

Definitive Interconnection
System Impact Study for
Generation Interconnection
Requests
(DISIS-2012-002-2)

August 2013

Generator Interconnection

Revision History

Date	Author	Change Description
01/31/2013	SPP	Report Issued (DISIS-2012-002)
2/8/2013	SPP	Report Re-Issued for corrections
5/16/2013	SPP	Account for Withdrawn Projects, Report Re-Posted (DISIS-2012-002-1)
8/5/2013	SPP	Account for Withdrawn Projects, Report Posted (DISIS-2012-002-2)

Executive Summary

Generation Interconnection customers have requested a Definitive Interconnection System Impact Study (DISIS) under the Generation 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, 2012. The customers will be referred to in this study as the DISIS-2012-002 Interconnection Customers. This System Impact Study analyzes the interconnecting of multiple generation interconnection requests associated with new generation totaling approximately 2,753.8 MW of new generation which would be located within the transmission systems of American Electric Cooperative Corporation (AEPW), Lincoln Electric System (LES), Midwest Energy Inc. (MIDW), Nebraska Public Power District (NPPD), Oklahoma Gas and Electric (OKGE), Sunflower Electric Power Corporation/Mid-Kansas Electric Power LLC (SUNC)/(MKEC), Southwestern Public Service (SPS), Westar Energy Inc. (WERE), and Western Farmers Electric Cooperative (WFEC). The various generation interconnection requests have differing proposed in-service dates¹. The generation 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, 2,753.8 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.

In no way does this study guarantee operation for all periods of time. This interconnection study identifies and assigns transmission reinforcements for interconnection constraints (defined as a 20% distribution factor) and 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, otherwise known as curtailment, under certain system conditions to allow system operators to maintain the reliability of the transmission network.

The total estimated minimum cost for interconnecting the DISIS-2012-002 interconnection customers is \$122,561,603.00. These costs are shown in Appendix E and F. Interconnection Service

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.

to DISIS-2012-002 interconnection customers is also contingent upon higher queued customers paying for certain required network upgrades. **The in-service date for the DISIS 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.

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. 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 Definitive Interconnection System Impact Study (DISIS) for certain generation interconnection requests in the SPP Generation Interconnection Queue. These interconnection requests have been clustered together for the following System Impact Study window which closed September 30, 2012. The customers will be referred to in this study as the DISIS-2012-002 Interconnection Customers. This DISIS analyzes the interconnecting of multiple generation interconnection requests associated with new generation totaling 2,753.8 MW which would be located within the transmission systems of American Electric Cooperative Corporation (AEPW), Lincoln Electric System (LES), Midwest Energy Inc. (MIDW), Nebraska Public Power District (NPPD), Oklahoma Gas and Electric (OKGE), Sunflower Electric Power Corporation/Mid-Kansas Electric Power LLC (SUNC)/(MKEC), Southwestern Public Service (SPS), Westar Energy Inc. (WERE), and Western Farmers Electric Cooperative (WFEC). The various generation interconnection requests have differing proposed in-service dates². The generation 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 DISIS is to identify the system constraints associated with connecting the generation to the area transmission system. The Impact 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 has included all interconnection requests that submitted a Definitive Interconnection System Impact Study Agreement no later than September 30, 2012 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.

Affected System Interconnection Request

Also included in this Definitive Interconnection System Impact Study is a single Affected System Study, located on the Farmers Electric Cooperative, Inc. (FEC) system, which shares connections to the SPS system. The Affected System Study Requests has been given the designations: ASGI-2012-002 (18MW, Point of Interconnection is FEC-Clovis Interchange 115kV).

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 2012 series Transmission Service Request (TSR) Models 2013 spring, 2014 summer and winter peak, and the 2018 summer and winter peak, and 2023 summer peak 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.

Dynamic Stability

The 2012 series SPP Model Development Working Group (MDWG) Models 2013 winter and 2014 summer were used as starting points for this study.

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 Notice to Construct (NTC) or are in construction stages and were assumed to be in-service at the time of dispatch and added to the base case models. The DISIS-2012-002 Interconnection Customers have not been assigned acceleration costs for the below listed projects. The DISIS-2012-002 Interconnection Customers Generation Facilities in service dates may need to be delayed until the completion of the following

upgrades. 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.

- Hitchland 230/115kV area projects³:
 - Hitchland – Ochiltree 230kV Project, scheduled for 2/1/2013 in-service
- Balanced Portfolio Projects⁴:
 - Woodward – Border – TUCO 345kV project, scheduled for 5/19/2014 in-service
 - Woodward 345/138kV circuit #2 autotransformer
 - TUCO 345/138kV circuit #2 autotransformer
 - Reactors at Woodward and Border
 - Iatan– Nashua 345kV, scheduled for 6/1/2015 in-service
 - Nashua 345/161kV autotransformer
 - Muskogee– Seminole 345kV, scheduled for 12/31/2013 in-service
 - Tap Stillwell – Swissvale 345kV line at West Gardner (placed in-service in 2013)
- Priority Projects⁵:
 - Hitchland – Woodward double circuit 345kV, scheduled for 6/30/2014 in-service
 - Hitchland 345/230kV circuit #2 autotransformer
 - Woodward – Thistle double circuit 345kV, scheduled for 12/31/2014 in-service
 - Spearville – Clark double circuit 345kV, scheduled for 12/31/2014 in-service
 - Clark – Thistle double circuit 345kV, scheduled for 12/31/2014 in-service
 - Thistle – Wichita double circuit 345kV, scheduled for 12/31/2014 in-service
 - Thistle 345/138kV autotransformer, scheduled for 12/31/2014 in-service
 - Thistle – Flat Ridge 138kV, scheduled for 12/31/2014 in-service
- Various MKEC Transmission System Upgrades⁶
 - Harper – Flat Ridge 138kV rebuild, scheduled for 6/15/2013 in-service
 - Flat Ridge – Medicine Lodge 138kV rebuild, scheduled for 12/31/2013 in-service
 - Pratt – Medicine Lodge 115kV rebuild, scheduled for 6/15/2014 in-service
 - Medicine Lodge 138/115kV autotransformer replacement, scheduled for 6/1/2013 in-service
- Woodward (OKGE) – Woodward (WFEC) 69kV rebuild, scheduled for 12/1/2013 in-service⁷
- Sheldon – SW7th and Pleasant Hill 115kV circuit #2 rebuild, scheduled for 5/15/2013 in-service⁸

³ SPP Regional Reliability Projects identified in 2007 STEP. As of the writing of this report, SPP Project Tracking TAGIT shows some of these project's in-service dates have been delayed from the original 2010/2011 in-service dates.

⁴ Notice to Construct (NTC) issued June 2009.

⁵ Notice to Construct (NTC) issued June 2010.

⁶ SPP Transmission Service Projects identified in SPP-2007-AG3-AFS-9.

⁷ SPP Regional Reliability Project. Per SPP-NTC-20003.

⁸ SPP Regional Reliability 2012 ITPNT Project. Per SPP-NTC-200171.

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 DISIS-2012-002 study and are assumed to be in service. This list may not be all inclusive. The DISIS-2012-002 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 Generation Interconnection Agreement or withdraw from the interconnection queue. The DISIS-2012-002 Interconnection Customer Generation Facilities in-service dates may need to be delayed until the completion of the following upgrades.

- Upgrades assigned to ICS-2008-001 Interconnection Customers
 - Amarillo South – Swisher 230kV replace line traps
 - Finney-Holcomb 345kV circuit #2 build
- Upgrades assigned to DISIS-2009-001 Interconnection Customers:
 - Fort Dodge – North Fort Dodge – Spearville 115kV circuit #2 build
 - Albion – Petersburg – Neligh 115kV circuit #1 rerate (placed in-service in 2011)
 - Fort Randall – Madison County – Kelly 230kV circuit #1 rerate (320MVA)
 - Spearville 345/115kV autotransformer circuit #1 build
- Upgrades assigned to DISIS-2010-001 Interconnection Customers:
 - Switch 2749 – Wildorado 69kV circuit # 1 rebuild
 - Washita – Gracemont 138kV circuit #2 build (placed in-service in 2012)
- Upgrades assigned to DISIS-2010-002 Interconnection Customers:
 - Twin Church – Dixon County 230kV circuit #1 rerate (320MVA)
- Upgrades assigned to DISIS-2011-001 Interconnection Customers:
 - Beaver County – Buckner 345kV circuit #1 build
 - Beaver County 345kV Expansion (Tap & Tie Hitchland – Woodward circuit #2 into Beaver County 345kV)
 - Spearville – Mullergren – Reno double circuit 345kV build
 - Tatonga – Matthewson - Cimarron 345kV circuit #2 build
 - Tatonga terminal equipment upgrade rerate (1792 MVA)
 - Rice County – Circle 230kV conversion (placed in-service in 2012)
 - Rice County – Lyons 115kV rebuild (placed in-service in 2013)
 - Rice County 230/115kV autotransformer build (placed in-service in 2012)
 - Lyons – Wheatland 115kV rerate (199 MVA) (placed in-service in 2012)
 - Hoskins – Dixon County – Twin Church 230kV circuit #1 rerate
 - (NRIS only) FPL Switch – Woodward - Mooreland 138kV circuit #1 rebuild
 - (NRIS only) Woodward (OGE) – Woodward (WFEC) 69kV rebuild
- Upgrades assigned to DISIS-2011-002 interconnection Customers:
 - Amoco Wasson – Oxy Tap – Yoakum 230kV circuit #1 replace line traps
 - Harbine – Crete 115kV circuit #1 build
 - Jones – Lubbock South 230kV circuit #2 replace line traps
 - Power System Stabilizers - Install Power System Stabilizers @ Tolk(Units: 1,2) and Jones (Units: 1,2,3,4)
 - Mustang – Yoakum 230kV circuit #1 replace line traps
 - West Brock – SUB 967 – SUB 968 – SUB 969 – SUB 974 69kV circuit #1 replace terminal equipment

- (NRIS only) Allen – Lubbock South 115kV circuit #1 rebuild
- (NRIS only) Hydro Carbon Tap - Sub974 69kV circuit #1 reset CT
- (NRIS only) Lubbock South 230/115kV Autotransformer build circuit #2
- (NRIS only) Nebraska City U Syracuse – SUB 970 circuit #1 replace terminal equipment
- (NRIS only) Benton – Wichita 345kV circuit #1 rerate (1195MVA)
- (NRIS only) Chisholm – Maize East 138kV circuit #1 rebuild
- Evans Energy Center – Maize West 138kV circuit #1 rebuild
- (NRIS only) Duncan – Tosco – Comanche Tap 69kV rebuild
- (NRIS only) Yoakum 230/115kV transformer circuit #1 and #2 replacements
- Upgrades assigned to DISIS-2012-001 interconnection Customers:
 - Holcomb 345/115/13.8kV Transformer circuit #2 build
 - Denver North – Mustang 115kV circuit #1 rebuild
 - Denver South – Mustang 115kV 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 in fifteen different regional groups based on geographical and electrical impacts. These groupings are shown in Appendix C.

To determine interconnection impacts, fifteen different generation dispatch scenarios of the spring base case models were developed to accommodate the regional groupings.

Power Flow

For each group, the various wind generating plants were modeled at 100% nameplate of maximum generation. The other wind generating plants in each area were modeled at 80% nameplate while the wind generating plants in the other areas were modeled at 20% nameplate of maximum generation. These projects were dispatched as Energy Resources with equal distribution across the SPP footprint. Certain projects that requested Network Resource Interconnection Service were dispatched in an additional analysis into the balancing authority of the interconnecting transmission owner. 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. Other sensitivity analyses are also performed with all interconnection requests in each group being dispatched at 100% nameplate.

Peaking units were not dispatched in the 2013 spring model. To study peaking units' impacts, the 2014 summer and winter and 2018 summer and winter, and 2023 summer seasonal models were chosen and peaking units were modeled at 100% of the nameplate rating and wind 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 wind 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. These constraints were then screened to determine if any of the generation interconnection requests had at least a 20% Distribution Factor (DF) upon the constraint. Constraints that measured at least a 20% DF from at least one interconnection request were considered for mitigation. Interconnection Requests that have requested Network Resource Interconnection Service (NRIS) were also studied in the NRIS analysis to determine if any constraint had at least a 3% DF. If so, these constraints were considered for mitigation.

Determination of Cost Allocated Network Upgrades

Cost Allocated Network Upgrades of wind generation interconnection requests were determined using the 2013 spring model. Cost Allocated Network Upgrades of peaking units was determined using the 2018 summer peak model. A PSS®MUST sensitivity analysis was performed to determine the Distribution Factors (DF), a distribution factor with no contingency that each generation interconnection request had on each new upgrade. The impact each generation 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 Generation Interconnection requests, X, Y, and Z that are responsible for the costs of Upgrade Project '1'. Given that their respective PTDF for the project have been determined, the cost allocation for Generation Interconnection request 'X' for Upgrade Project 1 is found by the following set of steps and formulas:

- Determine an Impact Factor 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 for Amounts Advanced for Network Upgrades

Interconnection Customer shall be entitled to credits 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 2,753.8 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 \$122,561,603.00. Interconnection Facilities specific to each generation interconnection request are listed in Appendix E. A preliminary one-line drawing for each generation interconnection request are listed in Appendix D.

A list of constraints that were identified and used for mitigation are listed in Appendix G. Listed within Appendix G are the ERIS constraints with greater than or equal to a 20% DF, as well as, the NRIS constraints that have a DF of 3% or greater. Other Network Constraints which are not requiring mitigation are shown in Appendix H. 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. Additional constraints identified by NERC category "C" contingencies are listed in Appendix I.

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. NERC Category “B” and “C” contingencies were evaluated.

Power Flow Analysis

A power flow analysis was conducted for each Interconnection Customer’s facility using modified versions of the 2013 spring peak, 2014 summer and winter peak, and the 2018 summer and winter peak, 2023 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.

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 AECI, NPPD, OKGE, SPS, and WFEC transmission systems under system intact and contingency conditions in the peak seasons.

Cluster Group 1 (Woodward Area)

In addition to the 4,935.8 MW of previously queued generation in the area, 512.1 MW of new interconnection service was studied. With previously assigned Network Upgrades in service, no new constraints for mitigation were found in this area.

Cluster Group 2 (Hitchland Area)

In addition to the 3,180.2 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints for mitigation were found in this area.

Cluster Group 3 (Spearville Area)

In addition to the 5,114.0 MW of previously queued generation in the area, 180.0 MW of new interconnection service was studied. With previously assigned Network Upgrades in service, no new transmission constraints for mitigation were identified.

Cluster Group 4 (NW Kansas Group)

In addition to the 2,089.3 MW of previously queued generation in the area, 100.0 MW of new interconnection service was studied. No new constraints for mitigation were found in this area.

Cluster Group 5 (Amarillo Area)

In addition to the 1,332.6 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints for mitigation were found in this area.

Cluster Group 6 (South Texas Panhandle/New Mexico)

In addition to the 2,571.5 MW of previously queued generation in the area, 719.3 MW of new interconnection service was studied. With the withdrawal of GEN-2012-038, the previously assigned network upgrades necessary for stability (GEN-2012-038 Tap – Sweetwater – Gracemont 345kV) were found to no longer be required for this study. Thermal overloads are seen on the TUCO Interchange 345/230/13kV Transformer circuit #1 and #2 during N-1 contingency. To mitigate this constraint, a 3rd TUCO Interchange 345/230/23kV Transformer will be needed. Since the TUCO Substation is at full land capacity, an adjacent substation may be needed to house the new transformer.

MONITORED ELEMENT	RATE B (MVA)	TC%LOADING (% MVA)	CONTINGENCY
TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	560	115.2745	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2
TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2	560	112.7842	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1

Cluster Group 7 (Southwestern Oklahoma)

In addition to the 1,926.0 MW of previously queued generation in the area, 74.8 MW of new interconnection service was studied. Constraints for mitigation in this area include replacing CT on Lake Creek-Lone Wolf 69kV and rebuilding the 138kV line from the GEN-2012-029 tap to Hobart Jct 138kV.

MONITORED ELEMENT	RATE B (MVA)	TC%LOADING (% MVA)	CONTINGENCY
LAKE CREEK - LONEWOLF 69KV CKT 1	48	126.5949	ELK CITY (ELKCTY-4) 138/69/13.8KV TRANSFORMER CKT 1

Cluster Group 8 (South Central Kansas/North Oklahoma)

In addition to the 1,986.3 MW of previously queued generation in the area, 847.8 MW of new interconnection service was studied. ERIS constraints were observed on the Remington – Fairfax 138kV line on the AECl/KAMO system. SPP will coordinate with AECl during the Facility Study to ascertain costs to change the design parameters of this line to 100 degrees °C ambient temperature. Additionally, AECl will be notified as an Affected System for this Interconnection Request and will be asked to evaluate its impacts on the AECl transmission system. For interconnection requests with NRIS, currently no constraints were identified.

