_ROSEVELTS6_230kV_3PH	-10.36	0.9946	LEAD	-16.26	0.9868	LEAD	105.13	0.6856	LAG
63	FLT_63_TOLKEAST6_TUPOINT6_230kV_3PH	-10.35	0.9946	LEAD	-16.27	0.9868	LEAD	105.07	0.6858	LAG
64	FLT_64_TOLKEAST6_PLANTX6_230kV_3PH	-10.34	0.9946	LEAD	-16.26	0.9868	LEAD	104.93	0.6862	LAG
65	FLT_65_TOLKWEST6_ROSEVELTN6_230kV_3PH	-10.37	0.9946	LEAD	-16.26	0.9868	LEAD	105.13	0.6856	LAG
66	FLT_66_TOLKWEST6_LAMBCNTY6_230kV_3PH	-10.35	0.9946	LEAD	-16.26	0.9868	LEAD	105.15	0.6855	LAG
67	FLT_67_TOLKWEST6_PLANTX6_230kV_3PH	-10.10	0.9948	LEAD	-16.26	0.9868	LEAD	104.93	0.6862	LAG
68	FLT_68_TOLKWEST6_G13027TAP2_230kV_3PH	-10.30	0.9946	LEAD	-16.07	0.9871	LEAD	105.33	0.6849	LAG
69	FLT_69_TUCO2_TUPOINT7_345kV_3PH	-10.48	0.9944	LEAD	-16.20	0.9869	LEAD	104.92	0.6863	LAG
70	FLT_70_TOLK7_POTTER7_345kV_3PH	-10.28	0.9947	LEAD	-16.39	0.9866	LEAD	105.62	0.6839	LAG
71	FLT_71_TUPOINT7_OKU7_345kV_3PH	-10.31	0.9946	LEAD	-16.16	0.9869	LEAD	105.39	0.6847	LAG
72	FLT_72_TUCO_G14007TAP_345kV_3PH	-10.32	0.9946	LEAD	-16.21	0.9869	LEAD	105.07	0.6858	LAG
73	FLT_73_G14007TAP_TUCO2_345kV_3PH	-10.31	0.9946	LEAD	-16.22	0.9868	LEAD	104.94	0.6862	LAG
74	FLT_74_TUPOINT7_TUPOINT6_345_230kV_3PH	-10.21	0.9947	LEAD	-16.20	0.9869	LEAD	105.10	0.6857	LAG
75	FLT_75_YOAKUM7_YOAKUM6_345_230kV_3PH	-10.62	0.9943	LEAD	-16.35	0.9866	LEAD	106.30	0.6815	LAG
76	FLT_76_TOLKWEST6_ROSEVELTN6_230kV_1PH_SB	-10.36	0.9946	LEAD	-16.27	0.9868	LEAD	105.16	0.6855	LAG
77	FLT_77_TOLKWEST6_PLANTX6_230kV_1PH_SB	-10.24	0.9947	LEAD	-16.16	0.9869	LEAD	105.64	0.6838	LAG
78	FLT_78_TOLKWEST6_LAMBCNTY6_230kV_1PH_SB	-10.39	0.9945	LEAD	-16.29	0.9867	LEAD	105.20	0.6853	LAG
79	FLT_79_TOLKEAST6_PLANTX6_230kV_1PH_SB	-10.35	0.9946	LEAD	-16.26	0.9868	LEAD	104.93	0.6863	LAG
80	FLT_80_EDDYNORTH6_CHAVESCNTY6_230kV_1PH_SB	-9.56	0.9954	LEAD	-14.97	0.9888	LEAD	106.70	0.6802	LAG
81	FLT_81_EDDYSOUTH6_CUNNINGHAM6_230kV_1PH_SB	-8.65	0.9962	LEAD	-14.18	0.9899	LEAD	108.50	0.6740	LAG
82	FLT_82_TOLKEAST6_PLANTX6_230kV_3PH_PO	-10.50	0.9944	LEAD	-16.40	0.9866	LEAD	105.23	0.6852	LAG
83	FLT_83_TUPOINT3_TUPOINT6_115_230kV_3PH_PO	-10.35	0.9946	LEAD	-16.25	0.9868	LEAD	104.78	0.6868	LAG
84	FLT_84_EDDYXF_TOLKXF_345_230kV_3PH_PO	-9.73	0.9952	LEAD	-15.54	0.9879	LEAD	107.17	0.6786	LAG
85	FLT_85_WHITTEN_OCHOA_115kV_3PH_PO	-13.30	0.9911	LEAD	-11.38	0.9935	LEAD	N/A	N/A	N/A
86	FLT_86_WHITTEN_PNDEROSATP3_115kV_3PH_PO	N/A	N/A	N/A	N/A	N/A	N/A	18.49	0.9830	LAG
87	FLT_87_WHITTEN_WARD_115kV_3PH_PO	-8.64	0.9962	LEAD	-16.86	0.9858	LEAD	49.11	0.8958	LAG

Table D-3: GEN-2014-065 25SP Power Factor Analysis Results with 2015 ITPNT Reactive Power Support

POI: Whitten 115kV (528540) MW at POI = 99.0		2025 Summer Voltage = 1.0000 pu		
Contingency Name	Mvars at POI	Power Factor		
0	FLT_00_NoFault	49.80	0.8934	LAG
1	FLT_01_WHITTEN3_OCHOA3_115kV_3PH	N/A	N/A	N/A
2	FLT_02_WHITTEN3_PNDEROSATP3_115kV_3PH	18.88	0.9823	LAG
3	FLT_03_OCHOA3_PNDEROSATP3_115kV_3PH	37.67	0.9346	LAG
4	FLT_04_OCHOA3_AGAVERHILL3_115kV_3PH	41.88	0.9210	LAG
5	FLT_05_AGAVERHILL3_REDBLUFF3_115kV_3PH	N/A	N/A	N/A
6	FLT_06_AGAVERHILL3_RDRUNNER3_115kV_3PH	64.48	0.8379	LAG
7	FLT_07_RDRUNNER3_BATTLEAXLE3_115kV_3PH	47.38	0.9020	LAG
8	FLT_08_RDRUNNER3_REDBLUFF3_115kV_3PH	50.11	0.8922	LAG
9	FLT_09_REDBLUFF3_BOPCOPKRLK3_115kV_3PH	47.56	0.9014	LAG
10	FLT_10_BOPCOPKRLK3_WOODDRAW3_115kV_3PH	48.89	0.8966	LAG
11	FLT_11_REDBLUFF3_SANDDUNES3_115kV_3PH	52.38	0.8839	LAG
12	FLT_12_SANDDUNES3_WIPP3_115kV_3PH	52.63	0.8830	LAG
13	FLT_13_WIPP3_IMC1TP3_115kV_3PH	N/A	N/A	N/A
14	FLT_14_WIPP3_LIVSTNRIDGE3_115kV_3PH	53.85	0.8785	LAG
15	FLT_15_LIVSTNRIDGE3_IMC1TP3_115kV_3PH	60.91	0.8517	LAG
16	FLT_16_LIVSTNRIDGE3_SAGEBRUSH3_115kV_3PH	55.46	0.8724	LAG
17	FLT_17_SAGEBRUSH3_LAGARTO3_115kV_3PH	48.57	0.8978	LAG
18	FLT_18_LAGARTO3_CARDINAL3_115kV_3PH	43.71	0.9148	LAG
19	FLT_19_CARDINAL3_TEAGUE3_115kV_3PH	49.80	0.8934	LAG
20	FLT_20_CARDINAL3_TARGA3_115kV_3PH	71.07	0.8124	LAG
21	FLT_21_WHITTEN3_WARD3_115kV_3PH	34.05	0.9456	LAG
22	FLT_22_WARD3_LEAROAD3_115kV_3PH	36.37	0.9386	LAG
23	FLT_23_LEAROAD3_OILCENTER3_115kV_3PH	56.41	0.8688	LAG
24	FLT_24_WHITTEN3_SJAL3_115kV_3PH	15.33	0.9882	LAG
25	FLT_25_SJAL3_TEAGUE3_115kV_3PH	45.32	0.9093	LAG
26	FLT_26_SJAL3_DOLLARHIDE3_115kV_3PH	25.50	0.9684	LAG
27	FLT_27_TARGA3_NAENRICH3_115kV_3PH	81.15	0.7734	LAG
28	FLT_28_NAENRICH3_DRINKARD3_115kV_3PH	53.23	0.8808	LAG
29	FLT_29_NAENRICH3_ANDREWS3_115kV_3PH	59.07	0.8588	LAG
30	FLT_30_ANDREWS3_ANDREWS6_115_230kV_3PH	49.04	0.8961	LAG
31	FLT_31_ANDREWS6_G14012TAP_230kV_3PH	59.04	0.8589	LAG
32	FLT_32_G14012TAP_HOBBSINT6_230kV_3PH	48.86	0.8967	LAG
33	FLT_33_ANDREWS6_HOBBSINT6_230kV_3PH	N/A	N/A	N/A
34	FLT_34_HOBBSINT6_HOBBSINT3_230_115kV_3PH	48.98	0.8963	LAG
35	FLT_35_HOBBSINT6_HOBBSINT7_230_345kV_3PH	59.15	0.8584	LAG
36	FLT_36_HOBBSINT7_YOAKUM345_345kV_3PH	49.50	0.8944	LAG
37	FLT_37_RDRUNNER3_RDRUNNER7_115_345kV_3PH	82.25	0.7692	LAG
38	FLT_38_RDRUNNER7_POTASHJCT_230kV_3PH	N/A	N/A	N/A
39	FLT_39_RDRUNNER7_KIOWA_345kV_3PH	82.70	0.7675	LAG
40	FLT_40_KIOWA_HOBBSINT_345kV_3PH	96.57	0.7159	LAG
41	FLT_41_KIOWA_NLOVPLT_345kV_3PH	53.26	0.8806	LAG
42	FLT_42_G14008TAP_CROSSROADS_345kV_3PH	50.37	0.8913	LAG
43	FLT_43_G14008TAP_EDDYCNTY7_345kV_3PH	49.94	0.8928	LAG
44	FLT_44_EDDYCNTY7_EDDYNORTH6_345_230kV_3PH	49.89	0.8930	LAG