MONITORED ELEMENT	RATE B (MVA)	TC%LOADING (% MVA)	CONTINGENCY
4REMNGTON 138.00 - FAIRFAX 138KV CKT 1	174	105.0038	SHIDLER - WEST PAWHUSKA 138KV CKT 1
4REMNGTON 138.00 - FAIRFAX 138KV CKT 1	174	104.6575	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1

Cluster Group 9/10 (Nebraska)

In addition to the 1,693.6 MW of previously queued generation in the area, 319.8 MW of new interconnection service was studied. An additional 200 MW of requested generation on the Twin

Church – Hoskins 230kV line will cause the need for additional 230kV transmission reinforcements in this area. To mitigate this constraint, a new 230kV line to the Western Area Power Administration (WAPA) is proposed. Further coordination with WAPA will occur in the Facility Study.

MONITORED ELEMENT		RATE B (MVA)	TC%LOADING (% MVA)	CONTINGENCY	
G10-51T	230.00 - TWIN CHURCH 230KV CKT 1	320	164.9684	G10-51T	230.00 - HOSKINS 230KV CKT 1
G10-51T	230.00 - HOSKINS 230KV CKT 1	320	175.0455	G10-51T	230.00 - TWIN CHURCH 230KV CKT 1
	SIOUX CITY - TWIN CHURCH 230KV CKT 1	320	115.3838	G10-51T	230.00 - TWIN CHURCH 230KV CKT 1

Cluster Group 12 (Northwest Arkansas)

There were no new interconnection service was studied. No new constraints for mitigation were found in this area.

Cluster Group 13 (Northwest Missouri)

In addition to the 285.8 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints for mitigation were found in this area.

Cluster Group 14 (South Central Oklahoma)

In addition to the 262.2 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints for mitigation 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 Analysis

A stability analysis was conducted for each Interconnection Customer’s facility using modified versions of the MDWG 2014 summer and 2013 winter peak dynamic cases. The MDWG 2013 winter peak case was modified to model the transmission network as of the end of 2014 and was used as the 2014 winter peak model for this study. The stability analysis was conducted with all upgrades in service that were identified in the power flow analysis. For each group, the interconnection requests were studied at 100% nameplate output while the other groups were dispatched at 20% output for wind requests and 100% output for fossil requests. The output of the Interconnection Customer’s facility was offset in each model by a reduction in output of existing online SPP generation. The following synopsis is included for each group. The entire stability study for each group can be found in the Appendices section.

Cluster Group 1 (Woodward Area)

There stability analysis was not performed again for this restudy. The original analysis in DISIS-2012-002 is still valid.

Cluster Group 2 (Hitchland Area)

There was no stability analysis conducted in the Hitchland area due to no requests in the area.

Cluster Group 3 (Spearville Area)

Because of the withdrawal of GEN-2010-029 (from DISIS-2011-001), the Cluster Group 3 stability analysis was performed again for this restudy by Mitsubishi Electric Power Products, Inc (MEPPI). Once the previously assigned upgrades are placed in service the transmission system will remain stable and low voltage ride through requirements are satisfied for the contingencies studied.

With the power factor requirements and all network upgrades in service, all interconnection requests in Group 3 will meet FERC Order #661A low voltage ride through (LVRT) requirements.

Power Factor Requirements:

Request	Size (MW)	Generator Model	Point of Interconnection	Power Factor Requirement at POI	
				Lagging (supplying)	Leading (absorbing)
GEN-2012-024	180	Vestas V112-3.0MW	Clark County	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 4 (Northwest Kansas Area)

There stability analysis was not performed again for this restudy. The original analysis in DISIS-2012-002 is still valid.

Cluster Group 5 (Amarillo Area)

There was no stability analysis conducted in the Amarillo area due to no requests in the area.

Cluster Group 6 (South Texas Panhandle/New Mexico)

The Group 6 stability analysis for this study was performed by Excel Engineering (“Excel”). Stability analysis has determined that with the withdrawal of GEN-2012-038 the previously identified 345kV line connecting the TUCO area to western Oklahoma is no longer required to interconnect the studied generation.

With the power factor requirements and all network upgrades in service, the transmission system will remain stable and all interconnection requests in Group 6 will meet FERC Order #661A low voltage ride through (LVRT) requirements.

Power Factor Requirements:

Request	Size (MW)	Generator Model	Point of Interconnection	Power Factor Requirement at POI	
				Lagging (supplying)	Leading (absorbing)
ASGI-2012-002	18	Vestas V82	Clovis 115kV	0.95	0.95
GEN-2012-020	478	G.E. 1.68MW	Tuco 230kV	0.95	0.95
GEN-2012-034	7MW increase	GENROU	Mustang 230kV	0.95	0.95
GEN-2012-035	7MW increase	GENROU	Mustang 230kV	0.95	0.95
GEN-2012-036	7MW increase	GENROU	Mustang 230kV	0.95	0.95
GEN-2012-037	196 Summer/203 Winter	GENROU	Tuco 345kV	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 Area)

There stability analysis was not performed again for this restudy. The original analysis in DISIS-2012-002 is still valid.

Cluster Group 8 (South Central Kansas/North Oklahoma)

There stability analysis was not performed again for this restudy. The original analysis in DISIS-2012-002 is still valid.

Cluster Group 9/10 (Nebraska)

There stability analysis was not performed again for this restudy. The original analysis in DISIS-2012-002 is still valid.

Cluster Group 11 (North Central Kansas Area)

This area number is reserved

Cluster Group 12 (Northwest Arkansas Area)

There was no stability analysis conducted in the Northwest Arkansas area due to no requests in the area.

Cluster Group 13 (Northwest Missouri Area)

There was no stability analysis conducted in the Northwest Missouri area due to no requests in the area.

Cluster Group 14 (South Central Oklahoma)

There was no stability analysis conducted in the South Central Oklahoma area due to no requests in the area.

Cluster Group 15 (reserved)

This group has been retired and all prior Group 15 requests have been re-designated as Group 9/10 requests.

Conclusion

The minimum cost of interconnecting 2,753.8 MW of new interconnection requests included in this Definitive Interconnection System Impact Study is estimated at \$122,561,603.00 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).

Appendix

A: Generation Interconnection Requests Considered for Impact Study

See next page.

A: Generation Interconnection Requests Considered for Impact Study

Request	Amount	Service	Area	Requested Point of Interconnection	Proposed Point of Interconnection	Requested In-Service Date	In Service Date Delayed Until no earlier than*	
ASGI-2012-002	18.15	ER	SPS	FE-Clovis Interchange 115kV	FE-Clovis Interchange 115kV			
GEN-2012-016	312.00	ER	OKGE	Tap Woodward - Thistle 345kV Ckt 1	Tap Woodward - Thistle 345kV Ckt 1	3/1/2017	12/31/2014	
GEN-2012-017	115.00	ER	NPPD	Cooper 345kV	Cooper 345kV	9/1/2018	TBD	
GEN-2012-018	200.00	ER	NPPD	Tap Hoskins - Twin Church 230kV (GEN-2010-051T)	Tap Hoskins - Twin Church 230kV (GEN-2010-051T)	12/15/2014	TBD	
GEN-2012-020	477.12	ER	SPS	TUCO 230kV	TUCO 230kV	9/30/2015	12/31/2014	
GEN-2012-021	4.80	ER	LES	Terry Bundy Generating Station 115kV	Terry Bundy Generating Station 115kV	8/1/2013	TBD	
GEN-2012-023	115.00	ER	WERE	Viola 345kV	Viola 345kV	12/31/2014	TBD	
GEN-2012-024	180.00	ER	SUNCMKEC	Clark County 345kV	Clark County 345kV	12/31/2015	12/31/2014	
GEN-2012-026	100.00	ER/NR	MIDW	Colby 115kV	Colby 115kV	12/31/2014	TBD	
GEN-2012-027	136.00	ER	AEPW	Shidler 138kV	Shidler 138kV	12/1/2014	TBD	
GEN-2012-028	74.80	ER	WFEC	Gotebo 69kV	Gotebo 69kV	12/1/2014	TBD	
GEN-2012-031	200.10	ER	OKGE	Cimarron 345kV (GEN-2010-040 Sub)	Cimarron 345kV (GEN-2010-040 Sub)	11/30/2014	TBD	
GEN-2012-032	300.00	ER	OKGE	Tap Rose Hill - Sooner 345kV	Tap Rose Hill - Sooner 345kV	11/30/2014	TBD	
GEN-2012-033	98.82	ER	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV	12/1/2014	TBD	
GEN-2012-034	7.00	ER	SPS	Mustang 230kV	Mustang 230kV	6/1/2013	TBD	
GEN-2012-035	7.00	ER	SPS	Mustang 230kV	Mustang 230kV	6/1/2013	TBD	
GEN-2012-036	7.00	ER	SPS	Mustang 230kV	Mustang 230kV	6/1/2013	TBD	
GEN-2012-037	203.00	ER	SPS	TUCO 345kV	TUCO 345kV	3/1/2015	12/31/2014	
GEN-2012-040	76.50	ER/NR	WFEC	Chilocco 138kV	Newkirk 138kV	12/1/2013	TBD	
GEN-2012-041	121.50	ER	OKGE	Tap Rose Hill - Sooner 345kV	Tap Rose Hill - Sooner 345kV	4/15/2015	TBD	
Total:		2,753.79						

*Requests that dependent upon Priority Projects or Balanced Portfolio may be delayed until 12/31/2014. Other requests in-service date to be determined after Facility Study.

B: Prior Queued 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	28.80	SPS	Lovington 115kV	Lea County Affected Study
ASGI-2011-002	10.00	SPS	Herring 115kV	AECI queue Affected Study
ASGI-2011-003	10.00	SPS	Hendricks 115kV	AECI queue Affected Study
ASGI-2011-004	20.00	SPS	Pleasant Hill 69kV	Under Study (DISIS-2011-002)
ASGI-2012-006	22.50	SUNCMKEC	Tap Hugoton - Rolla 69kV	Under Study (DISIS-2012-001)
GEN-2001-014	96.00	WFEC	Ft Supply 138kV	On-Line
GEN-2001-026	74.00	WFEC	Washita 138kV	On-Line
GEN-2001-033	180.00	SPS	San Juan Tap 230kV	On-Line
GEN-2001-036	80.00	SPS	Norton 115kV	On-Line
GEN-2001-037	102.00	OKGE	FPL Moreland Tap 138kV	On-Line
GEN-2001-039A	105.00	SUNCMKEC	Tap Greensburg - Ft Dodge (Shooting Star Tap) 115kV	On-Line
GEN-2001-039M	99.00	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
GEN-2003-021N	75.00	NPPD	Ainsworth Wind Tap 115kV	On-Line
GEN-2003-022	120.00	AEPW	Washita 138kV	On-Line
GEN-2004-005N	30.00	NPPD	St Francis 115kV	On Suspension
GEN-2004-014	154.50	SUNCMKEC	Spearville 230kV	On-Line at 100MW
GEN-2004-020	27.00	AEPW	Washita 34.5kV	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	Spearville 345kV	On-Line at 160MW
GEN-2005-013	201.00	WERE	Tap Latham - Neosho (Caney River) 345kV	On-Line
GEN-2006-002	101.00	AEPW	Sweetwater 230kV	On-Line
GEN-2006-006	205.50	SUNCMKEC	Spearville 345kV	On Schedule for 2015
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

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2006-021	101.00	SUNCMKEC	Flat Ridge Tap 138kV	On-Line
GEN-2006-022	150.00	SUNCMKEC	Ninnescah 115kV	On Schedule for 2014
GEN-2006-024S	19.80	WFEC	Buffalo Bear Tap 69kV	On-Line
GEN-2006-026	604.00	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 Schedule for 2013
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 80MW
GEN-2006-044N	40.50	OPPD	North Petersburg 115kV	On-Line
GEN-2006-046	131.00	OKGE	Dewey 138kV	On-Line
GEN-2006-047	240.00	SPS	Tap Bushland - Deaf Smith (Buffalo) 230kV	On Suspension
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 Schedule for 2014
GEN-2007-025	300.00	WERE	Viola 345kV	On-Line
GEN-2007-032	150.00	WFEC	Tap Clinton Junction - Clinton 138kV	On Schedule for 2013
GEN-2007-038	200.00	SUNCMKEC	Spearville 345kV	On Schedule for 2015
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 Schedule for 2014
GEN-2007-046	199.50	SPS	Hitchland 115kV	On Schedule for 2014
GEN-2007-048	400.00	SPS	Tap Amarillo S - Swisher 230kV	On Schedule for 2014
GEN-2007-050	170.00	OKGE	Woodward EHV 138kV	On-Line at 150MW
GEN-2007-052	150.00	WFEC	Anadarko 138kV	On-Line
GEN-2007-057	34.50	SPS	Moore County East 115kV	On Schedule for 2014
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-2008-008	60.00	SPS	Graham 69kV	On Suspension
GEN-2008-009	60.00	SPS	San Juan Tap 230kV	On Schedule for 2014
GEN-2008-013	300.00	OKGE	Tap Wichita - Woodring (Hunter) 345kV	On-Line at 235MW
GEN-2008-017	300.00	SUNCMKEC	Setab 345kV	On Schedule for 2014
GEN-2008-018	405.00	SPS	Finney 345kV	On Schedule for 2014
GEN-2008-019	300.00	OKGE	Tatonga 345kV	On Schedule for 2015
GEN-2008-021	42.00	WERE	Wolf Creek 345kV	On-Line
GEN-2008-022	300.00	SPS	Tap Eddy Co - Tolk (Chaves County) 345kV	On Schedule for 2015
GEN-2008-023	150.00	AEPW	Hobart Junction 138kV	On-Line
GEN-2008-025	101.00	SUNCMKEC	Ruleton 115kV	Withdrawn
GEN-2008-029	250.00	OKGE	Woodward EHV 138kV	On Schedule for 2014
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	SPS	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV	IA Pending
GEN-2008-051	322.00	SPS	Potter County 345kV	On-Line at 161MW
GEN-2008-071	76.80	OKGE	Newkirk 138kV	On Suspension

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2008-079	98.90	SUNCMKEC	Tap Cudahy - Ft Dodge 115kV	On-Line
GEN-2008-086N02	200.00	NPPD	Tap Ft Randle - Columbus (Madison County) 230kV	On Schedule for 2014
GEN-2008-088	50.60	SPS	Vega 69kV	On Schedule for 2014
GEN-2008-092	201.00	MIDW	Knoll 230kV	IA Pending
GEN-2008-098	100.80	WERE	Tap Lacygne - Wolf Creek (Anderson County) 345kV	On Schedule for 2015
GEN-2008-1190	60.00	OPPD	S1399 161kV	On-Line
GEN-2008-123N	89.70	NPPD	Tap Guide Rock - Pauline 115kV	On Schedule for 2014
GEN-2008-124	200.00	SUNCMKEC	Spearville 345kV	On Schedule for 2014
GEN-2008-124T	42.00	SPS	TC-Keyes Texas County 69kV	On Schedule for 2014
GEN-2008-129	80.00	MIPU	Pleasant Hill 161kV	On-Line
GEN-2009-008	199.50	MIDW	South Hays 230kV	On Suspension
GEN-2009-016	100.80	AEPW	Falcon Road 138kV	On Schedule for 2015
GEN-2009-020	48.60	MIDW	Tap Nekoma - Bazine 69kV	On Suspension
GEN-2009-025	60.00	OKGE	Tap Deer Creek - Sinclair Blackwell 69kV	On-Line
GEN-2009-040	73.80	WERE	Marshall 115kV	On Suspension
GEN-2009-073T	48.00	SPS	TC-Eva Texas County 69kV	On Schedule for 2014
GEN-2010-001	300.00	SPS	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV	On Schedule for 2014 (204 MW) and 2015 (96 MW)
GEN-2010-003	100.80	WERE	Tap Lacygne - Wolf Creek (Anderson County) 345kV	On Schedule for 2015
GEN-2010-005	300.00	WERE	Viola 345kV	On-Line at 114MW
GEN-2010-006	205.00	SPS	Jones 230kV	On-Line
GEN-2010-009	165.60	SUNCMKEC	Buckner 345kV	On-Line
GEN-2010-011	30.00	OKGE	Tatonga 345kV	On Line
GEN-2010-014	358.80	SPS	Hitchland 345kV	On Schedule for 2016
GEN-2010-015	200.10	SUNCMKEC	Spearville 345kV	On Schedule for 2015
GEN-2010-020	20.00	SPS	Roswell 69kV	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	S 1399 161kV	IA Pending
GEN-2010-044	99.00	NPPD	Harbine 115kV	IA Pending
GEN-2010-045	197.80	SUNCMKEC	Buckner 345kV	IA Pending
GEN-2010-046	56.00	SPS	TUCO Interchange 230kV	On Schedule for 2016
GEN-2010-048	70.00	MIDW	Tap Beach Station - Redline 115kV	IA Pending
GEN-2010-051	200.00	NPPD	Tap Twin Church - Hoskins 230kV	On Schedule for 2014
GEN-2010-055	4.50	AEPW	Wekiwa 138kV	On-Line
GEN-2010-056	151.20	MIPU	Tap Saint Joseph - Cooper 345kV	On Suspension
GEN-2010-057	201.00	MIDW	Rice County 230kV	On-Line
GEN-2010-058	20.00	SPS	Chaves County 115kV	On Suspension
GEN-2010-061	180.00	MIDW	Tap Post Rock - Spearville (GEN-2011-017T) 345kV	Facility Study
GEN-2011-007	250.00	OKGE	Tap Cimarron - Woodring (Matthewson) 345kV	On Schedule for 2014
GEN-2011-008	600.00	SUNCMKEC	Clark County 345kV	IA Pending
GEN-2011-010	100.80	OKGE	Minco 345kV	On-Line
GEN-2011-011	50.00	KACP	Iatan 345kV	On-Line
GEN-2011-012	104.50	SPS	Tap Moore County - Hitchland 345kV	IA Pending
GEN-2011-014	201.00	SPS	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV	IA Pending
GEN-2011-016	200.10	SUNCMKEC	Spearville 345kV	IA Pending
GEN-2011-017	299.00	SUNCMKEC	Tap Spearville - PostRock (GEN-2011-017T) 345kV	IA Pending
GEN-2011-018	73.60	NPPD	Steele City 115kV	On Schedule for 2013

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2011-019	299.00	OKGE	Woodward 345kV	IA Pending
GEN-2011-020	299.00	OKGE	Woodward 345kV	IA Pending
GEN-2011-021	299.00	SPS	Beaver County 345kV	IA Pending
GEN-2011-022	299.00	SPS	Hitchland 345kV	IA Pending
GEN-2011-023	299.00	SUNCMKEC	Clark County 345kV	IA Pending
GEN-2011-024	299.00	OKGE	Tatonga 345kV	IA Pending
GEN-2011-025	82.30	SPS	Tap Floyd County - Crosby County 115kV	On Suspension
GEN-2011-027	120.00	NPPD	Hoskins 230kV	IA Pending
GEN-2011-037	7.00	WFEC	Blue Canyon 5 138kV	On-Line
GEN-2011-040	111.00	OKGE	Tap Ratliff - Pooleville 138kV	On Schedule for 2014
GEN-2011-043	150.00	SUNCMKEC	Thistle 345kV	Facility Study
GEN-2011-044	150.00	SUNCMKEC	Thistle 345kV	Facility Study
GEN-2011-045	205.00	SPS	Jones 230kV	On-Line
GEN-2011-046	27.00	SPS	Lopez 115kV	On Schedule for 2013
GEN-2011-048	175.00	SPS	Mustang 230kV	On Schedule for 2014
GEN-2011-049	250.00	OKGE	Border 345kV	IA Pending
GEN-2011-050	109.80	AEPW	Tap Rush Springs - Marlow 138kV	IA Pending
GEN-2011-051	104.40	OKGE	Tap Woodward - Tatonga 345kV	IA Pending
GEN-2011-054	300.00	OKGE	Cimarron 345kV	On Schedule for 2013 (200 MW) and 2014 (99 MW)
GEN-2011-055	52.80	OPPD	South Sterling 69kV	Facility Study
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	Tap Grassland - Borden County 230kV	On-Line
GEN-2012-002	101.20	SUNCMKEC	Tap Pile - Scott City 115kV	IA Pending
GEN-2012-004	41.40	OKGE	Tap Ratliff - Pooleville 138kV	On Schedule for 2014
GEN-2012-007	120.00	SUNCMKEC	Rubart 115kV	IA Pending
GEN-2012-008	40.00	SPS	Mustang 115kV & Mustang 230kV	Facility Study
GEN-2012-009	15.00	SPS	Mustang 230kV	Facility Study
GEN-2012-010	15.00	SPS	Mustang 230kV	Facility Study
GEN-2012-011	200.00	SUNCMKEC	Tap Spearville - Post Rock 345kV (North of GEN-2011-017 Tap)	Facility Study
Gray County Wind (Montezuma)	110.00	SUNCMKEC	Gray County Tap 115kV	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 (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)	10.80	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

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
SPS Distributed (Monument)	10.00	SPS	Monument 115kV	On-Line
SPS Distributed (Moore E)	25.00	SPS	Moore East 115kV	On-Line
SPS Distributed (Ocotillo)	10.00	SPS	Ocotillo 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
Total:		25,377.3		

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	102.00	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-2008-019	300.00	OKGE	Tatonga 345kV
GEN-2008-029	250.00	OKGE	Woodward EHV 138kV
GEN-2008-044	197.80	OKGE	Tatonga 345kV
GEN-2010-011	30.00	OKGE	Tatonga 345kV
GEN-2010-040	300.00	OKGE	Cimarron 345kV
GEN-2011-007	250.00	OKGE	Tap Cimarron - Woodring (Matthewson) 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-2011-024	299.00	OKGE	Tatonga 345kV
GEN-2011-051	104.40	OKGE	Tap Woodward - Tatonga 345kV
GEN-2011-054	300.00	OKGE	Cimarron 345kV
PRIOR QUEUED SUBTOTAL	4,935.80		
GEN-2012-016	312.00	OKGE	Tap Woodward - Thistle 345kV Ckt 1
GEN-2012-031	200.10	OKGE	Cimarron 345kV (GEN-2010-040 Sub)
CURRENT CLUSTER SUBTOTAL	512.10		
AREA TOTAL	5,447.90		

GROUP 2: HITCHLAND AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2011-002	10.00	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	199.50	SPS	Hitchland 115kV
GEN-2007-057	34.50	SPS	Moore County East 115kV
GEN-2008-047	300.00	SPS	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV
GEN-2008-124T	42.00	SPS	TC-Keyes Texas County 69kV
GEN-2009-073T	48.00	SPS	TC-Eva Texas County 69kV
GEN-2010-001	300.00	SPS	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV
GEN-2010-014	358.80	SPS	Hitchland 345kV
GEN-2011-012	104.50	SPS	Tap Moore County - Hitchland 345kV
GEN-2011-014	201.00	SPS	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV
GEN-2011-021	299.00	SPS	Beaver County 345kV
GEN-2011-022	299.00	SPS	Hitchland 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	3,180.20		
AREA TOTAL	3,180.20		

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	Tap Greensburg - Ft Dodge (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	Spearville 345kV
GEN-2006-006	205.50	SUNCMKEC	Spearville 345kV
GEN-2006-021	101.00	SUNCMKEC	Flat Ridge Tap 138kV
GEN-2006-022	150.00	SUNCMKEC	Ninnescah 115kV
GEN-2007-038	200.00	SUNCMKEC	Spearville 345kV
GEN-2007-040	200.00	SUNCMKEC	Buckner 345kV
GEN-2008-018	405.00	SPS	Finney 345kV
GEN-2008-079	98.90	SUNCMKEC	Tap Cudahy - Ft Dodge 115kV
GEN-2008-124	200.00	SUNCMKEC	Spearville 345kV
GEN-2010-009	165.60	SUNCMKEC	Buckner 345kV
GEN-2010-015	200.10	SUNCMKEC	Spearville 345kV
GEN-2010-045	197.80	SUNCMKEC	Buckner 345kV
GEN-2010-061	180.00	MIDW	Tap Post Rock - Spearville (GEN-2011-017T) 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 - PostRock (GEN-2011-017T) 345kV
GEN-2011-023	299.00	SUNCMKEC	Clark County 345kV
GEN-2011-043	150.00	SUNCMKEC	Thistle 345kV
GEN-2011-044	150.00	SUNCMKEC	Thistle 345kV
GEN-2012-007	120.00	SUNCMKEC	Rubart 115kV
GEN-2012-011	200.00	SUNCMKEC	Tap Spearville - Post Rock 345kV (North of GEN-2011-017 Tap)
Gray County Wind (Montezuma)	110.00	SUNCMKEC	Gray County Tap 115kV
PRIOR QUEUED SUBTOTAL	5,114.00		
GEN-2012-024	180.00	SUNCMKEC	Clark County 345kV
CURRENT CLUSTER SUBTOTAL	180.00		
AREA TOTAL	5,294.00		

GROUP 4: NW KANSAS AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-039M	99.00	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-2008-025	101.00	SUNCMKEC	Ruleton 115kV
GEN-2008-092	201.00	MIDW	Knoll 230kV
GEN-2009-008	199.50	MIDW	South Hays 230kV
GEN-2009-020	48.60	MIDW	Tap Nekoma - Bazine 69kV
GEN-2010-048	70.00	MIDW	Tap Beach Station - Redline 115kV
GEN-2010-057	201.00	MIDW	Rice County 230kV
GEN-2012-002	101.20	SUNCMKEC	Tap Pile - Scott City 115kV
PRIOR QUEUED SUBTOTAL	2,089.30		
GEN-2012-026	100.00	MIDW	Colby 115kV
CURRENT CLUSTER SUBTOTAL	100.00		
AREA TOTAL	2,189.30		

GROUP 5: AMARILLO AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2002-022	240.00	SPS	Bushland 230kV
GEN-2006-047	240.00	SPS	Tap Bushland - Deaf Smith (Buffalo) 230kV
GEN-2007-048	400.00	SPS	Tap Amarillo S - Swisher 230kV
GEN-2008-051	322.00	SPS	Potter County 345kV
GEN-2008-088	50.60	SPS	Vega 69kV
Llano Estacado (White Deer)	80.00	SPS	Llano Wind 115kV
PRIOR QUEUED SUBTOTAL	1,332.60		
AREA TOTAL	1,332.60		

GROUP 6: S-TX PANHANDLE/NW 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	28.80	SPS	Lovington 115kV
ASGI-2011-003	10.00	SPS	Hendricks 115kV
ASGI-2011-004	20.00	SPS	Pleasant Hill 69kV
GEN-2001-033	180.00	SPS	San Juan Tap 230kV
GEN-2001-036	80.00	SPS	Norton 115kV
GEN-2006-018	170.00	SPS	TUCO Interchange 230kV
GEN-2006-026	604.00	SPS	Hobbs 230kV & Hobbs 115kV
GEN-2008-008	60.00	SPS	Graham 69kV
GEN-2008-009	60.00	SPS	San Juan Tap 230kV
GEN-2008-022	300.00	SPS	Tap Eddy Co - Tolk (Chaves County) 345kV
GEN-2010-006	205.00	SPS	Jones 230kV
GEN-2010-020	20.00	SPS	Roswell 69kV
GEN-2010-046	56.00	SPS	TUCO Interchange 230kV
GEN-2010-058	20.00	SPS	Chaves County 115kV
GEN-2011-025	82.30	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	Tap Grassland - Borden County 230kV
GEN-2012-008	40.00	SPS	Mustang 115kV & Mustang 230kV
GEN-2012-009	15.00	SPS	Mustang 230kV
GEN-2012-010	15.00	SPS	Mustang 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	Ocotillo 115kV
PRIOR QUEUED SUBTOTAL	2,571.50		
ASGI-2012-002	18.15	SPS	FE-Clovis Interchange 115kV
GEN-2012-020	477.12	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
CURRENT CLUSTER SUBTOTAL	719.27		
AREA TOTAL	3,290.8		

GROUP 7: SW OKLAHOMA AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-026	74.00	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 34.5kV
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-2009-016	100.80	AEPW	Falcon Road 138kV
GEN-2011-037	7.00	WFEC	Blue Canyon 5 138kV
GEN-2011-049	250.00	OKGE	Border 345kV
PRIOR QUEUED SUBTOTAL	1,926.00		
GEN-2012-028	74.80	WFEC	Gotebo 69kV
CURRENT CLUSTER SUBTOTAL	74.80		
AREA TOTAL	2,000.80		

GROUP 8: N-OK/S-KS AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2010-006	150.00	AECI	Tap Fairfax (AECI) - Shilder (AEPW) 138kV
GEN-2002-004	200.00	WERE	Latham 345kV
GEN-2005-013	201.00	WERE	Tap Latham - Neosho (Caney River) 345kV
GEN-2007-025	300.00	WERE	Viola 345kV
GEN-2008-013	300.00	OKGE	Tap Wichita - Woodring (Hunter) 345kV
GEN-2008-021	42.00	WERE	Wolf Creek 345kV
GEN-2008-071	76.80	OKGE	Newkirk 138kV
GEN-2008-098	100.80	WERE	Tap Lacygne - Wolf Creek (Anderson County) 345kV
GEN-2009-025	60.00	OKGE	Tap Deer Creek - Sinclair Blackwell 69kV
GEN-2010-003	100.80	WERE	Tap Lacygne - Wolf Creek (Anderson County) 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
PRIOR QUEUED SUBTOTAL	1,986.30		
GEN-2012-023	115.00	WERE	Viola 345kV
GEN-2012-027	136.00	AEPW	Shidler 138kV
GEN-2012-032	300.00	OKGE	Tap Rose Hill - Sooner 345kV
GEN-2012-033	98.82	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV
GEN-2012-040	76.50	WFEC	Newkirk 138kV
GEN-2012-041	121.50	OKGE	Tap Rose Hill - Sooner 345kV
CURRENT CLUSTER SUBTOTAL	847.82		
AREA TOTAL	2,834.1		

GROUP 9/10: 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-2004-005N	30.00	NPPD	St Francis 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	OPPD	North Petersburg 115kV
GEN-2007-011N08	81.00	NPPD	Bloomfield 115kV
GEN-2008-086N02	200.00	NPPD	Tap Ft Randle - Columbus (Madison County) 230kV
GEN-2008-119O	60.00	OPPD	S1399 161kV
GEN-2008-123N	89.70	NPPD	Tap Guide Rock - Pauline 115kV
GEN-2009-040	73.80	WERE	Marshall 115kV
GEN-2010-041	10.50	OPPD	S 1399 161kV
GEN-2010-044	99.00	NPPD	Harbine 115kV
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-2011-055	52.80	OPPD	South Sterling 69kV
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
NPPD Distributed (Broken Bow)	8.30	NPPD	Broken Bow 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)	10.80	NPPD	Ord 115kV
NPPD Distributed (Stuart)	2.10	NPPD	Ainsworth 115kV
PRIOR QUEUED SUBTOTAL	1,693.60		
GEN-2012-017	115.00	NPPD	Cooper 345kV
GEN-2012-018	200.00	NPPD	Tap Hoskins - Twin Church 230kV (GEN-2010-051T)
GEN-2012-021	4.80	LES	Terry Bundy Generating Station 115kV
CURRENT CLUSTER SUBTOTAL	319.80		
AREA TOTAL	2,013.4		

GROUP 12: NW AR AREA

Request	Capacity	Area	Proposed Point of Interconnection
AREA TOTAL	0.00		

GROUP 13: NW MISSOURI AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2008-129	80.00	MIPU	Pleasant Hill 161kV
GEN-2010-036	4.60	WERE	6th Street 115kV
GEN-2010-056	151.20	MIPU	Tap Saint Joseph - Cooper 345kV
GEN-2011-011	50.00	KACP	Iatan 345kV
PRIOR QUEUED SUBTOTAL	285.80		
AREA TOTAL	285.80		