POI: Whitten 115kV (528540) MW at POI = 99.0		2025 Summer Voltage = 1.0000 pu		
Contingency Name	Mvars at POI	Power Factor		
45	FLT_45_EDDYNORTH6_EDDYSTH3_230_115kV_3PH	50.07	0.8924	LAG
46	FLT_46_EDDYNORTH6_CHAVESCNTY6_230kV_3PH	49.93	0.8929	LAG
47	FLT_47_EDDYNORTH6_EDDYSOUTH6_230kV_3PH	49.77	0.8934	LAG
48	FLT_48_EDDYNORTH6_EPTNPD6_230kV_3PH	49.80	0.8933	LAG
49	FLT_49_EDDYSOUTH6_CUNNINHAM6_230kV_3PH	50.36	0.8913	LAG
50	FLT_50_EDDYSOUTH6_7RIVERS6_230kV_3PH	49.87	0.8931	LAG
51	FLT_51_EDDYSOUTH6_EDDYINTH3_230_115kV_3PH	50.12	0.8922	LAG
52	FLT_52_EDDYSTH3_PECOS3_115kV_3PH	49.86	0.8931	LAG
53	FLT_53_EDDYSTH3_CVDAYTON3_115kV_3PH	49.84	0.8932	LAG
54	FLT_54_EDDYINTH3_TWEEDY3_115kV_3PH	50.80	0.8897	LAG
55	FLT_55_EDDYINTH3_CV12MH_115kV_3PH	49.48	0.8945	LAG
56	FLT_56_EDDYINTH3_EDDYSTH3_115kV_3PH	49.74	0.8936	LAG
57	FLT_57_CROSSROADS_TOLK7_345kV_3PH	48.54	0.8979	LAG
58	FLT_58_TOLK7_TUCO2_345kV_3PH	49.67	0.8938	LAG
59	FLT_59_TOLK7_TOLKTAP6_345_230kV_3PH	50.24	0.8917	LAG
60	FLT_60_TOLKTAP6_TOLKEAST6_230kV_3PH	49.80	0.8934	LAG
61	FLT_61_TOLKTAP6_TOLKWEST6_230kV_3PH	49.87	0.8931	LAG
62	FLT_62_TOLKEAST6_ROSEVELTS6_230kV_3PH	49.81	0.8933	LAG
63	FLT_63_TOLKEAST6_TUCOINT6_230kV_3PH	49.80	0.8934	LAG
64	FLT_64_TOLKEAST6_PLANTX6_230kV_3PH	49.78	0.8934	LAG
65	FLT_65_TOLKWEST6_ROSEVELTN6_230kV_3PH	49.81	0.8933	LAG
66	FLT_66_TOLKWEST6_LAMBCNTY6_230kV_3PH	49.76	0.8935	LAG
67	FLT_67_TOLKWEST6_PLANTX6_230kV_3PH	49.78	0.8934	LAG
68	FLT_68_TOLKWEST6_G13027TAP2_230kV_3PH	50.04	0.8925	LAG
69	FLT_69_TUCO2_TUCOINT7_345kV_3PH	49.81	0.8933	LAG
70	FLT_70_TOLK7_POTTER7_345kV_3PH	49.67	0.8938	LAG
71	FLT_71_TUCOINT7_OKU7_345kV_3PH	49.84	0.8932	LAG
72	FLT_72_TUCO_G14007TAP_345kV_3PH	49.81	0.8933	LAG
73	FLT_73_G14007TAP_TUCO2_345kV_3PH	49.80	0.8933	LAG
74	FLT_74_TUCOINT7_TUCOINT6_345_230kV_3PH	49.88	0.8930	LAG
75	FLT_75_YOAKUM7_YOAKUM6_345_230kV_3PH	50.77	0.8898	LAG
76	FLT_76_TOLKWEST6_ROSEVELTN6_230kV_1PH_SB	49.79	0.8934	LAG
77	FLT_77_TOLKWEST6_PLANTX6_230kV_1PH_SB	50.06	0.8924	LAG
78	FLT_78_TOLKWEST6_LAMBCNTY6_230kV_1PH_SB	49.73	0.8936	LAG
79	FLT_79_TOLKEAST6_PLANTX6_230kV_1PH_SB	49.78	0.8934	LAG
80	FLT_80_EDDYNORTH6_CHAVESCNTY6_230kV_1PH_SB	49.99	0.8927	LAG
81	FLT_81_EDDYSOUTH6_CUNNINGHAM6_230kV_1PH_SB	51.17	0.8884	LAG
82	FLT_82_TOLKEAST6_PLANTX6_230kV_3PH_PO	49.67	0.8938	LAG
83	FLT_83_TUCOINT3_TUCOINT6_115_230kV_3PH_PO	49.70	0.8937	LAG
84	FLT_84_EDDYXF_TOLKXF_345_230kV_3PH_PO	50.31	0.8915	LAG
85	FLT_85_WHITTEN_OCHOA_115kV_3PH_PO	N/A	N/A	N/A
86	FLT_86_WHITTEN_PNDEROSATP3_115kV_3PH_PO	13.48	0.9909	LAG
87	FLT_87_WHITTEN_WARD_115kV_3PH_PO	-5.59	0.9984	LEAD

Appendix E – Reduced Wind Generation Analysis Results

Figure E-1: GEN-2014-008 with generators off and no shunt reactors

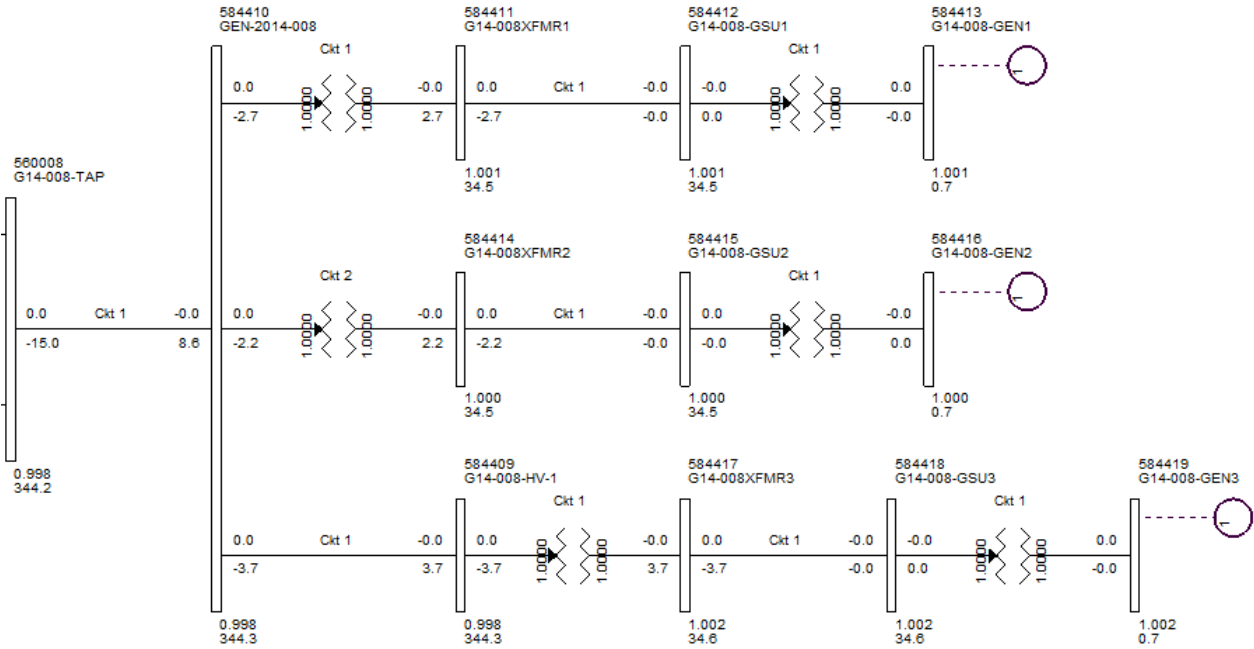
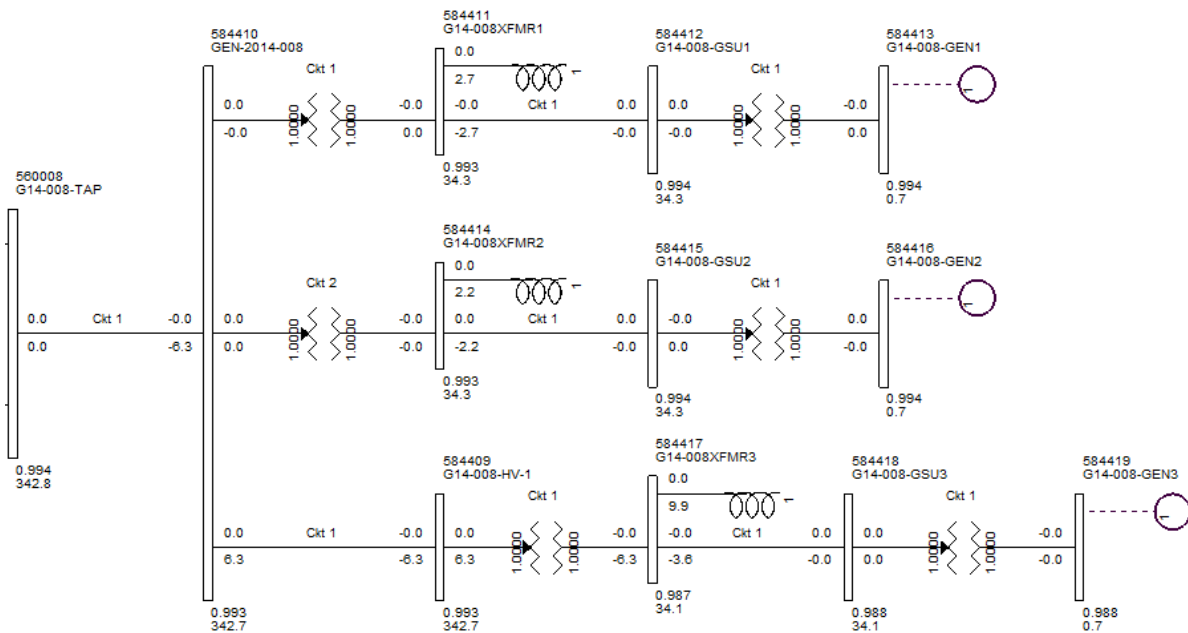