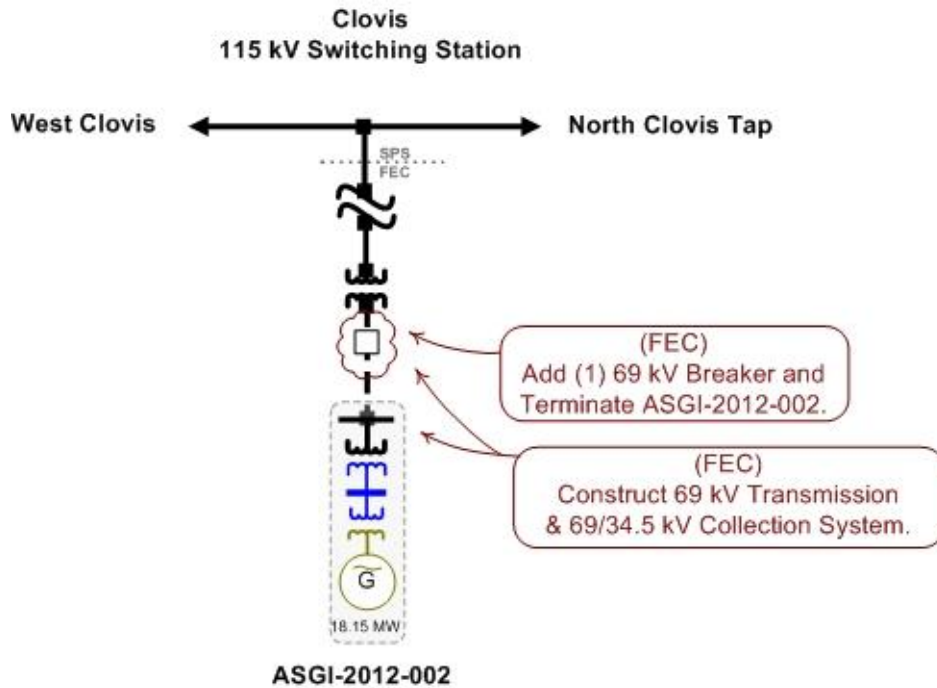
GROUP 14: S OKLAHOMA AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2011-040	111.00	OKGE	Tap Ratliff - Pooleville 138kV
GEN-2011-050	109.80	AEPW	Tap Rush Springs - Marlow 138kV
GEN-2012-004	41.40	OKGE	Tap Ratliff - Pooleville 138kV
PRIOR QUEUED SUBTOTAL	262.20		
AREA TOTAL	262.20		

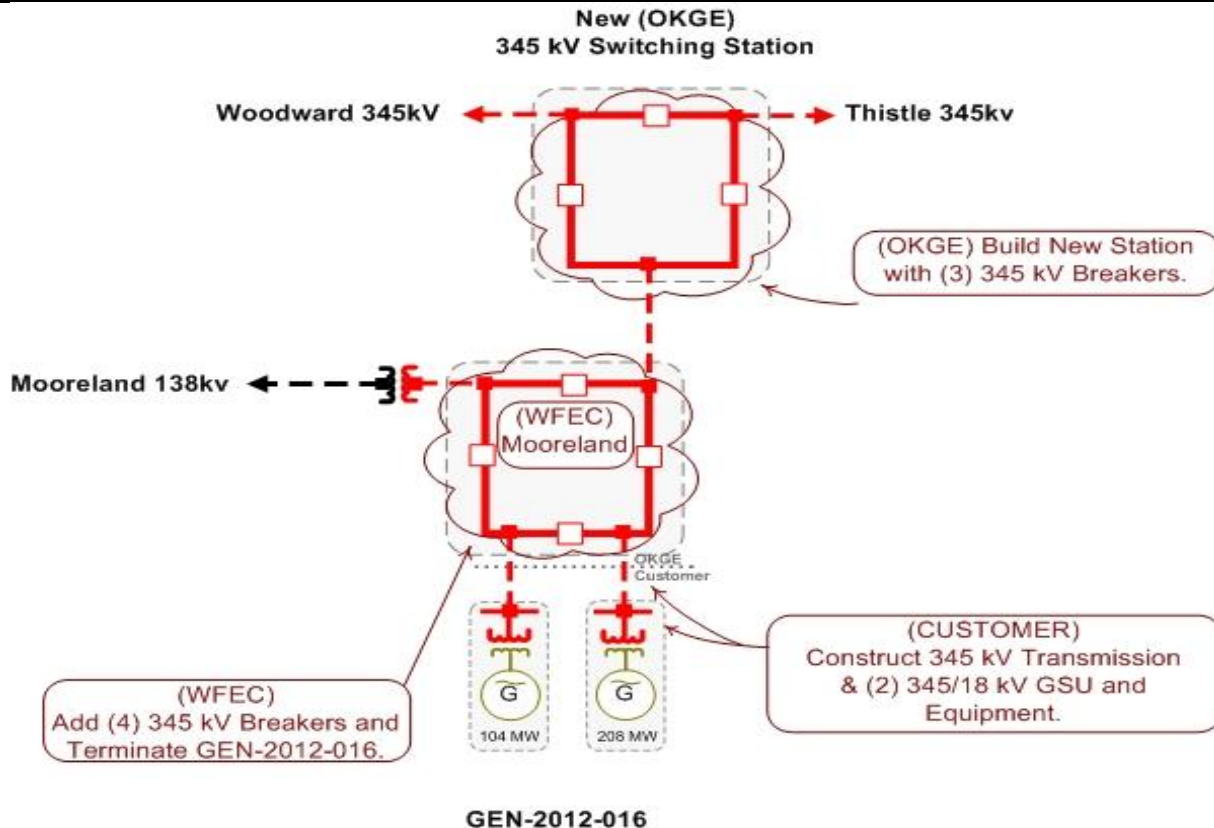
CLUSTER TOTAL (CURRENT STUDY)	2,753.8	MW
PQ TOTAL (PRIOR QUEUED)	25,377.3	MW
CLUSTER TOTAL (INCLUDING PRIOR QUEUED)	28,131.1	MW