Figure E-2: GEN-2014-008 with generators off and shunt reactors added to the low side of the substation 345/34.5kV



Appendix F – Short Circuit Analysis Results

Table F-1: GEN-2014-008 25SP Short Circuit Analysis Results

POI: Tap Talk – Eddy County 345kV (GEN-2014-008 Tap, 560008) 5 Bus Level Short Circuit Analysis			3 Phase Short Circuit Current (Amps)	
Bus Number	Bus Name	Bus Voltage (kV)	Magnitude	Angle
528095	7-RIVERS 6	230	6099.2	-82.96
528325	7-RIVERS 6	115	6692.8	-79.72
526460	AMOCO_SS 6	230	9777.4	-82.44
527786	AMOCO_SS 6	115	7045.5	-79.4
528604	ANDREWS 6	230	7202.6	-83.75
528442	ANDREWS 6	115	11962.1	-74.52
528160	CARLSBAD 3	115	10838.4	-79.41
528331	CARLSBAD 3	13.8	24313.6	-87.46
527482	CHAVES_CNTY3	115	6333.6	-83.26
528018	CHAVES_CNTY3	115	7934.8	-80.02
527483	CHAVES_CNTY6	230	4165.5	-82.15
524294	CHAVES_CNTY6	34.5	17154.3	-88.05
527478	CHAVES_TR1 1	13.2	12541.1	-87.3
527996	CHAVES_TR1 1	69	2939.7	-70.49
527479	CHAVES_TR2 1	13.2	12446.3	-86.71
528000	CHAVES_TR2 1	115	10928	-80.16
528223	CHINA_DRAW 7	345	3816.5	-84.04
528362	CHINA_DRAW 7	13.8	34152.3	-88.78
527882	CUNINGHAM2 1	20	109989	-89.24
528137	CUNINGHAM2 1	115	8443.5	-78.76
527883	CUNINGHAM3 1	13.8	82198.7	-88.76
528145	CUNINGHAM3 1	69	8582.6	-86.27
527863	CUNNHM_TR1 1	13.2	25232.8	-86.13
528094	CUNNHM_TR1 1	115	8210.1	-81.29
527864	CUNNINHAM 3	115	29678.8	-84.3
528132	CUNNINHAM 3	115	6055.1	-73.43
527865	CUNNINHAM 6	230	18008.1	-86.5
524909	CUNNINHAM 6	230	9376.2	-82.2
527821	CV-DAYTON 3	115	6950.7	-79.31
528090	CV-DAYTON 3	13.2	18192	-87.61
527802	EDDY_CNTY 7	345	5159.5	-84.97
560025	EDDY_CNTY 7	345	11644.2	-85.55
528568	EDDY_CNTY 7	115	10016.3	-76.45
527799	EDDY_NORTH 6	230	8296.1	-83.84
584241	EDDY_NORTH 6	34.5	22418.2	-87.29
560017	EDDY_NORTH 6	115	10473	-79.63
527798	EDDY_NTH 3	115	11165	-84.05
528070	EDDY_NTH 3	115	7346.2	-79.03
527800	EDDY_SOUTH 6	230	8296.1	-83.84
524889	EDDY_SOUTH 6	230	4564.2	-83.11
527793	EDDY_STH 3	115	11165	-84.05
524295	EDDY_STH 3	34.5	19422.1	-87.98
527790	EDDY_SVC 1	8.5	45813	-87.18
528022	EDDY_SVC 1	69	6633	-83.34
527796	EDDY_TR 1	13.2	31630.1	-86.46
584130	EDDY_TR 1	230	9368.1	-83.14
560015	EDDY_TR 1	230	9486.5	-83.23
527797	EDDY_TR2 1	13.2	13878.9	-87.09
528040	EDDY_TR2 1	115	3436.6	-78.51
527795	EDDY_TR3 1	13.2	15533	-87.87
524875	EDDY_TR3 1	230	7738.1	-82.07
525844	ELK_1 1	18	44617.4	-88.83
527597	ELK_1 1	115	4949.1	-80.51
525845	ELK_4 1	18	44617.4	-88.83

POI: Tap Talk – Eddy County 345kV (GEN-2014-008 Tap, 560008) 5 Bus Level Short Circuit Analysis			3 Phase Short Circuit Current (Amps)	
Bus Number	Bus Name	Bus Voltage (kV)	Magnitude	Angle
527711	ELK_4_1	115	7320.8	-79.87
599960	EPTNP-D6	230	8296.1	-83.84
527146	EPTNP-D6	115	22245.5	-84.42
560007	G08-022-TAP	345	7914.2	-85.57
562487	G08-022-TAP	345	12693.8	-85.62
528601	G08-022-TAP	13.2	14258.4	-86.88
577104	G08-022-WEST	345	6488.6	-85.31
526161	G08-022-WEST	230	14169.6	-83.97
577122	G08-022XFMR3	34.5	8400.8	-87.36
526337	G08-022XFMR3	230	21594.3	-86.2
584412	G14-008-GSU1	34.5	13437.4	-86.26
526928	G14-008-GSU1	115	9177.3	-78.3
584415	G14-008-GSU2	34.5	13015.7	-85.26
527041	G14-008-GSU2	115	12923.2	-79.09
584409	G14-008-HV-1	345	6475.7	-85.36
511553	G14-008-HV-1	345	14382	-85.52
583950	G14-008-HV-1	115	6333.6	-83.26
560008	G14-008-TAP	345	7461.1	-85.42
560011	G14-008-TAP	345	11130.1	-85.28
528491	G14-008-TAP	115	15654.8	-81.94
584411	G14-008XFMR1	34.5	13997.1	-87.71
515458	G14-008XFMR1	345	11313.2	-85.74
583970	G14-008XFMR1	115	6027	-83.24
584414	G14-008XFMR2	34.5	13997	-87.71
515554	G14-008XFMR2	345	18215.4	-86.12
584131	G14-008XFMR2	34.5	12787.1	-87.3
584417	G14-008XFMR3	34.5	13997.1	-87.71
527143	G14-008XFMR3	13.2	23263	-88.05
584260	G14047&14062	345	6024	-83.05
511468	G14047&14062	345	12229.2	-84.59
583840	G14047&14062	230	9154.1	-82.99
584261	G14-047XFMR1	34.5	4635.9	-88.21
526784	G14-047XFMR1	230	14008.4	-84.87
584271	G14-062XFMR1	34.5	20610.6	-87.29
526792	G14-062XFMR1	115	5835.4	-75.92
560018	G14-070-TAP	230	9493.8	-83.18
525828	G14-070-TAP	115	20789.8	-84.4
528610	GAINES_GEN 6	230	8697.7	-85.27
528463	GAINES_GEN 6	115	16181.7	-80.11
528611	G14012TAP	230	10173.7	-85.02
525821	G14012TAP	13.2	29118.2	-87.68
577103	GEN-2008-022	345	7187.4	-85.43
584418	GEN-2008-022	34.5	13113.2	-85.5
583790	GEN-2008-022	345	12693.8	-85.62
584410	GEN-2014-008	345	6475.7	-85.36
577102	GEN-2014-008	34.5	19361	-86.87
528602	GEN-2014-008	115	10636.6	-82.49
584240	GEN-2014-063	345	8394.9	-82.67
526435	GEN-2014-063	230	11144.1	-82.48
527363	HIGG_3	115	10211.2	-74.43
527980	HIGG_3	69	5696.9	-78.02
527891	HOBBS_INT 3	115	33050.6	-85.75
525481	HOBBS_INT 3	230	29590.9	-85.9
527894	HOBBS_INT 6	230	20491.5	-86.98
584244	HOBBS_INT 6	34.5	22437.6	-87.28
577101	HOBBS_INT 6	34.5	18694.8	-85.28
527896	HOBBS_INT 7	345	10252.7	-86.43
562480	HOBBS_INT 7	230	10236.7	-83.06
528600	HOBBS_INT 7	13.2	14206.2	-86.91
527901	HOBBS_PLT1 1	18	74290.8	-89.17

POI: Tap Talk – Eddy County 345kV (GEN-2014-008 Tap, 560008) 5 Bus Level Short Circuit Analysis			3 Phase Short Circuit Current (Amps)	
Bus Number	Bus Name	Bus Voltage (kV)	Magnitude	Angle
528151	HOBBS_PLT1 1	115	9459.5	-78.63
527902	HOBBS_PLT2 1	18	74229.1	-89.17
528157	HOBBS_PLT2 1	13.2	4205.8	-86.3
527903	HOBBS_PLT3 1	18	104369	-88.85
525561	HOBBS_PLT3 1	24	176513	-88.28
527890	HOBBS_TR1 1	13.2	26795.3	-87.05
525213	HOBBS_TR1 1	230	10638.5	-82.28
527889	HOBBS_TR2 1	13.2	18466.8	-88.24
524911	HOBBS_TR2 1	230	9376.2	-82.2
527895	HOBBS_TR3 1	13.2	35489.6	-87.07
584262	HOBBS_TR3 1	34.5	4594.2	-86.53
577111	HOBBS_TR3 1	34.5	18946.8	-85.57
527999	INTREPDW_TP3	115	12811.8	-81.4
528222	INTREPDW_TP3	115	7567	-83.64
527965	KIOWA 7	345	6097.1	-84.39
584272	KIOWA 7	34.5	19573.3	-85.61
583340	KIOWA 7	230	9541.7	-84.28
527964	KIOWA_TR1 1	13.2	32247	-86.55
525637	KIOWA_TR1 1	230	5694.5	-82.17
528334	LE-LOVINTON3	115	8549.7	-81.83
528363	LE-LOVINTON3	12.5	8045	-88.42
528355	MADDOX 3	115	27621.8	-84.75
528392	MADDOX 3	115	6375.6	-73.43
528435	MILLEN 3	115	11668.1	-73.73
528394	MILLEN 3	115	8144	-75.7
527149	MUSTANG 6	230	15779	-85.65
527929	MUSTANG 6	69	6197.8	-83.22
528185	NLOV_PLT 7	345	4718.2	-84.16
525820	NLOV_PLT 7	13	37797	-88.56
528186	NLOV_PLT TR1	13.2	31730.5	-86.59
528361	NLOV_PLT TR1	13.8	88330.1	-88.76
528182	NORTH_LOVNG3	115	8574.9	-84
528348	NORTH_LOVNG3	115	8381.1	-81.77
511456	O.K.U.-7	345	5158.9	-84.29
527151	O.K.U.-7	230	15779	-85.65
527010	OXYBRU_TP 6	230	14141.3	-84.47
527928	OXYBRU_TP 6	13.2	5094.2	-85.67
527930	PCA 3	115	11340.3	-79.35
528158	PCA 3	13.2	22723.5	-74.29
528178	PECOS 3	115	11409.6	-80.74
528337	PECOS 3	115	8549.7	-81.83
527961	POTASH_JCT 2	69	8626.6	-86.34
528192	POTASH_JCT 2	115	6583.9	-82.21
527962	POTASH_JCT 3	115	15484.7	-83.46
525562	POTASH_JCT 3	24	178679	-88.27
527963	POTASH_JCT 6	230	6976.3	-83.96
528219	POTASH_JCT 6	13.2	30015.6	-86.29
527958	POTASH_TR1 1	13.2	22932.4	-89.13
528159	POTASH_TR1 1	69	4394.4	-85.26
527959	POTASH_TR2 1	13.2	4932.5	-89.53
528176	POTASH_TR2 1	13.2	19848	-85.94
527960	POTASH_TR3 1	13.2	4522.3	-87.93
528179	POTASH_TR3 1	230	6390.3	-83.39
523959	POTTER_CO 6	230	23725.2	-85.16
527194	POTTER_CO 6	115	7481	-76.31
523961	POTTER_CO 7	345	12796.7	-86.16
523097	POTTER_CO 7	345	18178.9	-85.77
584242	POTTER_CO 7	34.5	21292.4	-85.05
523957	POTTER_TR 1	13.2	6856	-88.92
527163	POTTER_TR 1	22	58938	-88.44

POI: Tap Tolk – Eddy County 345kV (GEN-2014-008 Tap, 560008) 5 Bus Level Short Circuit Analysis			3 Phase Short Circuit Current (Amps)	
Bus Number	Bus Name	Bus Voltage (kV)	Magnitude	Angle
528023	RDRNNER_TR11	13.2	32244.6	-85.66
528226	RDRNNER_TR11	115	6754.2	-79.64
528025	RDRUNNER 3	115	8789.8	-81.93
528230	RDRUNNER 3	115	6089.1	-77.41
528027	RDRUNNER 7	345	3970.9	-83.84
525819	RDRUNNER 7	13.2	23334.5	-88.01
524885	SN_JUAN_TAP6	230	4766.7	-83.05
527284	SN_JUAN_TAP6	115	9084	-74.28
524296	SPNSPUR_WND7	345	6058.4	-85.24
527276	SPNSPUR_WND7	230	7286.6	-82.6
525549	TOLK 7	345	13104.1	-86.56
577112	TOLK 7	34.5	19515.3	-86.95
528607	TOLK 7	18	66763.4	-88.49
525524	TOLK_EAST 6	230	32412	-86.41
527286	TOLK_EAST 6	115	10033.6	-74.66
525543	TOLK_TAP 6	230	32412	-86.41
523869	TOLK_TAP 6	230	3883.1	-81.96
584280	TOLK_TAP 6	115	5395.1	-82.99
525537	TOLK_TR 1	13.2	36556.1	-87.09
523309	TOLK_TR 1	230	6783.7	-82.53
584245	TOLK_TR 1	34.5	21017.7	-84.96
525531	TOLK_WEST 6	230	32412	-86.41
527362	TOLK_WEST 6	115	10589.3	-75.39
560021	TUCO_2	345	16637.7	-85.96
525840	TUCO_2	230	25534.9	-85.5
525830	TUCO_INT 6	230	25772	-85.49
527546	TUCO_INT 6	115	5087.5	-80.87
525832	TUCO_INT 7	345	16989.5	-86
523979	TUCO_INT 7	230	28133.9	-86.29
584290	TUCO_INT 7	345	9965.2	-84.39
525824	TUCO_TR1 1	13.2	32070.7	-87.48
527501	TUCO_TR1 1	115	5354.9	-81.46
525825	TUCO_TR2 1	13.2	23838.3	-88.42
527508	TUCO_TR2 1	115	4972.7	-81.55
526934	YOAKUM 3	115	16277.8	-83.05
527884	YOAKUM 3	13.8	73676.9	-88.58
526935	YOAKUM 6	230	17970.6	-84.98
524010	YOAKUM 6	230	21088.2	-84.84
526936	YOAKUM_345	345	9596.3	-86.27
577121	YOAKUM_345	34.5	8195.1	-86.01
528618	YOAKUM_345	69	6863.9	-83.48
526937	YOAKUM_TR1	13.2	35223.4	-87
524267	YOAKUM_TR1	230	10389.3	-83.2
526931	YOAKUM_TR1 1	13.2	24783.3	-89.65
527828	YOAKUM_TR1 1	115	10666.9	-83.1
526932	YOAKUM_TR2 1	13.2	6656.8	-89.47
527881	YOAKUM_TR2 1	13.8	76563.1	-89.01