D: Proposed Point of Interconnection One Line Diagrams

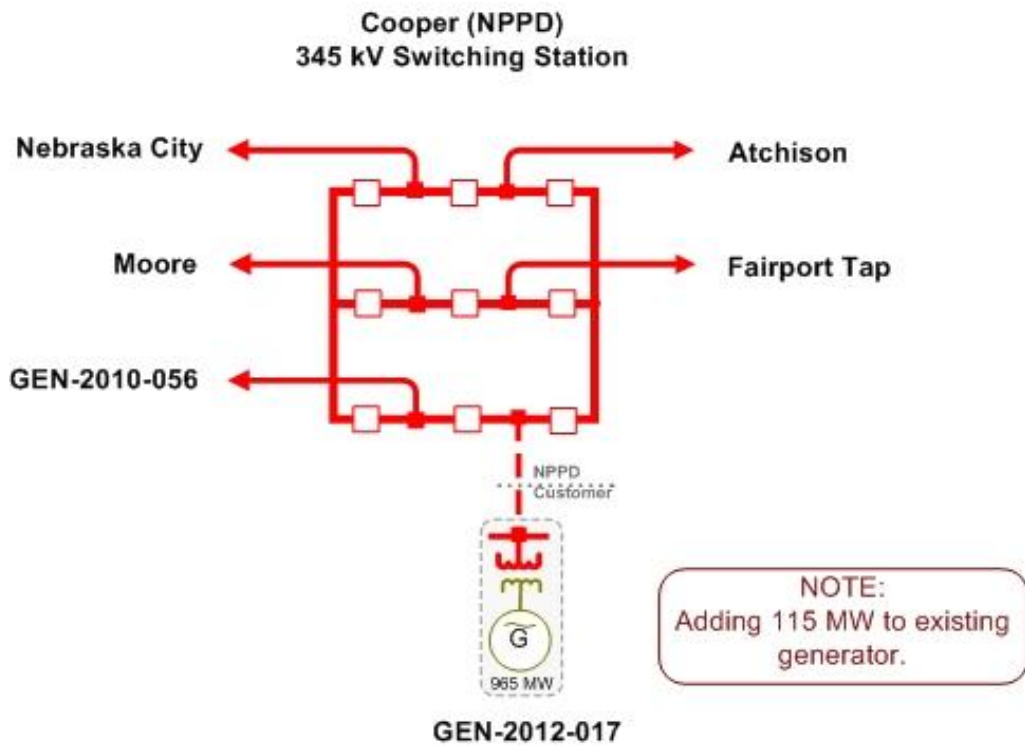
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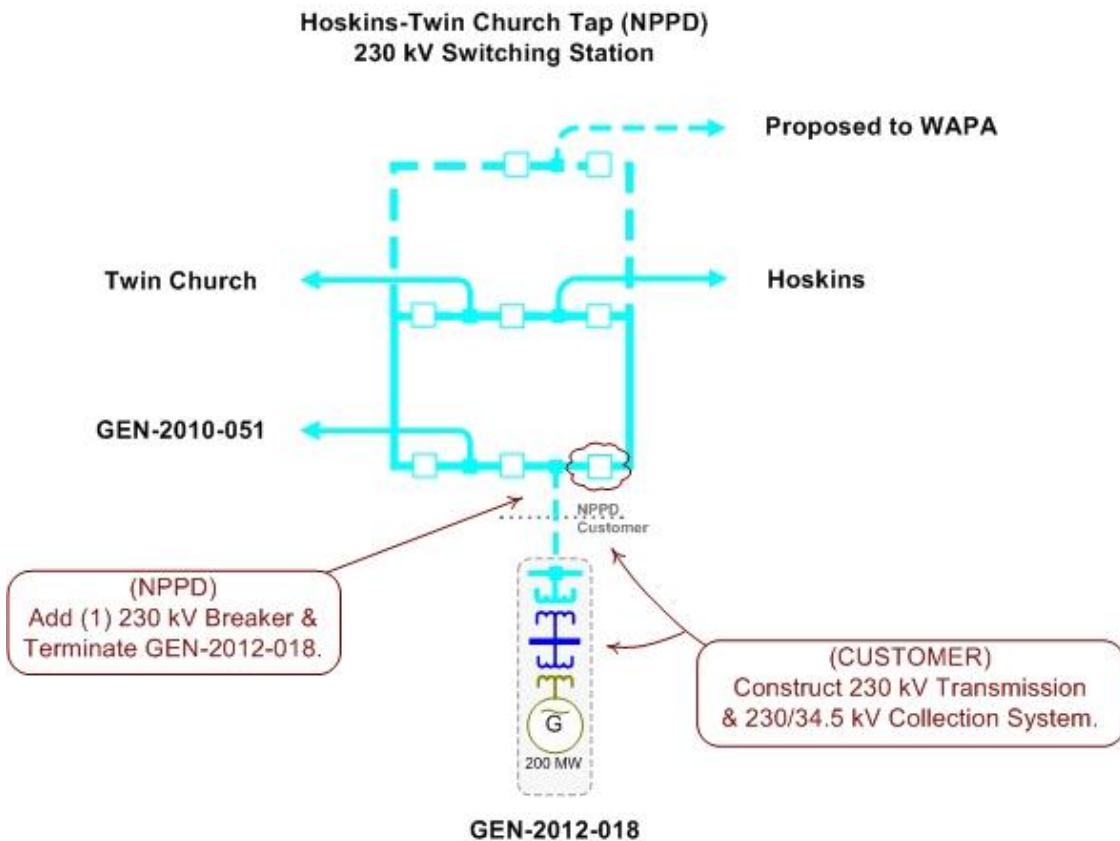
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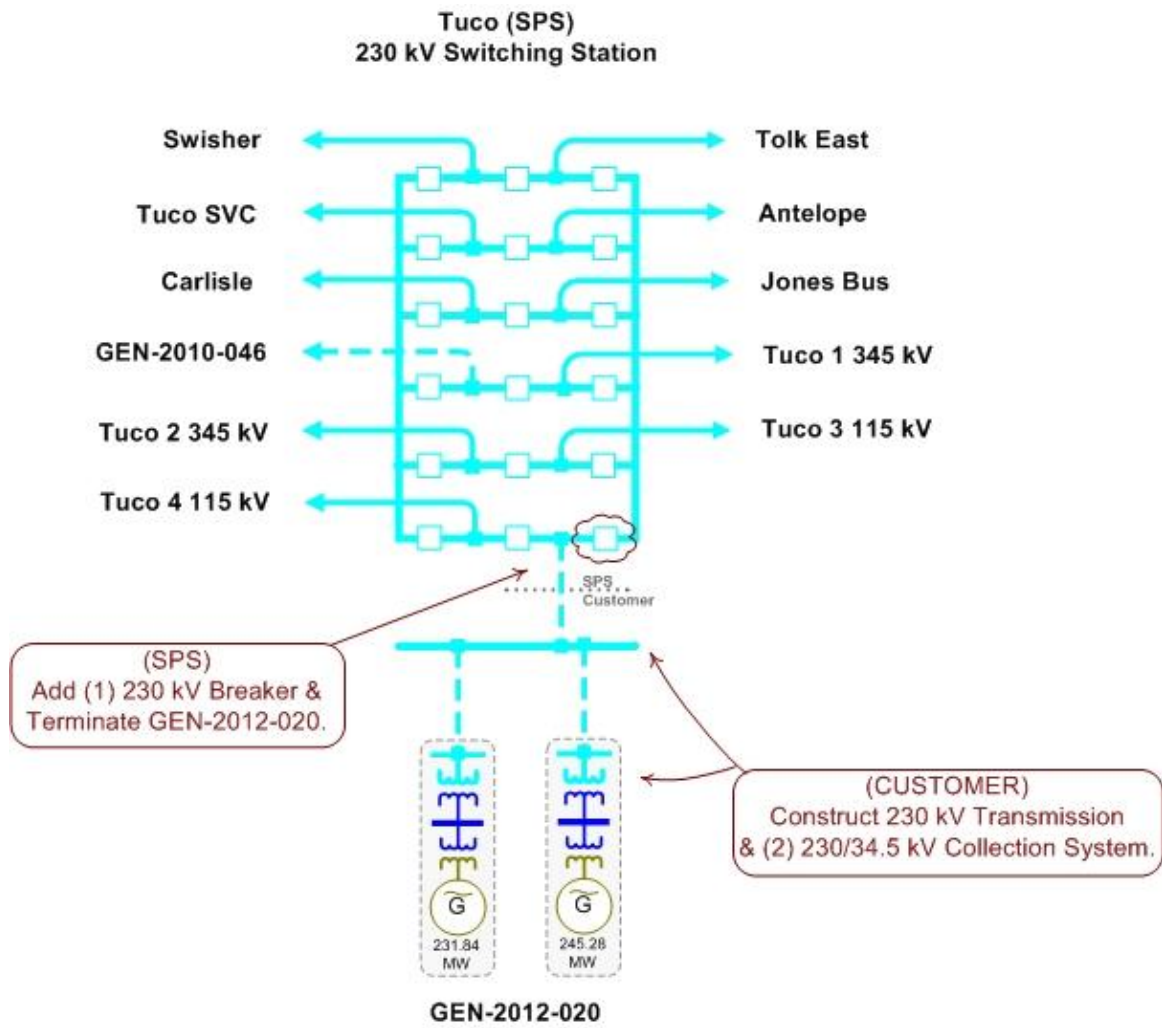
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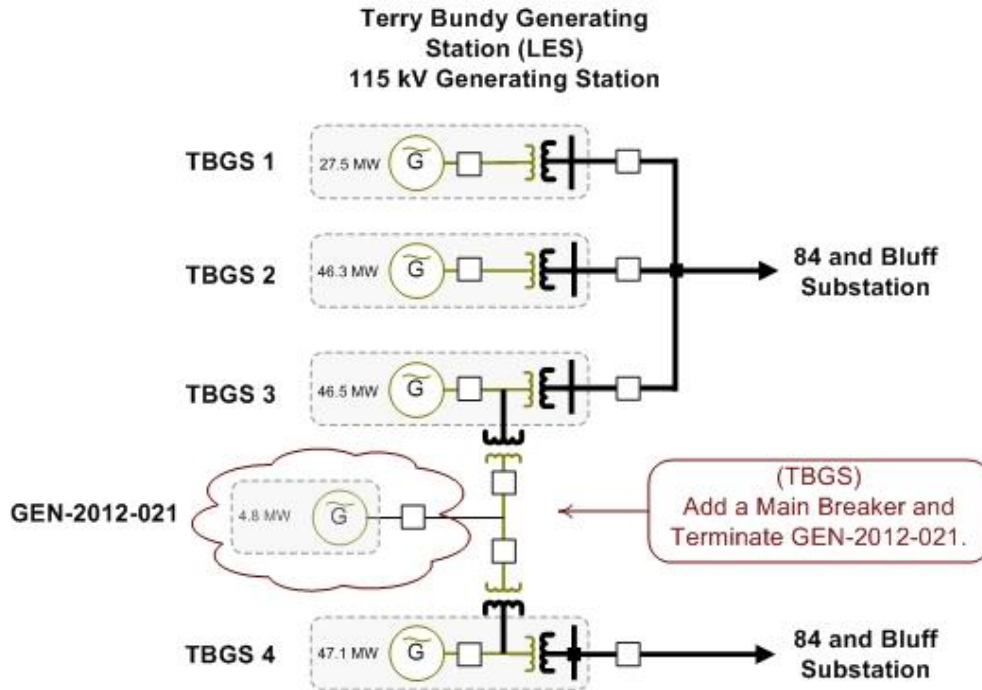
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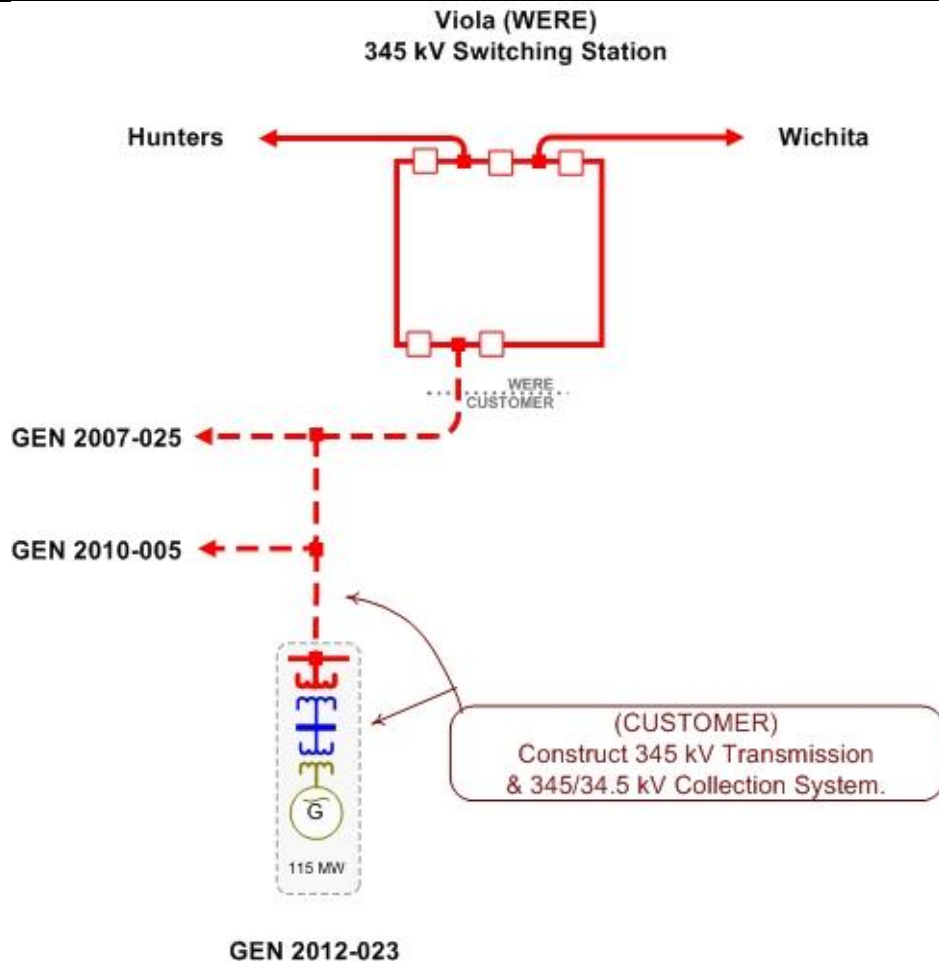
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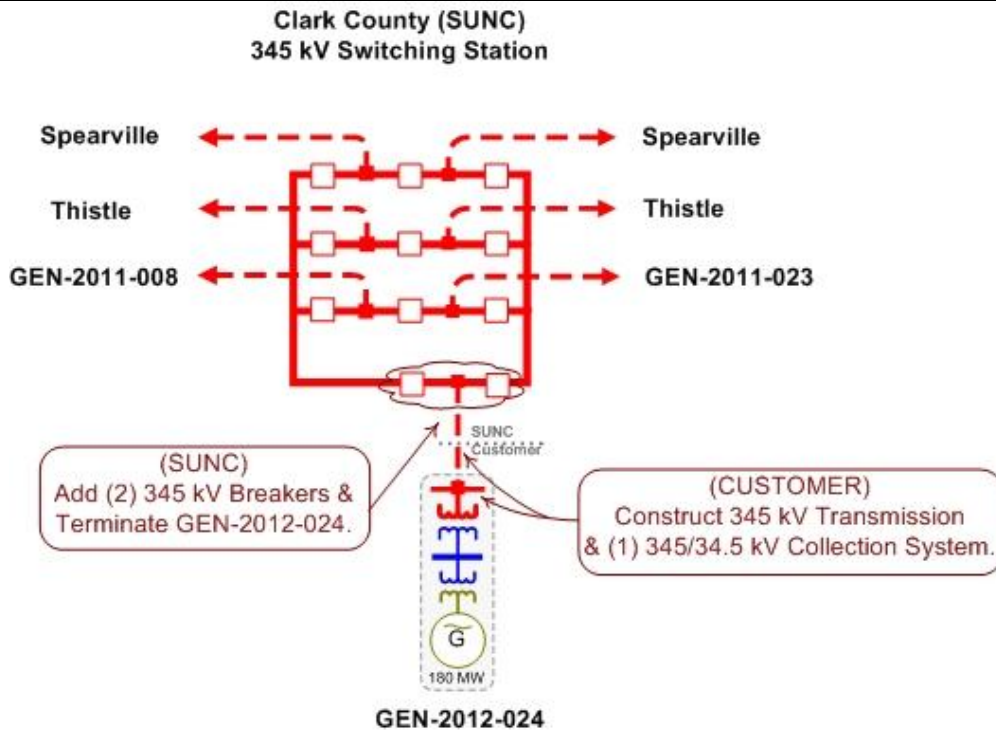
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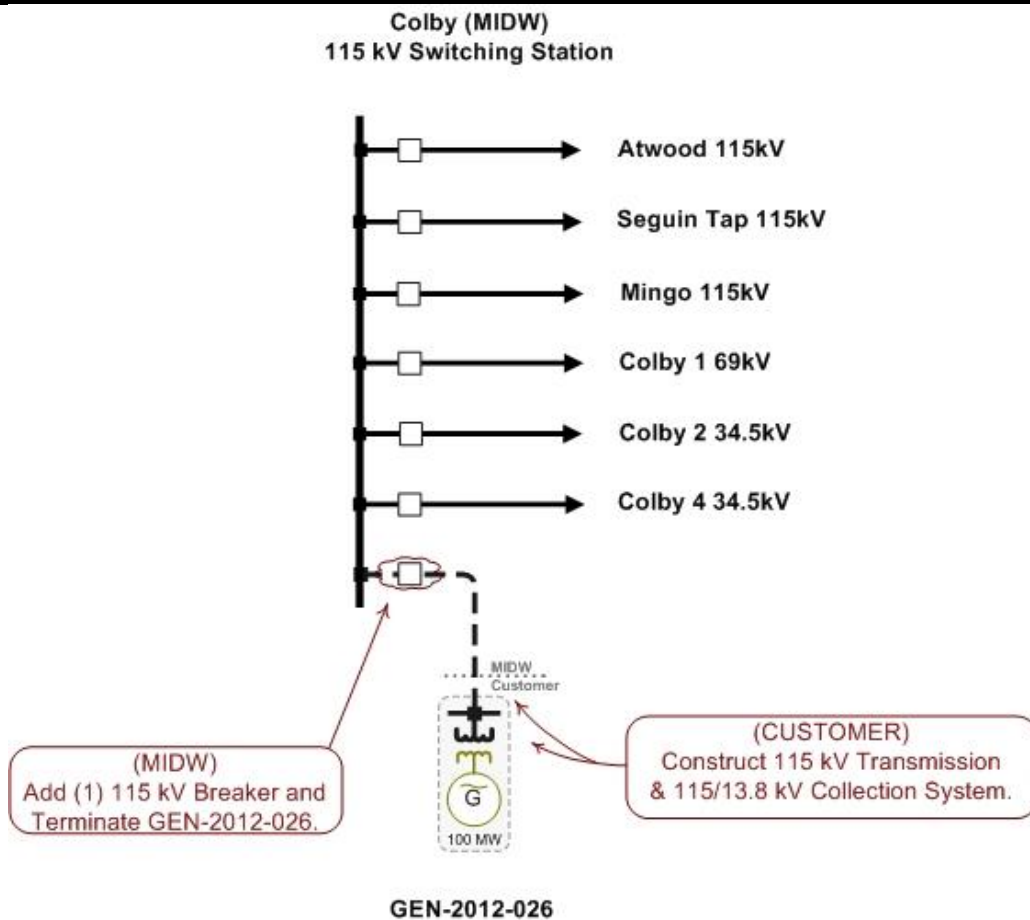
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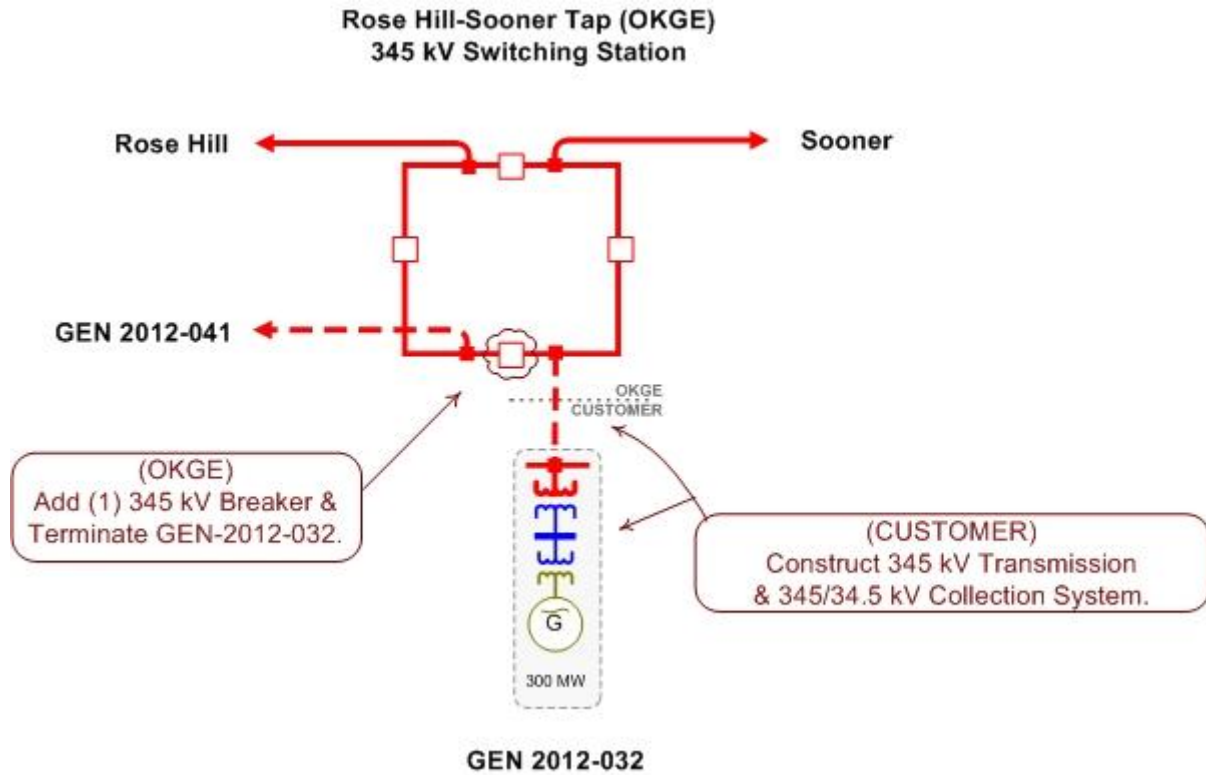
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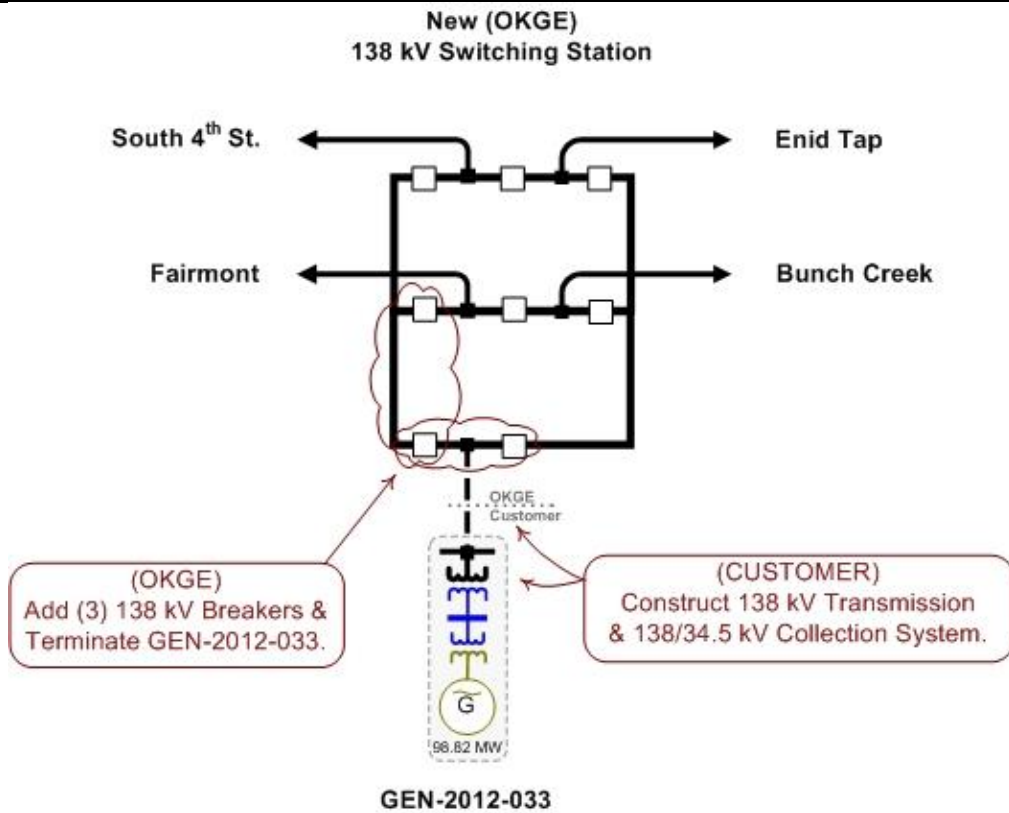
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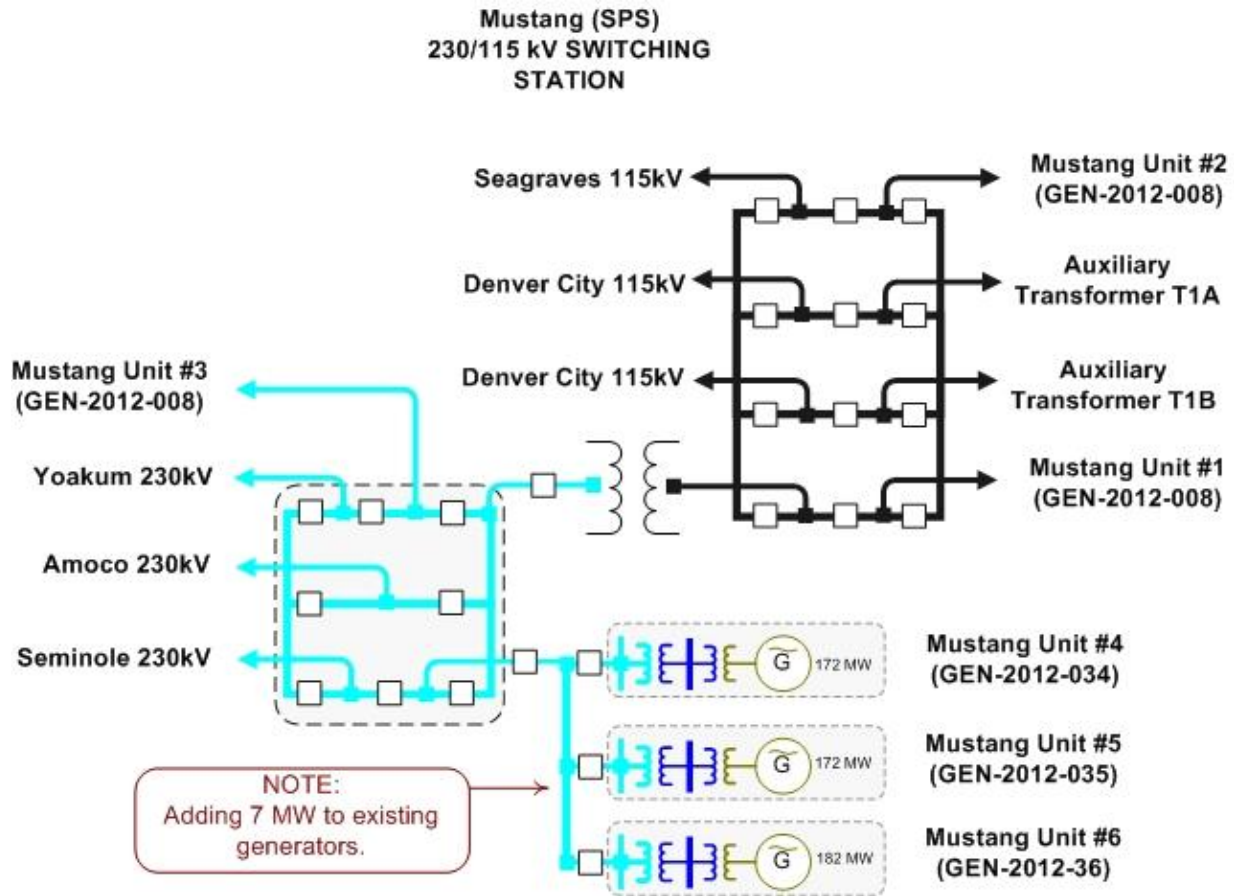
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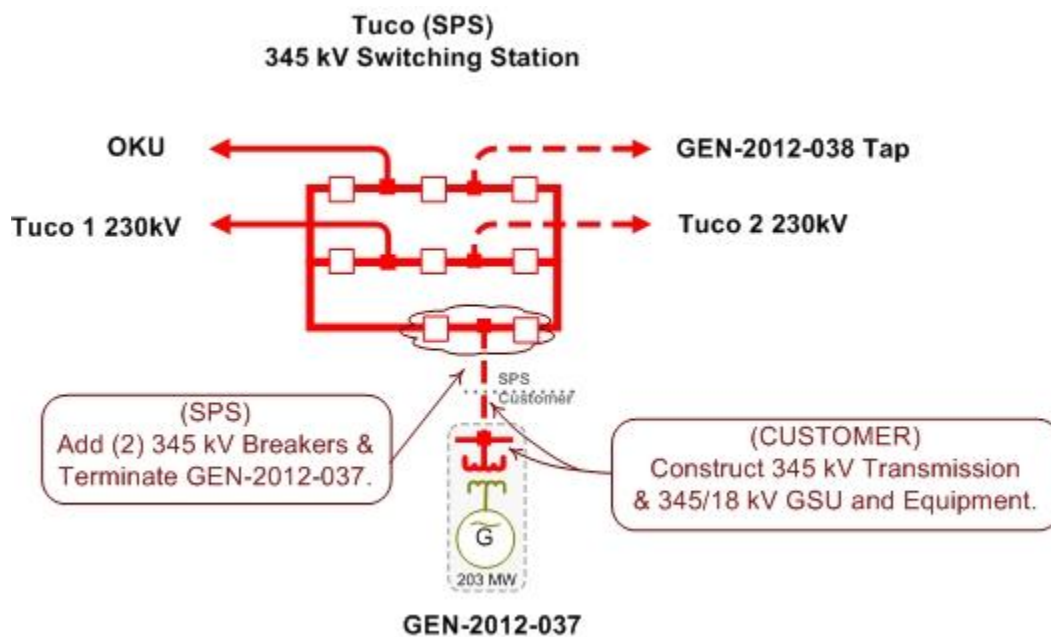
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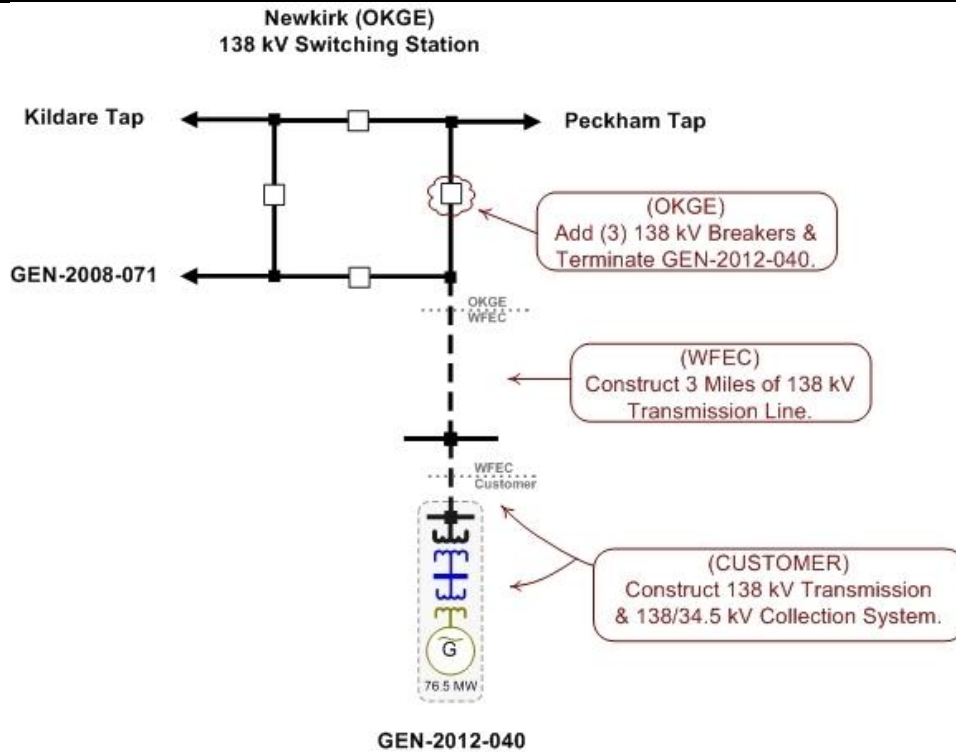
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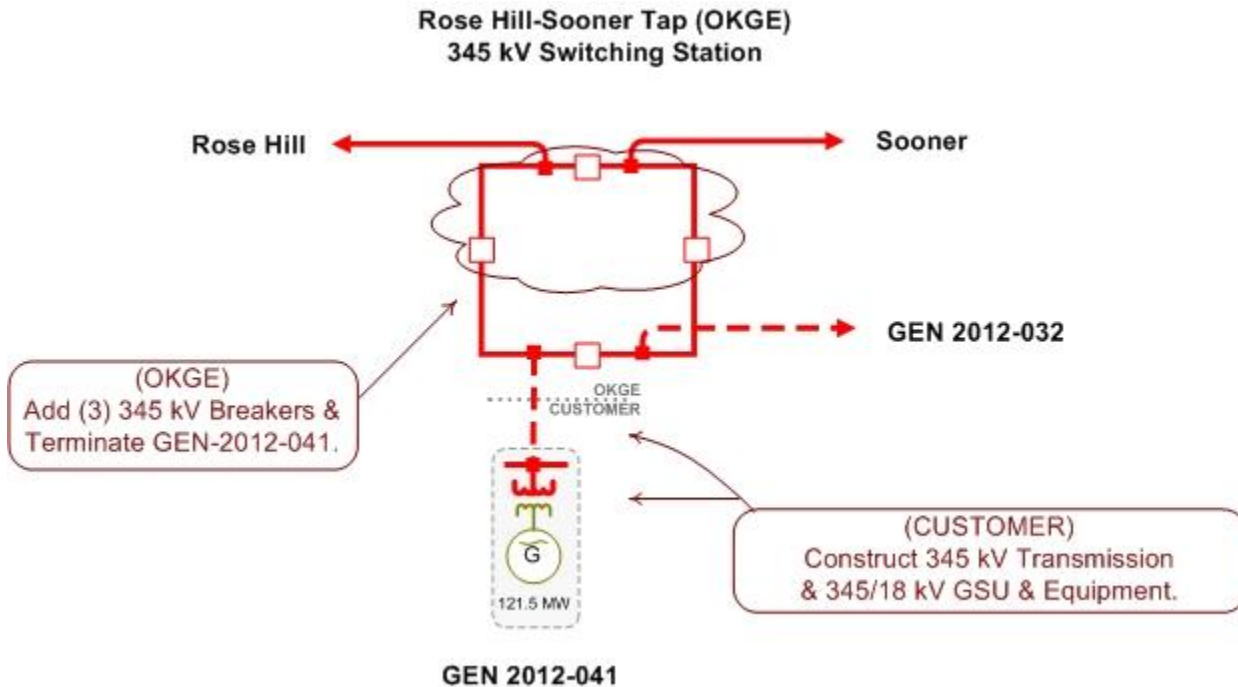
GEN-2012-037



GEN-2012-040



GEN-2012-041



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 Generation 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 Generation 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
ASGI-2012-002			
ASGI-2012-002 Interconnection Cost See One-Line Diagram.	Current Study	\$0.00	\$0.00
TUCO 345/230/13.2kV Autotransformer CKT 3 Build TUCO 345/230/13.2kV Autotransformer CKT 3 at new substation adjacent to the TUCO substation	Current Study	\$302,259.76	\$15,000,000.00
Nichols - Harrington Mid 230kV CKT 1 Per GEN-2008-051 LOIS: Rebuild approximately 1 mile of 230kV @ 1825 amps	In-Service		\$869,251.00
Nichols - Harrington West 230kV CKT 1 Per GEN-2008-051 LOIS: Rebuild approximately 1 mile of 230kV @ 1825 amps	In-Service		\$869,251.00
Beaver County - Woodward 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Beaver County 345kV Expansion Beaver County Expansion: Tap & Tie in Hitchland - Woodward 345kV CKT 2	Previously Allocated		\$3,500,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Hitchland - Beaver County 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Hitchland 345/230kV Autotransformer CKT 2 Priority Project: Hitchland 345/230kV Autotransformer CKT 2 (Total Project E&C Cost Shown).	Previously Allocated		\$8,883,760.00
Power System Stabilizers (PSS) Install Power System Stabilizers @ Tolk(Units: 1,2) and Jones (Units: 1,2,3,4)	Previously Allocated		\$300,000.00
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$426,504,292.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$207,782,000.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
	Current Study Total	\$302,259.76	

* 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
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GEN-2012-016

GEN-2012-016 Interconnection Cost See One-Line Diagram.	Current Study	\$10,000,000.00	\$10,000,000.00
Matthewson - Cimarron 345kV CKT 2 Build second 345kV circuit from Matthewson - Cimarron @ 3000 amps	Previously Allocated		\$42,903,753.00
Mullergren - Reno 345kV Dbl CKT Build approximately 92 miles of new Dbl 345kV circuit from Mullergren - Reno @ 3000 amps	Previously Allocated		\$210,887,465.33
Spearville - Mullergren 345kV Dbl CKT Build approximately 85 miles of new Dbl 345kV circuit from Spearville - Mullergren @ 3000 amps	Previously Allocated		\$196,323,921.67
Tatonga - Matthewson 345kV CKT 2 Build second 345kV circuit from Tatonga - Matthewson @ 3000 amps	Previously Allocated		\$104,260,473.00
Thistle - Flat Ridge 138kV CKT 1 Priority Project: Thistle - Flat Ridge 138kV CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$5,776,280.00
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$426,504,292.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$207,782,000.00
Thistle 345/138KV Transformer CKT 1 Priority Project: Thistle 345/138kV Transformer CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$6,585,986.00
	Current Study Total	\$10,000,000.00	

GEN-2012-017

GEN-2012-017 Interconnection Cost See One-Line Diagram.	Current Study	\$720,000.00	\$720,000.00
Nashua 345/161/13.8KV Autotransformer CKT 1 Balanced Portfolio: Nashua/161/13.8 Autotransformer 345kV CKT 1 (Total Project E&C Cost Shown).	Previously Allocated		\$4,230,000.00
	Current Study Total	\$720,000.00	

GEN-2012-018

Dixon County - Rasmussen 230kV CKT 1 Build approximately 40 miles of new 230kV	Current Study	\$40,000,000.00	\$40,000,000.00
GEN-2012-018 Interconnection Cost See One-Line Diagram.	Current Study	\$3,000,000.00	\$3,000,000.00

* 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
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		\$500,000.00
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		\$100,000.00
	Current Study Total	\$43,000,000.00	

GEN-2012-020

GEN-2012-020 Interconnection Cost See One-Line Diagram.	Current Study	\$6,000,000.00	\$6,000,000.00
TUCO 345/230/13.2kV Autotransformer CKT 3 Build TUCO 345/230/13.2kV Autotransformer CKT 3 at new substation adjacent to the TUCO substation	Current Study	\$10,735,558.28	\$15,000,000.00
Beaver County - Woodward 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Beaver County 345kV Expansion Beaver County Expansion: Tap & Tie in Hitchland - Woodward 345kV CKT 2	Previously Allocated		\$3,500,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Hitchland - Beaver County 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Hitchland 345/230kV Autotransformer CKT 2 Priority Project: Hitchland 345/230kV Autotransformer CKT 2 (Total Project E&C Cost Shown).	Previously Allocated		\$8,883,760.00
Power System Stabilizers (PSS) Install Power System Stabilizers @ Tolk(Units: 1,2) and Jones (Units: 1,2,3,4)	Previously Allocated		\$300,000.00
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$426,504,292.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$207,782,000.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
	Current Study Total	\$16,735,558.28	

GEN-2012-021

* 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-2012-021 Interconnection Cost See One-Line Diagram.	Current Study	\$0.00	\$0.00
Nashua 345/161/13.8KV Autotransformer CKT 1 Balanced Portfolio: Nashua/161/13.8 Autotransformer 345kV CKT 1 (Total Project E&C Cost Shown).	Previously Allocated		\$4,230,000.00
	Current Study Total	\$0.00	
<hr/>			
GEN-2012-023			
GEN-2012-023 Interconnection Cost See One-Line Diagram.	Current Study	\$26,583.00	\$26,583.00
Matthewson - Cimarron 345kV CKT 2 Build second 345kV circuit from Matthewson - Cimarron @ 3000 amps	Previously Allocated		\$42,903,753.00
	Current Study Total	\$26,583.00	
<hr/>			
GEN-2012-024			
GEN-2012-024 Interconnection Cost See One-Line Diagram.	Current Study	\$5,000,000.00	\$5,000,000.00
Beaver County - Buckner 345kV Build approximately 90 miles of 345kV from Beaver County - Gray County @ 3000 amps	Previously Allocated		\$170,209,050.00
Beaver County - Woodward 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Beaver County 345kV Expansion Beaver County Expansion: Tap & Tie in Hitchland - Woodward 345kV CKT 2	Previously Allocated		\$3,500,000.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Clark - Thistle 345KV Dbl CKT Priority Project: Spearville - Clark - Thistle Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$426,504,292.00
Hitchland 345/230kV Autotransformer CKT 2 Priority Project: Hitchland 345/230kV Autotransformer CKT 2 (Total Project E&C Cost Shown).	Previously Allocated		\$8,883,760.00
Matthewson - Cimarron 345kV CKT 2 Build second 345kV circuit from Matthewson - Cimarron @ 3000 amps	Previously Allocated		\$42,903,753.00
Mullergren - Reno 345kV Dbl CKT Build approximately 92 miles of new Dbl 345kV circuit from Mullergren - Reno @ 3000 amps	Previously Allocated		\$210,887,465.33
Spearville - Mullergren 345kV Dbl CKT Build approximately 85 miles of new Dbl 345kV circuit from Spearville - Mullergren @ 3000 amps	Previously Allocated		\$196,323,921.67

* 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
Spearville -Clark 345KV Dbl CKT Priority Project: Spearville - Clark - Thistle Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$426,504,292.00
Tatonga - Matthewson 345kV CKT 2 Build second 345kV circuit from Tatonga - Matthewson @ 3000 amps	Previously Allocated		\$104,260,473.00
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$426,504,292.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$207,782,000.00
	Current Study Total	\$5,000,000.00	

GEN-2012-026

GEN-2012-026 Interconnection Cost See One-Line Diagram.	Current Study	\$7,892,160.00	\$7,892,160.00
Beaver County - Buckner 345kV Build approximately 90 miles of 345kV from Beaver County - Gray County @ 3000 amps	Previously Allocated		\$170,209,050.00
Beaver County - Woodward 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Beaver County 345kV Expansion Beaver County Expansion: Tap & Tie in Hitchland - Woodward 345kV CKT 2	Previously Allocated		\$3,500,000.00
Clark - Thistle 345KV Dbl CKT Priority Project: Spearville - Clark - Thistle Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$426,504,292.00
Hitchland - Beaver County 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Holcomb 345/115/13.8kV Transformer Build second 345/115/13.8kV transformer	Previously Allocated		\$12,312,009.00
Matthewson - Cimarron 345kV CKT 2 Build second 345kV circuit from Matthewson - Cimarron @ 3000 amps	Previously Allocated		\$42,903,753.00
Mullergren - Reno 345kV Dbl CKT Build approximately 92 miles of new Dbl 345kV circuit from Mullergren - Reno @ 3000 amps	Previously Allocated		\$210,887,465.33
Spearville - Mullergren 345kV Dbl CKT Build approximately 85 miles of new Dbl 345kV circuit from Spearville - Mullergren @ 3000 amps	Previously Allocated		\$196,323,921.67
Spearville -Clark 345KV Dbl CKT Priority Project: Spearville - Clark - Thistle Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$426,504,292.00