Table F-2: GEN-2014-065 25SP Short Circuit Analysis Results

POI: Whitten 115kV (528540) 5 Bus Level Short Circuit Analysis			3 Phase Short Circuit Current (Amps)	
Bus Number	Bus Name	Bus Voltage (kV)	Magnitude	Angle
584363	A14-010-GEN1	13	4105.1	-87.71
528230	AGAVE_RHILL3	115	6089.1	-77.41
584360	ASGI2014-010	115	6047.1	-77.32
584380	ASGI2014-012	115	6120	-73.92
528040	BATTLE_AXE 3	115	3436.6	-78.51
528582	BYRD 3	115	7600.7	-74.84
528596	CARDINAL 3	115	7518.5	-77.86
528554	COOPER_RNCH3	115	6120	-73.92
528560	DOLLARHIDE 1	12.47	5576.9	-87.49
528561	DOLLARHIDE 3	115	4155.2	-72.5
584432	G14-065-GSU1	13.8	23567	-80.04
584431	G14-065XFMR1	13.8	23946.7	-81.52
584430	GEN-2014-065	115	5529.4	-75.36
527957	LAGARTO 3	115	4346.9	-77.21
528504	LEA_ROAD 1	12.47	4853.6	-84.97
528505	LEA_ROAD 3	115	5229.4	-73.59
528603	NA_ENRICH 3	115	10321.9	-81.46
528232	OCHOA 3	115	6047.1	-77.32
528552	OIL_CENTER 3	115	5670.6	-73.76
528239	PNDEROSATP 3	115	5520.6	-75.31
528240	PONDEROSA 3	115	3965.9	-75.6
528023	RDRNNER_TR11	13.2	32244.6	-85.66
528025	RDRUNNER 3	115	8789.8	-81.93
528027	RDRUNNER 7	345	3970.9	-83.84
528018	RED_BLUFF 3	115	7934.8	-80.02
528546	S_JAL 1	12.47	5283.9	-85.56
528547	S_JAL 3	115	5307.4	-75.28
527955	SAGE_BRUSH 3	115	4377.8	-77.17
528605	TARGA 3	115	8242.7	-78.81
528526	TEAGUE 3	115	5859.9	-76.23
528564	TOBOSOFLATS3	115	3209.6	-73.37
528519	WARD 3	115	5018.8	-73.71
528540	WHITTEN 3	115	5881.4	-75.1

K: Group 10 Dynamic Stability Analysis Report



Group 10 Stability Impact Study

PISIS-2014-002

February 2015
Generator Interconnection



Executive Summary

PISIS-2014-002 Interconnection Customers have requested a Definitive Interconnection System Impact Study detailing the impacts of interconnecting the generation projects shown below.

- GEN-2014-018 – 719MW/772MW (Summer Peak/Winter Peak) - One (1) 1 x 1 Combined Cycle “J” model generator single shaft combustion turbine (CT) and steam turbine (ST) rated 480MW (summer)/540MW (winter) and one additional CT rated 230MW (summer)/232MW(winter) connected on a new Point of Interconnection (POI) on Tenaska Gateway - Crockett 345kV transmission line on the American Electric Power West (AEPW) Transmission System.

A stability cluster impact analysis was performed for the generation projects from the PISIS-2014-002 Group 10 study. The analysis was performed on three (3) seasonal models including 2015 summer peak (15SP), the 2015 winter peak (15WP), and the 2025 summer peak (25SP) cases. These cases are modified versions of the 2014 model series of Model Development Working Group (MDWG) dynamic study models. Thirty-seven (37) contingencies were evaluated for the three (3) seasonal cases.

The stability analysis has determine with all BASE Case network upgrades and previously assigned network upgrades, the Group 10 projects were found to have voltage violations and instability for multiple contingencies listed below .

- FLT_01_G14018TAP_TENRUSK7_345kV_3PH (15SP, 15WP, 25SP)
- FLT_12_TENRUSK7_LEBROCK7_345kV_3PH (15SP, 15WP, 25SP)
- FLT_34_PIRKEY7_DIANA7_345V_1PH_SB (15SP, 15WP, 25SP)
- FLT_36_PIRKEY7_DIANA_345kV_3PH_PO (15SP, 15WP, 25SP)
- FLT_37_TENRUSK7_LEBROCK7_345kV_3PH_PO (15SP, 15WP, 25SP)

In order to mitigate voltage violations and system instability during contingency the following upgrades were needed:

- Build approximately seventy-four (74) miles of 345kV from GEN-2014-018 Tap – Diana.

After implementing the network upgrade mentioned above in upgrade simulation scenarios, all generators in the monitored areas remained stable and within the pre-contingency, voltage recovery, and post fault voltage recovery criterion of 0.7pu to 1.2pu for the entire modeled disturbances besides Fault 37.

Fault 37 was found to be unstable during the upgrade scenario with GEN-2014-018 Tap – Diana 345kV. GEN-2014-018 Generation was backed down to 0.0MW in efforts to mitigate the unstable response for the prior outage contingency. Fault 37 could additionally require other existing local area generation to reduce generation as well.

In addition to the stability impact analysis, a short circuit analysis was conducted using the current study upgrade 2025 summer peak case.

Nothing in this study should be construed as a guarantee of delivery or transmission service. If the customer wishes to sell power from the facility, a separate request for transmission service must be requested on Southwest Power Pool's OASIS by the Customer.

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1. Introduction

PISIS-2014-002 Interconnection Customer has requested a Preliminary Interconnection System Impact Study detailing the impacts of interconnecting the generation projects shown **Table 1-1** below.

Table 1-1 Group 10 Interconnection Request

Request	Capacity (MW)	Generator Model	Point of Interconnection
GEN-2014-018	One (1) combined cycle single shaft generator (480MW summer/540MW winter)	GENROU	Tap Tenaska Gateway – Crockett 345kV
	One (1) combustion turbine (230MW summer/232MW winter)	GENROU	

The previously queued generation projects in the Group 6 area are listed in **Table 1-2** below.

Table 1-2: Group 10 Prior Queued Interconnection Requests

Request	Capacity (MW)	Generator Model	Point of Interconnection
Gateway Power Station	634 ¹	GENROU (combined cycle)	Gateway 345kV
Lebrocke Power Station	?	GENROU (combined cycle)	Lebrocke 345kV
GEN-2014-027	60.0	GENSAL	Weleetka 138kV (510902)

A stability analysis was performed for the addition of the generation projects in Group 10. The analysis was performed on three (3) seasonal models including 2015 summer peak (15SP), the 2015 winter peak (15WP), and the 2025 summer peak (25SP) cases. These cases are modified versions of the 2014 model series of Model Development Working Group (MDWG) dynamic study models.

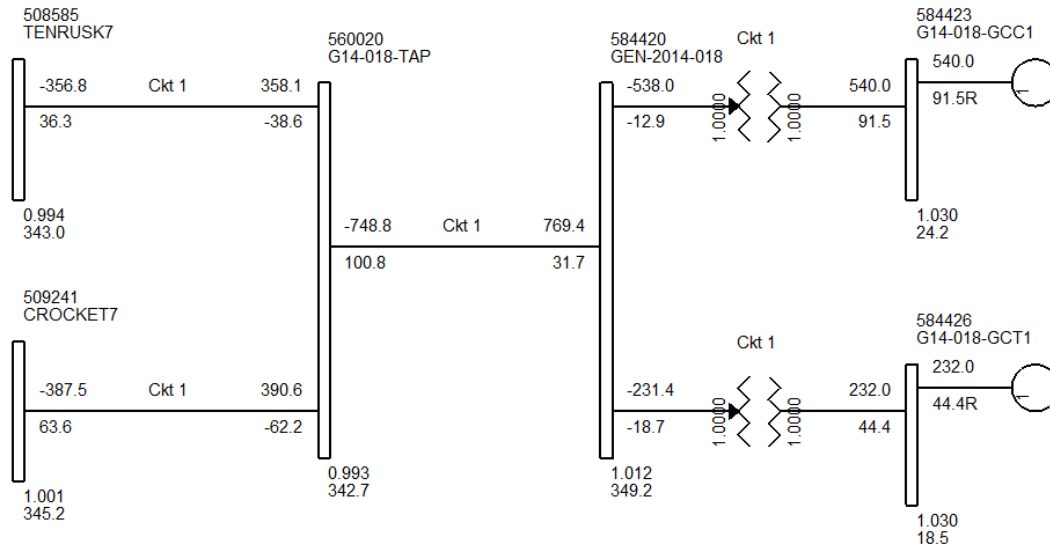
Nothing in this System Impact Study constitutes a request for transmission service or grants the Interconnection Customer any rights to transmission service. If the customer wishes to sell power from the facility, a separate request for transmission service must be requested on Southwest Power Pool's OASIS by the Customer.

¹ Gateway has a maximum interconnection limit of 634MW that is subject to change based on studies performed by AEPW.

2. Facilities

A one-line PSS/E slider drawings for each of the generation interconnection requests in this study is shown in **Figure 2-1**.

Figure 2-1: GEN-2014-018 One-line Diagram



3. Stability Analysis

Transient stability analysis is used to determine if the transmission system can maintain angular stability and ensure bus voltages stay within planning criteria bandwidth during and after a disturbance while considering the addition of a generator interconnection request.

Model Preparation

Transient stability analysis was performed using modified versions of the 2014 series of Model Development Working Group (MDWG) dynamic study models including the 2015 summer peak, 2015 winter peak, and the 2025 summer peak seasonal models. The cases are then loaded with prior queued interconnection requests and network upgrades assigned to those interconnection requests. Finally the prior queued and study generation are dispatched into the SPP footprint. Initial simulations are then carried out for a no-disturbance run of twenty (20) seconds to verify the numerical stability of the model. In addition, as noted in Table 1-2, the Gateway and Lebrocke Power Stations were dispatched up to their maximum interconnection limits in the models.