* 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
Tatonga - Matthewson 345kV CKT 2 Build second 345kV circuit from Tatonga - Matthewson @ 3000 amps	Previously Allocated		\$104,260,473.00
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$426,504,292.00
	Current Study Total	\$7,892,160.00	
GEN-2012-027			
Fairfax 138/69kV CKT 1 Per AECI Affected System Study for DISIS-2012-002	Current Study	\$2,200,000.00	\$2,200,000.00
GEN-2012-027 Interconnection Cost See One-Line Diagram.	Current Study	\$1,779,284.00	\$1,779,284.00
Remington - Fairfax 138KV CKT 1 Increase conductor clearance	Current Study	\$400,000.00	\$400,000.00
	Current Study Total	\$4,379,284.00	
GEN-2012-028			
GEN-2012-028 Interconnection Cost See One-Line Diagram.	Current Study	\$1,300,000.00	\$1,300,000.00
Lake Creek- Lone Wolf 69kV CKT 1 Reset CT.	Current Study	\$197,972.00	\$197,972.00
	Current Study Total	\$1,497,972.00	
GEN-2012-031			
GEN-2012-031 Interconnection Cost See One-Line Diagram.	Current Study	\$40,000.00	\$40,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Matthewson - Cimarron 345kV CKT 2 Build second 345kV circuit from Matthewson - Cimarron @ 3000 amps	Previously Allocated		\$42,903,753.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$207,782,000.00
	Current Study Total	\$40,000.00	
GEN-2012-032			

* 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-2012-032 Interconnection Cost See One-Line Diagram.	Current Study	\$3,654,353.00	\$3,654,353.00
	Current Study Total	\$3,654,353.00	
GEN-2012-033			
GEN-2012-033 Interconnection Cost See One-Line Diagram.	Current Study	\$3,033,890.00	\$3,033,890.00
	Current Study Total	\$3,033,890.00	
GEN-2012-034			
GEN-2012-034 Interconnection Cost See One-Line Diagram.	Current Study	\$0.00	\$0.00
TUCO 345/230/13.2kV Autotransformer CKT 3 Build TUCO 345/230/13.2kV Autotransformer CKT 3 at new substation adjacent to the TUCO substation	Current Study	\$130,055.53	\$15,000,000.00
Amoco Wasson - Oxy Tap 230kV CKT 1 Replace line traps at both terminals	Previously Allocated		\$200,000.00
Beaver County - Woodward 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Beaver County 345kV Expansion Beaver County Expansion: Tap & Tie in Hitchland - Woodward 345kV CKT 2	Previously Allocated		\$3,500,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Hitchland - Beaver County 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Mustang - Denver North 115kV CKT 1 Reconductor approximately 3 miles of 115 kV @ 1900 amps	Previously Allocated		\$2,154,989.00
Mustang - Denver South 115kV CKT 1 Reconductor approximately 3 miles of 115 kV @ 1900 amps	Previously Allocated		\$2,137,372.00
Mustang - Yoakum 230kV CKT 1 Replace line traps at both terminals	Previously Allocated		\$200,000.00
Oxy Tap - Yoakum 230kV CKT 1 Replace line traps at both terminals	Previously Allocated		\$200,000.00

* 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
Power System Stabilizers (PSS) Install Power System Stabilizers @ Tolk(Units: 1,2) and Jones (Units: 1,2,3,4)	Previously Allocated		\$300,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$207,782,000.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
	Current Study Total	\$130,055.53	

GEN-2012-035

GEN-2012-035 Interconnection Cost See One-Line Diagram.	Current Study	\$0.00	\$0.00
TUCO 345/230/13.2kV Autotransformer CKT 3 Build TUCO 345/230/13.2kV Autotransformer CKT 3 at new substation adjacent to the TUCO substation	Current Study	\$130,055.53	\$15,000,000.00
Amoco Wasson - Oxy Tap 230kV CKT 1 Replace line traps at both terminals	Previously Allocated		\$200,000.00
Beaver County - Woodward 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Beaver County 345kV Expansion Beaver County Expansion: Tap & Tie in Hitchland - Woodward 345kV CKT 2	Previously Allocated		\$3,500,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Hitchland - Beaver County 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Mustang - Denver North 115kV CKT 1 Reconductor approximately 3 miles of 115 kV @ 1900 amps	Previously Allocated		\$2,154,989.00
Mustang - Denver South 115kV CKT 1 Reconductor approximately 3 miles of 115 kV @ 1900 amps	Previously Allocated		\$2,137,372.00
Mustang - Yoakum 230kV CKT 1 Replace line traps at both terminals	Previously Allocated		\$200,000.00
Oxy Tap - Yoakum 230kV CKT 1 Replace line traps at both terminals	Previously Allocated		\$200,000.00

* 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
Power System Stabilizers (PSS) Install Power System Stabilizers @ Tolk(Units: 1,2) and Jones (Units: 1,2,3,4)	Previously Allocated		\$300,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$207,782,000.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
	Current Study Total	\$130,055.53	

GEN-2012-036

GEN-2012-036 Interconnection Cost See One-Line Diagram.	Current Study	\$0.00	\$0.00
TUCO 345/230/13.2kV Autotransformer CKT 3 Build TUCO 345/230/13.2kV Autotransformer CKT 3 at new substation adjacent to the TUCO substation	Current Study	\$130,055.53	\$15,000,000.00
Amoco Wasson - Oxy Tap 230kV CKT 1 Replace line traps at both terminals	Previously Allocated		\$200,000.00
Beaver County - Woodward 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Beaver County 345kV Expansion Beaver County Expansion: Tap & Tie in Hitchland - Woodward 345kV CKT 2	Previously Allocated		\$3,500,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Hitchland - Beaver County 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Mustang - Denver North 115kV CKT 1 Reconductor approximately 3 miles of 115 kV @ 1900 amps	Previously Allocated		\$2,154,989.00
Mustang - Denver South 115kV CKT 1 Reconductor approximately 3 miles of 115 kV @ 1900 amps	Previously Allocated		\$2,137,372.00
Mustang - Yoakum 230kV CKT 1 Replace line traps at both terminals	Previously Allocated		\$200,000.00
Oxy Tap - Yoakum 230kV CKT 1 Replace line traps at both terminals	Previously Allocated		\$200,000.00

* 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
Power System Stabilizers (PSS) Install Power System Stabilizers @ Tolk(Units: 1,2) and Jones (Units: 1,2,3,4)	Previously Allocated		\$300,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$207,782,000.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
	Current Study Total		\$130,055.53

GEN-2012-037

GEN-2012-037 Interconnection Cost See One-Line Diagram.	Current Study	\$8,000,000.00	\$8,000,000.00
TUCO 345/230/13.2kV Autotransformer CKT 3 Build TUCO 345/230/13.2kV Autotransformer CKT 3 at new substation adjacent to the TUCO substation	Current Study	\$3,572,015.36	\$15,000,000.00
Beaver County - Woodward 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Beaver County 345kV Expansion Beaver County Expansion: Tap & Tie in Hitchland - Woodward 345kV CKT 2	Previously Allocated		\$3,500,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,247,072.00
Hitchland - Beaver County 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Power System Stabilizers (PSS) Install Power System Stabilizers @ Tolk(Units: 1,2) and Jones (Units: 1,2,3,4)	Previously Allocated		\$300,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$207,782,000.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
	Current Study Total		\$11,572,015.36

GEN-2012-040

GEN-2012-040 Interconnection Cost See One-Line Diagram.	Current Study	\$3,524,000.00	\$3,524,000.00
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* 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
FPL Switch - Woodward 138kV CKT 1 NRIS only required upgrade: Rebuild approximately 12 miles of 138kV line	Previously Allocated		\$6,509,948.00
	Current Study Total	\$3,524,000.00	
GEN-2012-041			
GEN-2012-041 Interconnection Cost See One-Line Diagram.	Current Study	\$10,793,361.00	\$10,793,361.00
	Current Study Total	\$10,793,361.00	
TOTAL CURRENT STUDY COSTS:		\$122,561,602.99	

* 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 Generation 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

ASGI-2012-002 Interconnection Cost		\$0.00
See One-Line Diagram.		
	ASGI-2012-002	\$0.00
	Total Allocated Costs	\$0.00
Dixon County - Rasmussen 230kV CKT 1		\$40,000,000.00
Build approximately 40 miles of new 230kV		
	GEN-2012-018	\$40,000,000.00
	Total Allocated Costs	\$40,000,000.00
Fairfax 138/69kV CKT 1		\$2,200,000.00
Per AECI Affected System Study for DISIS-2012-002		
	GEN-2012-027	\$2,200,000.00
	Total Allocated Costs	\$2,200,000.00
GEN-2012-016 Interconnection Cost		\$10,000,000.00
See One-Line Diagram.		
	GEN-2012-016	\$10,000,000.00
	Total Allocated Costs	\$10,000,000.00
GEN-2012-017 Interconnection Cost		\$720,000.00
See One-Line Diagram.		
	GEN-2012-017	\$720,000.00
	Total Allocated Costs	\$720,000.00
GEN-2012-018 Interconnection Cost		\$3,000,000.00
See One-Line Diagram.		
	GEN-2012-018	\$3,000,000.00
	Total Allocated Costs	\$3,000,000.00
GEN-2012-020 Interconnection Cost		\$6,000,000.00
See One-Line Diagram.		
	GEN-2012-020	\$6,000,000.00
	Total Allocated Costs	\$6,000,000.00

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

GEN-2012-021 Interconnection Cost		\$500,000.00
See One-Line Diagram.		
	GEN-2012-021	\$500,000.00
	Total Allocated Costs	\$500,000.00
GEN-2012-023 Interconnection Cost		\$26,583.00
See One-Line Diagram.		
	GEN-2012-023	\$26,583.00
	Total Allocated Costs	\$26,583.00
GEN-2012-024 Interconnection Cost		\$5,000,000.00
See One-Line Diagram.		
	GEN-2012-024	\$5,000,000.00
	Total Allocated Costs	\$5,000,000.00
GEN-2012-026 Interconnection Cost		\$7,892,160.00
See One-Line Diagram.		
	GEN-2012-026	\$7,892,160.00
	Total Allocated Costs	\$7,892,160.00
GEN-2012-027 Interconnection Cost		\$1,779,284.00
See One-Line Diagram.		
	GEN-2012-027	\$1,779,284.00
	Total Allocated Costs	\$1,779,284.00
GEN-2012-028 Interconnection Cost		\$1,300,000.00
See One-Line Diagram.		
	GEN-2012-028	\$1,300,000.00
	Total Allocated Costs	\$1,300,000.00
GEN-2012-031 Interconnection Cost		\$40,000.00
See One-Line Diagram.		
	GEN-2012-031	\$40,000.00
	Total Allocated Costs	\$40,000.00
GEN-2012-032 Interconnection Cost		\$3,654,353.00
See One-Line Diagram.		
	GEN-2012-032	\$3,654,353.00
	Total Allocated Costs	\$3,654,353.00

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

GEN-2012-033 Interconnection Cost		\$3,033,890.00
See One-Line Diagram.		
	GEN-2012-033	\$3,033,890.00
	Total Allocated Costs	\$3,033,890.00
GEN-2012-034 Interconnection Cost		\$0.00
See One-Line Diagram.		
	GEN-2012-034	\$0.00
	Total Allocated Costs	\$0.00
GEN-2012-035 Interconnection Cost		\$0.00
See One-Line Diagram.		
	GEN-2012-035	\$0.00
	Total Allocated Costs	\$0.00
GEN-2012-036 Interconnection Cost		\$0.00
See One-Line Diagram.		
	GEN-2012-036	\$0.00
	Total Allocated Costs	\$0.00
GEN-2012-037 Interconnection Cost		\$8,000,000.00
See One-Line Diagram.		
	GEN-2012-037	\$8,000,000.00
	Total Allocated Costs	\$8,000,000.00
GEN-2012-040 Interconnection Cost		\$3,524,000.00
See One-Line Diagram.		
	GEN-2012-040	\$3,524,000.00
	Total Allocated Costs	\$3,524,000.00
GEN-2012-041 Interconnection Cost		\$10,793,361.00
See One-Line Diagram.		
	GEN-2012-041	\$10,793,361.00
	Total Allocated Costs	\$10,793,361.00
Lake Creek- Lone Wolf 69kV CKT 1		\$197,972.00
Reset CT.		
	GEN-2012-028	\$197,972.00
	Total Allocated Costs	\$197,972.00

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

Remington - Fairfax 138KV CKT 1**\$400,000.00**

Increase conductor clearance

GEN-2012-027 \$400,000.00

Total Allocated Costs \$400,000.00

TUCO 345/230/13.2kV Autotransformer CKT 3**\$15,000,000.00**

Build TUCO 345/230/13.2kV Autotransformer CKT 3 at new substation adjacent to the TUCO substation