Disturbances

Thirty-seven (37) contingencies were identified for use in this study and are listed in **Table 3-1**. These contingencies are faults at locations defined by SPP Generation Interconnection Staff. These contingencies include three-phase N-1, single-phase stuck breaker, and three-phase prior outage faults. Single-phase line faults were simulated by applying fault impedance to the positive sequence network at the fault location to represent the effect of the negative and zero sequence networks on the positive sequence network. The fault impedance was computed to give a positive sequence voltage at the specified fault location of approximately 60% of pre-fault voltage. This method is in agreement with SPP current practice.

Except for transformer faults, the typical sequence of events for a three-phase fault is as follows:

1. apply fault at particular location
2. continue fault for five (5) cycles, clear the fault by tripping the faulted facility
3. after an additional twenty (20) cycles, re-close the previous facility back into the fault
4. continue fault for five (5) additional cycles
5. trip the faulted facility and remove the fault

Transformer faults are typically modeled as three-phase faults, unless otherwise noted. The sequence of events for a transformer fault is as follows:

1. apply fault for five (5) cycles
2. clear the fault by tripping the affected transformer facility (unless otherwise noted there will be no re-closing into a transformer fault)

The SPP areas monitored during the stability analysis were:

- 351: Entergy Texas, Inc. (EES) Zone 385²
- 520: American Electric Power West (AEPW)
- 524: Oklahoma Gas and Electric Company (OKGE)
- 525: Western Farmers Electric Cooperative (WFEC)
- 526: Southwestern Public Service Company (SPS)
- 531: Midwest Energy, Inc. (MIDW)
- 534: Sunflower Electric Power Corp. (SUNC)
- 536: Westar Energy, Inc. (WERE)

² Area 351 Zone 385 was monitored channels included machine angles and voltage levels above 100kV.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
0	FLT_00_NoFault	System Intact
1	FLT_01_G14018TAP_TENRUSK7_345kV_3PH	3 phase fault on the GEN-2014-018 Tap (560020) to Tenaska Gateway (508585) 345kV line, near GEN-2014-018 Tap. a. Apply fault at the GEN-2014-018 Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.
2	FLT_02_G14018TAP_CROCKET7_345kV_3PH	3 phase fault on the GEN-2014-018 Tap (560020) to Crockett (509241) 345kV line, near GEN-2014-018 Tap. a. Apply fault at the GEN-2014-018 Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.
3	FLT_03_CROCKET7_7GRIMES_345kV_3PH	3 phase fault on the Crockett (509241) to Grimes (334028) 345kV line, near Crockett. a. Apply fault at the Crockett 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
4	FLT_04_CROCKET7_CROCKET4_345_138kV_3PH	3 phase fault on the Crockett 345kV (509241) / 138kV (509240) / 13.2kV (509243) transformer, near Crockett. a. Apply fault at the Crockett 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
5	FLT_05_CROCKET4_BEREA4_138kV_3PH	3 phase fault on the Crockett (509240) to Berea (509321) 138kV line, near Crockett. a. Apply fault at the Crockett 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
6	FLT_06_CROCKET4_LATEXO4_138kV_3PH	3 phase fault on the Crockett (509240) to Latexo (509323) 138kV line, near Crockett. a. Apply fault at the Crockett 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
7	FLT_07_7GRIMES_4GRIMES_345_138kV_3PH	3 phase fault on the Grimes (334028) 345kV to Grimes (334026) 138kV transformer, near Grimes. a. Apply fault at the Grimes 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
8	FLT_08_4GRIMES_4COLSTTA_138kV_3PH	3 phase fault on Grimes (334026) to College Station (LN183) (334021) 138kV line, near Grimes. a. Apply fault at the Grimes 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
9	FLT_09_4GRIMES_4MAGAND_138kV_3PH	3 phase fault on the Grimes (334026) to Magnolia Andereson (334025) 138kV line, near Grimes. a. Apply fault at the Grimes 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
10	FLT_10_4GRIMES_4BENTWATER_138kV_3PH	3 phase fault on the Grimes (334026) to Bentwater (334039) 138kV line, near Grimes. a. Apply fault at the Grimes 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
11	FLT_11_4GRIMES_4MTZION_138kV_3PH	3 phase fault on the Grimes (334026) to Mount Zion (334060) 138kV line, near Grimes. a. Apply fault at the Grimes 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
12	FLT_12_TENRUSK7_LEBROCK7_345kV_3PH	3 phase fault on the Tenaska Gateway (508585) to LeBrock (508572) 345kV line, near Tenaska Gateway. a. Apply fault at the Tenaska Gateway 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.
13	FLT_13_LEBROCK7_PIRKEY7_345kV_3PH	3 phase fault on the LeBrock (508572) to Pirkey (508563) 345kV line, near LeBrock. a. Apply fault at the LeBrock 345kV bus. b. Clear fault after 5 cycles and trip the faulted line.
14	FLT_14_PIRKEY7_DIANA7_345kV_3PH	3 phase fault on the Pirkey (508563) to Diana (508832) 345kV line, near Pirkey. a. Apply fault at the Pirkey 345kV bus. b. Clear fault after 5 cycles and trip the faulted line.
15	FLT_15_PIRKEY7_PIRKEY4_345_138kV_3PH	3 phase fault on the Pirkey 345kV (508563) / 138kV (508563) / 13.2kV (508587) transformer, near Pirkey. a. Apply fault at the Pirkey 345kV bus. b. Clear fault after 5 cycles and trip the faulted line.
16	FLT_16_PIRKEY4_MARSHL4_138kV_3PH	3 phase fault on the Pirkey (508563) to Marshall (508557) 138kV line, near Pirkey. a. Apply fault at the Pirkey 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line.
17	FLT_17_PIRKEY4_SABMINT4_138kV_3PH	3 phase fault on the Pirkey (508563) to Sabine Mining Tap (508566) 138kV line, near Pirkey. a. Apply fault at the Pirkey 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line.
18	FLT_18_PIRKEY4_WHITNEY4_138kV_3PH	3 phase fault on the Pirkey (508563) to Whitney (508575) 138kV line, near Pirkey. a. Apply fault at the Pirkey 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line.
19	FLT_19_PIRKEY4_EASTON4_138kV_3PH	3 phase fault on the Pirkey (508563) to Easton (509092) 138kV line, near Pirkey. a. Apply fault at the Pirkey 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line.
20	FLT_20_DIANA7_SWSHV7_345kV_3PH	3 phase fault on the Diana (508832) to Southwest Shreveport (507760) 345kV line, near Diana. a. Apply fault at the Diana 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
21	FLT_21_DIANA7_WELSH7_345kV_3PH	3 phase fault on the Diana (508832) to Welsh (508359) 345kV line, near Diana. a. Apply fault at the Diana 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
22	FLT_22_DIANA7_DIANA4_345_138kV_3PH	3 phase fault on the Diana 345kV (508832) / 138kV (508831) / 13.8kV (508843) transformer circuit #1, near Diana 345kV. a. Apply fault at the Diana 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
23	FLT_23_DIANA4_LSSOUTH4_138kV_3PH	3 phase fault on the Diana (508831) to Lone Star South (508297) 138kV line, near Diana. a. Apply fault at the Diana 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
24	FLT_24_DIANA4_PERDUE4_138kV_3PH	3 phase fault on the Diana (508831) to Perdue (508351) 138kV line, near Diana. a. Apply fault at the Diana 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
25	FLT_25_DIANA4_SPRHILL4_138kV_3PH	3 phase fault on the Diana (508831) to Spring Hill (508571) 138kV line, near Diana. a. Apply fault at the Diana 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
26	FLT_26_DIANA4_NGPLTAP4_138kV_3PH	3 phase fault on the Diana (508831) to NGPL Tap (508837) 138kV line, near Diana. a. Apply fault at the Diana 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
27	FLT_27_WELSH7_NWTKARK7_345kV_3PH	3 phase fault on the Welsh (508072) to Northwest Texarkana (508072) 345kV line, near Welsh. a. Apply fault at the Welsh 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.
28	FLT_28_WELSH7_LYDIA7_345kV_3PH	3 phase fault on the Welsh (508072) to Lydia (508298) 345kV line, near Welsh. a. Apply fault at the Welsh 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.
29	FLT_29_WELSH7_WILKES7_345kV_3PH	3 phase fault on the Welsh (508072) to Wilkes (508359) 345kV line, near Welsh. a. Apply fault at the Welsh 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
30	FLT_30_LYDIA7_VALINT7_345kV_3PH	3 phase fault on the Lydia (508298) to Valliant (510911) 345kV line, near Welsh. a. Apply fault at the Welsh 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line, trip Lydia to Welsh (508072) line, and Lydia to Northwest Texarkana (508072) line c. Wait 20 cycles, and then re-close the lines in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the lines in (b) and remove fault.
31	FLT_31_NWTEXARK7_TURK7_345kV_3PH	3 phase fault on the Northwest Texarkana (508072) to Turk (507455) 345kV line, near Northwest Texarkana. a. Apply fault at the Northwest Texarkana 345V bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
32	FLT_32_NWTEXARK7_NWTEXARK4_345_138kV_3PH	3 phase fault on the Northwest Texarkana 345kV (508072) / 138kV (508071) / 13.8kV (508100) transformer circuit #1, near Northwest Texarkana 345kV. a. Apply fault at the Northwest Texarkana 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
33	FLT_33_NWTEXARK7_VALINT7_345kV_3PH	3 phase fault on the Northwest Texarkana (508072) to Valliant (510911) 345kV line, near Northwest Texarkana. a. Apply fault at the Northwest Texarkana 345V bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
34	FLT_34_PIRKEY7_DIANA7_345V_1PH_SB	Single phase fault with stuck breaker on the Pirkey (508563) to Diana (508832) 345kV line, near Pirkey. a. Apply fault at the Pirkey 345kV bus. b. Run 5 cycles, and then open Diana end of the faulted line. c. Run 10 cycles, and then clear the fault and disconnect Pirkey (508563) 345kV bus.
35	FLT_35_CROCKET7_7GRIMES_345kV_1PH_SB	Single phase fault with stuck breaker on the Crockett (525531) to Grimes (524909) 345kV line, near Crockett. a. Apply fault at the Crockett 345kV bus. b. Run 5 cycles, and then open Grimes end of the faulted line. c. Run 10 cycles, and then clear the fault and disconnect Crockett 345kV (525531) 345kV bus.
36	FLT_36_PIRKEY7_DIANA_345kV_3PH_PO ³	(Prior Outage) Pirkey (508563) to Diana (508832) 345kV circuit #1 out of service then 3 phase fault on the GEN-2014-018 Tap 345kV (560020) to Diana (508832) 345kV circuit #1, near GEN-2014-018 Tap. a. Pirkey (508563) to Diana (508832) 345kV circuit #1 out of service then solve. b. Apply fault at the GEN-2014-018 Tap 345kV bus. c. Clear fault after 5 cycles by tripping the faulted line.

³ This prior outage contingency event is only applicable for upgrade scenarios that include the current study upgrade line from GEN-2014-018 Tap – Diana 345kV.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
37	FLT_37_TENRUSK7_LEBROCK7_345kV_3PH_PO ⁴	<p>(Prior Outage) Tenaska Gateway (508585) to LeBrock (508572) 345kV circuit #1 out of service then 3 phase fault on the GEN-2014-018 Tap 345kV (560020) to Diana (508832) 345kV circuit #1, near GEN-2014-018 Tap.</p> <p>a. Tenaska Gateway (508585) to LeBrock (508572) 345kV circuit #1 out of service then solve.</p> <p>b. Apply fault at the GEN-2014-018 Tap 345kV bus.</p> <p>c. Clear fault after 5 cycles by tripping the faulted line.</p>

Results

The stability analysis was performed and the results are summarized in **Table 3-2**. System instability issues were observed on faults numbers 01, 12, 34, 36, and 37. The stability plots will be available upon customer request.

It should be noted that there are existing stability concerns for this area of the Transmission System. Tenaska Gateway generation was studied at the previously approved 634MW total generation injection limit into the SPP transmission system.

During the analysis it was observed that Faults 01, 12, 34, 36 and 37 would cause non-damping oscillatory responses for the existing generation facilities on the Crockett - Pirkey 345kV line. Additionally, an unstable system angular response was experienced during these faults.

In order to mitigate voltage violations and system instability during contingency the following upgrades were added that were identified as necessary in the powerflow analysis:

- Build approximately seventy-four (74) miles of 345kV from GEN-2014-018 Tap – Diana.

The upgrade mentioned above was added to the models and simulations were run again. These results are shown in **Table 3-2**.

Table 3-2: Stability Analysis Results

	Contingency Number and Name	2015SP	2015WP	2025SP
1	FLT_01_G14018TAP_TENRUSK7_345kV_3PH	STABLE	STABLE	STABLE
12	FLT_12_TENRUSK7_LEBROCK7_345kV_3PH	STABLE	STABLE	STABLE
34	FLT_34_PIRKEY7_DIANA7_345V_1PH_SB	STABLE	STABLE	STABLE
35	FLT_35_CROCKET7_7GRIMES_345kV_1PH_SB	STABLE	STABLE	STABLE
36	FLT_36_PIRKEY7_DIANA_345kV_3PH_PO	STABLE	STABLE	STABLE
37	FLT_37_TENRUSK7_LEBROCK7_345kV_3PH_PO	UNSTABLE	UNSTABLE	UNSTABLE

⁴ This prior outage contingency event is only applicable for upgrade scenarios that include the current study upgrade line from GEN-2014-018 Tap – Diana 345kV.

Fault 37 was found to be unstable during the upgrade scenario with GEN-2014-018 Tap – Diana 345kV. GEN-2014-018 Generation was backed down to 0.0MW in efforts to mitigate the unstable response for the prior outage contingency. Fault 37 could additionally require other existing local area generation to reduce generation as well.

For applicable generators in the area, it could be possible that the Power System Stabilizers for the existing generators might need to be tuned for the addition of GEN-2014-018 generation.

4. Short Circuit Analysis

The short circuit analysis was performed on the current study upgrade 2025 Summer Peak power flow case using the PSS/E ASCC program. Since the power flow model does not contain negative and zero sequence data, only three-phase symmetrical fault current levels were calculated at the point of interconnection up to and including five levels away. The following pages list the results of the analysis.

Results

The results of the short circuit analysis are shown in **Table D-1** for GEN-2014-018 **Appendix D**.

Short Circuit Analysis was conducting using flat conditions with the following PSS/E ASCCC program settings:

- BUS VOLTAGES SET TO 1 PU AT 0 PHASE ANGLE
- GENERATOR P=0, Q=0
- TRANSFORMER TAP RATIOS=1.0 PU and PHASE ANGLES=0.0
- LINE CHARGING=0.0 IN +/-/0 SEQUENCE
- LOAD=0.0 IN +/- SEQUENCE, CONSIDERED IN ZERO SEQUENCE
- LINE/FIXED/SWITCHED SHUNTS=0.0 AND MAGNETIZING ADMITTANCE=0.0 IN +/-/0 SEQUENCE
- DC LINES AND FACTS DEVICES BLOCKED
- TRANSFORMER ZERO SEQUENCE IMPEDANCE CORRECTIONS IGNORED

5. Conclusion

PISIS-2014-002 Interconnection Customers have requested an Impact Study to determine the impacts of interconnecting generation to the SPP Transmission System.

A stability cluster impact analysis was performed for the generation projects from the PISIS-2014-002 Group 10 study. The analysis was performed on three (3) seasonal models including 2015 summer peak (15SP), the 2015 winter peak (15WP), and the 2025 summer peak (25SP) cases. These cases are modified versions of the 2014 model series of Model Development Working Group (MDWG) dynamic study models. Thirty-seven (37) contingencies were evaluated for the three (3) seasonal cases.

The stability analysis has determine with all BASE Case network upgrades and previously assigned network upgrades, the Group 10 projects were found to have voltage violations and instability for multiple contingencies listed below .

- FLT_01_G14018TAP_TENRUSK7_345kV_3PH (15SP, 15WP, 25SP)
- FLT_12_TENRUSK7_LEBROCK7_345kV_3PH (15SP, 15WP, 25SP)
- FLT_34_PIRKEY7_DIANA7_345V_1PH_SB (15SP, 15WP, 25SP)
- FLT_36_PIRKEY7_DIANA_345kV_3PH_PO (15SP, 15WP, 25SP)
- FLT_37_TENRUSK7_LEBROCK7_345kV_3PH_PO (15SP, 15WP, 25SP)

In order to mitigate voltage violations and system instability during contingency the following upgrades were needed:

- Build approximately seventy-four (74) miles of 345kV from GEN-2014-018 Tap – Diana.

After implementing the network upgrade mentioned above in upgrade simulation scenarios, all generators in the monitored areas remained stable and within the pre-contingency, voltage recovery, and post fault voltage recovery criterion of 0.7pu to 1.2pu for the entire modeled disturbances besides Fault 37.

Fault 37 was found to be unstable during the upgrade scenario with GEN-2014-018 Tap – Diana 345kV. GEN-2014-018 Generation was backed down to 0.0MW in efforts to mitigate the unstable response for the prior outage contingency. Fault 37 could additionally require other existing local area generation to reduce generation as well.

In addition to the stability impact analysis, a short circuit analysis was conducted using the current study upgrade 2025 summer peak case.

Nothing in this study should be construed as a guarantee of delivery or transmission service. If the customer wishes to sell power from the facility, a separate request for transmission service must be requested on Southwest Power Pool's OASIS by the Customer.

Appendix A – 2015 Summer Peak Stability Plots

(Available on request)

Appendix B – 2015 Winter Peak Stability Plots

(Available on request)

Appendix C – 2025 Summer Peak Stability Plots

(Available on request)

Appendix D – Short Circuit Analysis Results

Table D-1: GEN-2014-018 25SP Short Circuit Analysis Results

POI: Tap Talk – Eddy County 345kV (GEN-2014-018 Tap, 560020) 5 Bus Level Short Circuit Analysis			3 Phase Short Circuit Current (Amps)	
Bus Number	Bus Name	Bus Voltage (kV)	Magnitude	Angle
334030	1FRNTR 1	18	91897	-89.23
334031	1FRNTR 2	18	91897	-89.23
334032	1FRNTR 3	18	91897	-89.23
334033	1FRNTR 4	23	100190.9	-89.07
337363	3SAREPT	115	19468.5	-84.6
334039	4BENTWATER!	138	6553.9	-79.47
334020	4BRYAN	138	4785.7	-77.24
334021	4COLSTTA	138	6212.7	-78.42
334026	4GRIMES	138	17569.5	-85.5
334058	4L558T485	138	8552.8	-78.79
334025	4MAG AND	138	6939.7	-79.57
334060	4MT.ZION	138	7935.3	-79.18
334024	4SOTA 1	138	6378.6	-78.66
334022	4SPEEDWY	138	5900.1	-78.26
334040	4WALDEN	138	6766.4	-79.5
337562	7ELDEHV	345	12171.5	-87.28
334029	7FRONTR	345	9946.8	-87.05
334028	7GRIMES	345	9826.9	-86.76
337376	7SAREPT	345	9709.7	-84.67
509321	BEREA 4	138	5783.4	-85.33
508335	BIGSNDY2	69	6821.9	-76.78
508286	CAMPCOR4	138	9290.7	-81.94
500140	CARROLL6	230	10673.2	-84.34
507771	CEDARGR4	138	23368.4	-84.25
508540	CLARKSV2	69	12052.8	-79.77
509243	CROCK-B1	13.8	14004.9	-88.91
509240	CROCKET4	138	7751.9	-86.88
509241	CROCKET7	345	7681.5	-85.6
508831	DIANA 4	138	32482	-85.98
508832	DIANA 7	345	22266.5	-86.4
508843	DIANA-M1	13.8	25105.2	-87.47
508845	DIANA-N1	13.8	32184.9	-88.53
508844	DIANA-S1	13.8	16484.3	-88.92
500260	DOLHILL6	230	10785.3	-85.5
500250	DOLHILL7	345	11310.5	-87.31
508582	EASTEX 4	138	22247.3	-84.27
509092	EASTON 4	138	26783.4	-85.45
508369	EXXONM 4	138	7262.8	-80.65
507727	FLOURNY4	138	16962	-81.36
584423	G14-018-GCC1	23.5	101174.2	-88.19
584426	G14-018-GCT1	18	88103.4	-88.44
560020	G14-018-TAP	345	13761.6	-86.35
501801	G1DOLHIL	24	159753.9	-88.66
584420	GEN-2014-018	345	8088.2	-85.99
507732	GENMOTR4	138	18198.3	-81.79
508341	GILMER 2	69	5071.1	-72.48
509322	GRAPLND4	138	4932.6	-83.87
507735	HARTSIS4	138	16862.3	-83.92
521157	HUGO 7	345	10762.3	-85.84
508835	JEFFRSN4	138	13817.7	-81.09
508548	KNOXLEE4	138	28529.6	-85.45
509323	LATEXO 4	138	6699.5	-85.78
506752	LEBROCG1	18	72923.7	-89.52

POI: Tap Talk – Eddy County 345kV (GEN-2014-018 Tap, 560020) 5 Bus Level Short Circuit Analysis			3 Phase Short Circuit Current (Amps)	
Bus Number	Bus Name	Bus Voltage (kV)	Magnitude	Angle
506753	LEBROCG2	18	72745.4	-89.5
508572	LEBROCK7	345	18970.8	-87.04
506754	LEBROCS1	18	82183	-89.44
508358	LHAWKIN4	138	6559.7	-80.31
508550	LIBCYTP4	138	9890.1	-81.8
508806	LIEBERM4	138	20726	-80
507738	LINWOOD4	138	23532.1	-84.31
508593	LLAMON1-	13.8	14716.7	-86.18
508551	LLAMOND2	69	18270.8	-82.37
508552	LLAMOND4	138	7105.3	-84.94
508554	LONGVHT4	138	14605.2	-81.66
508819	LONGW1-1	13.2	29031.2	-89.06
508808	LONGWD 4	138	27026.1	-82.51
508809	LONGWD 7	345	16041	-85.26
508320	LONSTAR2	69	92817.4	-89.14
508295	LSREC 2	69	14306.5	-71.74
508325	LSS-1	12.47	19981.2	-88.89
508296	LSSOUTH2	69	33224.7	-77.98
508297	LSSOUTH4	138	20881	-82.77
508298	LYDIA 7	345	12747.5	-85.37
500525	MANCOMP 6	230	7112	-84.47
508576	MARAUTO2	69	18169.2	-84.42
508557	MARSHL-4	138	17047.5	-84.31
508591	MRS4#11	12.47	21341.2	-88.84
508592	MRS4#21	12.47	21068.2	-88.85
508064	MUNZCTY4	138	6562.3	-79.02
509325	MUSTPR4	138	3543.6	-83.42
508049	NASH 4	138	19242	-84.5
508560	NEWGLAD4	138	9846.5	-82.02
508827	NGPL 4	138	10269	-77.2
508837	NGPLTAP4	138	13698.9	-80.36
507774	NORAM 4	138	18176.2	-78.56
508070	NWT-BNT4	138	23687.1	-85.09
508100	NWTEX1-1	13.8	28540.8	-89.54
508101	NWTEX2-1	13.8	28361	-89.51
508071	NWTXARK4	138	24671.6	-85.22
508072	NWTXARK7	345	13223.7	-85.43
508816	OAKPH 4	138	20571.1	-81.47
507431	PATTERS4	138	13008.1	-82.21
508356	PERDUE 1	13.8	9850.3	-78.63
508350	PERDUE 2	69	13168.2	-81.66
508351	PERDUE 4	138	11203.5	-82.96
509403	PIRKEY 1	24	197386.2	-88.5
508562	PIRKEY 4	138	45681.6	-86.97
508563	PIRKEY 7	345	19871.9	-87.03
508587	PIRKY1-1	13.8	29942.3	-88.25
508588	PIRKY2-1	13.8	20579.8	-89.04
508328	PITTS1-1	14.5	14026.6	-87.95
508312	PITTSB_2	69	9396.5	-82.29
508313	PITTSB_4	138	10039.8	-82.2
510907	PITTSB-7	345	13219.6	-84.54
508564	PLILER 4	138	12219.4	-80.77
507748	POWELL 4	138	20079.7	-84.57
507754	S SHV 2	69	20085.9	-83.98
507755	S SHV 4	138	24303.7	-84.1
508577	SABINEM4	138	23388.5	-80.35
508566	SABMINT4	138	36491.4	-85.2
508567	SCOTTSV4	138	12371.7	-79.19
508368	SCROGNSSW4	138	6310.5	-82.59
508569	SEMRSHL4	138	13721	-79.56

POI: Tap Talk – Eddy County 345kV (GEN-2014-018 Tap, 560020) 5 Bus Level Short Circuit Analysis			3 Phase Short Circuit Current (Amps)	
Bus Number	Bus Name	Bus Voltage (kV)	Magnitude	Angle
509326	SLOCUM 4	138	4016.2	-82.8
508571	SPRHILL4	138	8482.2	-84.84
507757	SPRIDGE4	138	11134.5	-84.05
507775	SSHV1-1	13.2	7608.6	-89.43
507776	SSHV2-1	13.2	14881.9	-83.89
509052	STONWAL4	138	10152.1	-83.67
508080	SUGARHL4	138	12040.2	-84.4
507759	SW SHV 4	138	31741	-85.57
507760	SW SHV 7	345	16292.7	-85.69
507778	SWSHV1-1	13.8	29473.5	-89.67
507777	SWSHV2-1	13.8	38715.5	-88.49
506745	TENGAS 1	18	77169.4	-88.79
506746	TENGAS 2	18	77169.4	-88.79
506747	TENGAS 3	18	32219.4	-87.1
508586	TENGEN 7	345	14938.3	-86.77
508585	TENRUSK7	345	15044.2	-86.77
506748	TENSTM 1	23	129857.4	-88.81
507457	TURK 1	13.8	19663.8	-88.91
507454	TURK 4	138	23412.3	-86.2
507455	TURK 7	345	8880.2	-85.66
510918	VALIANT4	138	14626.9	-85.81
510911	VALIANT7	345	12977.4	-85.14
510938	VALN2-1	13.8	38394.3	-87.35
510939	VALN3-1	13.8	31805.4	-87.39
507765	WALLAKE4	138	10430.8	-81.3
508090	WATLANT4	138	6936.2	-80.82
508359	WELSH 7	345	22559.7	-86.68
509404	WELSH1-1	18	180874	-88.26
509406	WELSH3-1	18	182866.3	-88.24
508355	WELSHRE4	138	9772.3	-82.04
507767	WESTELC4	138	21691.8	-83.94
507768	WESTELT4	138	23131.7	-84.32
508589	WHIT1-1	12.47	19195.2	-89.34
508590	WHIT2-1	12.47	19311.5	-89.34
508574	WHITNEY2	69	22972.8	-84.56
508575	WHITNEY4	138	19965.2	-84.34
509407	WILKE1-1	20	78218	-88.56
509408	WILKE2-1	22	115813.8	-88.51
509409	WILKE3-1	22	110848	-88.95
508840	WILKES 4	138	32587.8	-85.59
508841	WILKES 7	345	16001.1	-86.38
508826	WILKES-1	13.2	29549.6	-89.53
509103	WLNTSPRINGS4	138	8688.1	-83.45