ASGI-2012-002 \$302,259.76

GEN-2012-020 \$10,735,558.28

GEN-2012-034 \$130,055.53

GEN-2012-035 \$130,055.53

GEN-2012-036 \$130,055.53

GEN-2012-037 \$3,572,015.36

Total Allocated Costs \$15,000,000.00

* 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	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	09G12_018_BPSON		0 13G	G12_018	'FROM->TO'	'G10-51T 230.00 - HOSKINS 230KV CKT 1'	320	1	175.1633	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'
FDNS	09G12_018		0 13G	G12_018	'FROM->TO'	'G10-51T 230.00 - HOSKINS 230KV CKT 1'	320	1	175.0455	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'
FDNS	9		0 13G	G12_018	'FROM->TO'	'G10-51T 230.00 - HOSKINS 230KV CKT 1'	320	1	133.3246	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'
FDNS	09_BPSON		0 13G	G12_018	'FROM->TO'	'G10-51T 230.00 - HOSKINS 230KV CKT 1'	320	1	133.2961	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'
FDNS	00G12_018		0 18SP	G12_018	'FROM->TO'	'G10-51T 230.00 - HOSKINS 230KV CKT 1'	320	1	130.0195	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'
FDNS	00G12_018		0 13WP	G12_018	'FROM->TO'	'G10-51T 230.00 - HOSKINS 230KV CKT 1'	320	1	129.7111	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'
FDNS	00G12_018		0 18WP	G12_018	'FROM->TO'	'G10-51T 230.00 - HOSKINS 230KV CKT 1'	320	1	129.6387	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'
FDNS	00G12_018		0 13SP	G12_018	'FROM->TO'	'G10-51T 230.00 - HOSKINS 230KV CKT 1'	320	1	129.5175	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'
FDNS	00G12_018		0 23SP	G12_018	'FROM->TO'	'G10-51T 230.00 - HOSKINS 230KV CKT 1'	320	1	129.36	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'
FDNS	09G12_018		0 13G	G12_018	'FROM->TO'	'G10-51T 230.00 - HOSKINS 230KV CKT 1'	320	0.78116	107.713	'SIOUX CITY - TWIN CHURCH 230KV CKT 1'
FDNS	09G12_018_BPSON		0 13G	G12_018	'FROM->TO'	'G10-51T 230.00 - HOSKINS 230KV CKT 1'	320	0.78116	107.6232	'SIOUX CITY - TWIN CHURCH 230KV CKT 1'
FDNS	09G12_018_BPSON		0 13G	G12_018	'FROM->TO'	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'	320	1	165.0018	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
FDNS	09G12_018		0 13G	G12_018	'FROM->TO'	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'	320	1	164.9684	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
FDNS	9		0 13G	G12_018	'FROM->TO'	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'	320	1	132.7063	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
FDNS	09_BPSON		0 13G	G12_018	'FROM->TO'	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'	320	1	132.6706	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
FDNS	00G12_018		0 18SP	G12_018	'FROM->TO'	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'	320	1	130.6746	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
FDNS	00G12_018		0 18WP	G12_018	'FROM->TO'	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'	320	1	130.4198	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
FDNS	00G12_018		0 23SP	G12_018	'FROM->TO'	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'	320	1	130.3429	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
FDNS	00G12_018		0 13WP	G12_018	'FROM->TO'	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'	320	1	130.2543	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
FDNS	00G12_018		0 13SP	G12_018	'FROM->TO'	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'	320	1	130.1513	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
FDNS	09G12_018_BPSON		0 13G	G12_018	'TO->FROM'	'SIOUX CITY - TWIN CHURCH 230KV CKT 1'	320	0.80637	115.7405	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
FDNS	09G12_018		0 13G	G12_018	'TO->FROM'	'SIOUX CITY - TWIN CHURCH 230KV CKT 1'	320	0.80636	115.3838	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
FDNS	06G12_020		0 13G	G12_020	'FROM->TO'	'TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1'	560	0.50824	115.2745	'TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2'
FDNS	06G12_020		0 13G	G12_020	'FROM->TO'	'TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1'	560	0.50824	114.2265	'TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2'
FDNS	06G12_020		0 13G	G12_020	'FROM->TO'	'TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2'	560	0.49681	112.7842	'TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	06G12_020		0 13G	G12_020	'FROM->TO'	'TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2'	560	0.49681	111.5556	'TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1'
FDNS	08G12_027		0 13G	G12_027	'FROM->TO'	'4REMINGTON 138.00 - FAIRFAX 138KV CKT 1'	174	0.48377	105.0038	'SHIDLER - WEST PAWHUSKA 138KV CKT 1'
FDNS	08G12_027		0 13G	G12_027	'FROM->TO'	'4REMINGTON 138.00 - FAIRFAX 138KV CKT 1'	174	0.48377	104.6575	'PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1'
FDNS	08G12_027		0 13G	G12_027	'FROM->TO'	'4REMINGTON 138.00 - FAIRFAX 138KV CKT 1'	174	0.48377	102.3503	'DOMES - PAWHUSKA TAP 138KV CKT 1'
FDNS	08G12_027		0 13G	G12_027	'FROM->TO'	'4REMINGTON 138.00 - FAIRFAX 138KV CKT 1'	174	0.48377	101.2803	'DOMES - MOUND ROAD 138KV CKT 1'
FDNS	00G12_028		0 23SP	G12_028	'TO->FROM'	'LAKE CREEK - LONEWOLF 69KV CKT 1'	48	0.26975	126.5949	'ELK CITY (ELKCTY-4) 138/69/13.8KV TRANSFORMER CKT 1'
FDNS	00G12_028		0 18SP	G12_028	'TO->FROM'	'LAKE CREEK - LONEWOLF 69KV CKT 1'	48	0.26978	119.2257	'ELK CITY (ELKCTY-4) 138/69/13.8KV TRANSFORMER CKT 1'
FDNS	00G12_028		0 13SP	G12_028	'TO->FROM'	'LAKE CREEK - LONEWOLF 69KV CKT 1'	48	0.2697	114.9798	'ELK CITY (ELKCTY-4) 138/69/13.8KV TRANSFORMER CKT 1'
FDNS	00G12_028		0 13SP	G12_028	'TO->FROM'	'LAKE CREEK - LONEWOLF 69KV CKT 1'	48	0.61664	105.5024	'GOTEBE - MOUNTAIN VIEW 69KV CKT 1'
FDNS	00G12_028		0 18WP	G12_028	'TO->FROM'	'LAKE CREEK - LONEWOLF 69KV CKT 1'	48	0.26985	104.8363	'ELK CITY (ELKCTY-4) 138/69/13.8KV TRANSFORMER CKT 1'
FDNS	00G12_028		0 18SP	G12_028	'TO->FROM'	'LAKE CREEK - LONEWOLF 69KV CKT 1'	48	0.6189	104.7749	'GOTEBE - MOUNTAIN VIEW 69KV CKT 1'
FDNS	00G12_028		0 18WP	G12_028	'TO->FROM'	'LAKE CREEK - LONEWOLF 69KV CKT 1'	48	0.61894	104.3986	'GOTEBE - MOUNTAIN VIEW 69KV CKT 1'
FDNS	00G12_028		0 13WP	G12_028	'TO->FROM'	'LAKE CREEK - LONEWOLF 69KV CKT 1'	48	0.61669	104.0422	'GOTEBE - MOUNTAIN VIEW 69KV CKT 1'
FDNS	00G12_028		0 13WP	G12_028	'TO->FROM'	'LAKE CREEK - LONEWOLF 69KV CKT 1'	48	0.26976	103.7669	'ELK CITY (ELKCTY-4) 138/69/13.8KV TRANSFORMER CKT 1'
FDNS	00G12_028		0 23SP	G12_028	'TO->FROM'	'LAKE CREEK - LONEWOLF 69KV CKT 1'	48	0.61883	102.8032	'GOTEBE - MOUNTAIN VIEW 69KV CKT 1'
FDNS	00G12_028		0 23SP	G12_028	'TO->FROM'	'LAKE CREEK - LONEWOLF 69KV CKT 1'	48	0.46826	100.5959	'CORDELL - GOTEBE 69KV CKT 1'
FDNS	00NR		0 13SP	G12_040	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.1081	113.6911	'G12-016 TAP 345.00 (MRLNDAUTO) 345/138/13.8KV TRANSFORMER CKT 1'
FDNS	00NR		0 18SP	G12_040	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.10786	102.9767	'G12-016 TAP 345.00 (MRLNDAUTO) 345/138/13.8KV TRANSFORMER CKT 1'

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

See next page.

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FNLS-Blown up	01ALL		0	13G	ASGI_12_002	Non-Converged Contingency	0	0.15007	-	DBL-TGA-MATT
FNLS-Blown up	03ALL		0	13G	ASGI_12_002	Non-Converged Contingency	0	0.05775	-	DBL-SPRVL-MU
FNLS-Blown up	03ALL		0	13G	ASGI_12_002	Non-Converged Contingency	0	0.05775	-	DBL-MUL-RENO
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	620	0.4264	117.9842	BASE CASE
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	620	0.4264	117.9842	BASE CASE
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	560	0.37853	109.1831	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	560	0.37853	108.4068	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	560	0.37002	106.7995	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	560	0.37002	105.8934	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	239	0.08938	101.0241	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	239	0.08938	100.9796	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	13SP	ASGI_12_002	FROM->TO	154	0.0841	106.9947	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	00ASGI_12_002		0	13SP	ASGI_12_002	FROM->TO	154	0.08409	108.0842	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	239	0.07685	101.3001	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	239	0.07685	101.2552	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	239	0.06886	104.0719	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	239	0.06886	104.0719	SPP-SWPS-K37
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	239	0.06886	104.0401	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	239	0.06886	104.0251	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	239	0.06886	104.0251	SPP-SWPS-K37
FDNS	06ALL		0	13G	ASGI_12_002	FROM->TO	239	0.06886	103.9933	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	0		0	13SP	ASGI_12_002	FROM->TO	154	0.06181	102.7386	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	00ASGI_12_002		0	13SP	ASGI_12_002	FROM->TO	154	0.0618	103.5436	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	13SP	ASGI_12_002	FROM->TO	154	0.05274	108.4937	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00ASGI_12_002		0	13SP	ASGI_12_002	FROM->TO	154	0.05273	109.1882	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	13SP	ASGI_12_002	FROM->TO	154	0.05185	100.5112	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	00ASGI_12_002		0	13SP	ASGI_12_002	FROM->TO	154	0.05184	101.1724	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		0	13SP	ASGI_12_002	FROM->TO	154	0.05127	115.7998	BASE CASE
FDNS	00ASGI_12_002		0	13SP	ASGI_12_002	FROM->TO	154	0.05126	116.6344	BASE CASE
FDNS	0		0	13SP	ASGI_12_002	FROM->TO	154	0.05106	119.1815	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	0		0	13SP	ASGI_12_002	FROM->TO	154	0.05106	104.282	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
FDNS	00ASGI_12_002		0	13SP	ASGI_12_002	FROM->TO	154	0.05105	119.8935	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	00ASGI_12_002		0	13SP	ASGI_12_002	FROM->TO	154	0.05105	104.9338	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
FDNS	1		0	13G	ASGI_12_002	FROM->TO	287	0.05009	141.7044	DBL-WWRD-G12
FDNS	01ALL		0	13G	ASGI_12_002	FROM->TO	287	0.04998	170.3527	DBL-WWRD-G12
FDNS	0		0	13SP	ASGI_12_002	FROM->TO	154	0.04045	122.589	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00ASGI_12_002		0	13SP	ASGI_12_002	FROM->TO	154	0.04045	123.0623	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	1		0	13G	ASGI_12_002	FROM->TO	287	0.03366	113.4355	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		0	13G	ASGI_12_002	FROM->TO	287	0.03366	135.852	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	0		0	23SP	ASGI_12_002	FROM->TO	154	0.03198	103.9428	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00ASGI_12_002		0	23SP	ASGI_12_002	FROM->TO	154	0.03198	104.2685	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	18SP	ASGI_12_002	FROM->TO	154	0.03153	108.3721	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00ASGI_12_002		0	18SP	ASGI_12_002	FROM->TO	154	0.03153	108.7352	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		0	13G	ASGI_12_002	TO->FROM	932	0.09668	109.2008	DBL-TGA-MATT
FDNS	03ALL		0	13G	ASGI_12_002	TO->FROM	932	0.09668	103.923	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		0	13G	ASGI_12_002	TO->FROM	932	0.09668	103.5031	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		0	13G	ASGI_12_002	TO->FROM	932	0.0744	104.3366	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		0	13G	ASGI_12_002	TO->FROM	932	0.0744	101.9316	HUNTERS7 345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	03ALL		0	13G	ASGI_12_002	TO->FROM	932	0.07303	115.7825	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	6		0	13G	ASGI_12_002	TO->FROM	153	0.05067	122.6276	DBL-WWRD-G12
FDNS	06ASGI_12_002		0	13G	ASGI_12_002	TO->FROM	153	0.05067	122.7484	DBL-WWRD-G12
FDNS	06ALL		0	13G	ASGI_12_002	TO->FROM	153	0.05038	135.1686	DBL-WWRD-G12
FDNS	1		0	13G	ASGI_12_002	TO->FROM	153	0.05009	214.3169	DBL-WWRD-G12
FDNS	01ALL		0	13G	ASGI_12_002	TO->FROM	153	0.04998	255.3534	DBL-WWRD-G12
FDNS	06ALL		0	13G	ASGI_12_002	TO->FROM	153	0.03398	105.7502	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	1		0	13G	ASGI_12_002	TO->FROM	153	0.03366	163.0037	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		0	13G	ASGI_12_002	TO->FROM	153	0.03366	189.973	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	620	0.42638	117.9724	BASE CASE
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	620	0.42638	117.9724	BASE CASE
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	620	0.34538	100.3088	BASE CASE
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	620	0.34538	100.3088	BASE CASE
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	239	0.08976	101.2521	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	239	0.08976	101.2076	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		2	13SP	ASGI_12_002	FROM->TO	154	0.08474	107.1129	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	00ASGI_12_002		2	13SP	ASGI_12_002	FROM->TO	154	0.08473	108.2097	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	239	0.07662	101.03	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	239	0.07662	100.9852	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	239	0.06902	104.1177	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	239	0.06902	104.1177	SPP-SWPS-K37
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	239	0.06902	104.0862	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	239	0.06902	104.0712	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	239	0.06902	104.0712	SPP-SWPS-K37
FDNS	06ALL		2	13G	ASGI_12_002	FROM->TO	239	0.06902	104.0396	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	0		2	13SP	ASGI_12_002	FROM->TO	154	0.06237	102.8549	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	00ASGI_12_002		2	13SP	ASGI_12_002	FROM->TO	154	0.06236	103.6665	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		2	13SP	ASGI_12_002	FROM->TO	154	0.05319	108.6195	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY	
FDNS	00ASGI_12_002		2	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05319	109.2925	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		2	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0523	100.6095	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	00ASGI_12_002		2	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05229	101.2759	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		2	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	115.9287	BASE CASE
FDNS	00ASGI_12_002		2	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05171	116.7704	BASE CASE
FDNS	0		2	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05151	119.2769	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	0		2	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05151	104.3813	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
FDNS	00ASGI_12_002		2	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05151	119.9939	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	00ASGI_12_002		2	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05151	105.0384	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
FDNS	0		2	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04078	122.6492	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00ASGI_12_002		2	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04078	123.126	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00ASGI_12_002		2	23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03229	103.981	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		2	18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03184	108.393	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00ASGI_12_002		2	18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03184	108.7597	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	6		2	13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05079	122.7075	DBL-WWRD-G12
FDNS	06ASGI_12_002		2	13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05078	122.8284	DBL-WWRD-G12
FDNS	06ALL		2	13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05049	135.2555	DBL-WWRD-G12
FDNS	06ALL		2	13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.8169	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	0		0	13WP	G12_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03534	117.4261	DBL-WICH-THI
FDNS	0		0	18WP	G12_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03509	120.0354	DBL-WICH-THI
FNSL-Blown up	03ALL		0	13G	G12_018		Non-Converged Contingency	0	0.05278	-	DBL-THIS-CLR
FNSL-Blown up	01ALL		0	13G	G12_018		Non-Converged Contingency	0	0.0425	-	DBL-TGA-MATT
FDNS	09ALL		0	13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	1	180.1714	G10-51T 230.00 - HOSKINS 230KV CKT 1
FDNS	09ALL_BPSON		0	13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	1	180.2773	G10-51T 230.00 - HOSKINS 230KV CKT 1
FDNS	09ALL		0	13G	G12_018	FROM->TO	G10-51T 230.00 - HOSKINS 230KV CKT 1	320	0.78116	112.4113	SIUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	09ALL_BPSON		0	13G	G12_018	FROM->TO	G10-51T 230.00 - HOSKINS 230KV CKT 1	320	0.78116	112.3683	SIUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	09ALL		0	13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.62292	102.1429	HOSKINS (HOSKINS T2) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_BPSON		0	13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.62292	102.6014	HOSKINS (HOSKINS T2) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00G12_018		0	13SP	G12_018	FROM->TO	HOSKINS (HOSKINS T1) 230/115/13.8KV TRANSFORMER CKT 1	187	0.10007	103.5654	HOSKINS (HOSKIN T4) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00G12_018		0	13SP	G12_018	FROM->TO	HOSKINS (HOSKINS T1) 230/115/13.8KV TRANSFORMER CKT 1	187	0.10007	102.117	HOSKINS (HOSKIN T4) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00G12_018		0	18SP	G12_018	FROM->TO	HOSKINS (HOSKINS T1) 230/115/13.8KV TRANSFORMER CKT 1	187	0.09957	106.9063	HOSKINS (HOSKIN T4) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00G12_018		0	18SP	G12_018	FROM->TO	HOSKINS (HOSKINS T1) 230/115/13.8KV TRANSFORMER CKT 1	187	0.09957	105.155	HOSKINS (HOSKIN T4) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	06ALL		0	13G	G12_018	FROM->TO	TUCFR345230	300	0.03492	117.3	BASE CASE
FDNS	09ALL		0	13G	G12_018	TO->FROM	SIUX CITY - TWIN CHURCH 230KV CKT 1	320	0.80636	127.2758	G10-51T 230.00 - HOSKINS 230KV CKT 1
FDNS	09ALL_BPSON		0	13G	G12_018	TO->FROM	SIUX CITY - TWIN CHURCH 230KV CKT 1	320	0.80636	127.7575	G10-51T 230.00 - HOSKINS 230KV CKT 1
FDNS	03ALL		0	13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03873	104.3366	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		0	13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03873	101.9316	HUNTERS7 345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	09ALL		2	13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55596	100.2792	G10-51T 230.00 - HOSKINS 230KV CKT 1
FDNS	09ALL_BPSON		2	13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55596	100.2009	G10-51T 230.00 - HOSKINS 230KV CKT 1
FDNS	00G12_018		2	13SP	G12_018	FROM->TO	HOSKINS (HOSKINS T1) 230/115/13.8KV TRANSFORMER CKT 1	187	0.07226	100.3625	HOSKINS (HOSKIN T4) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00G12_018		2	18SP	G12_018	FROM->TO	HOSKINS (HOSKINS T1) 230/115/13.8KV TRANSFORMER CKT 1	187	0.0717	103.882	HOSKINS (HOSKIN T4) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00G12_018		2	18SP	G12_018	FROM->TO	HOSKINS (HOSKINS T1) 230/115/13.8KV TRANSFORMER CKT 1	187	0.0717	102.2138	HOSKINS (HOSKIN T4) 345/115/13.8KV TRANSFORMER CKT 1
FNSL-Blown up	01ALL		0	13G	G12_020		Non-Converged Contingency	0	0.13853	-	DBL-TGA-MATT
FNSL-Blown up	03ALL		0	13G	G12_020		Non-Converged Contingency	0	0.05021	-	DBL-SPRVL-MU
FNSL-Blown up	03ALL		0	13G	G12_020		Non-Converged Contingency	0	0.05021	-	DBL-MUL-RENO
FDNS	06ALL		0	13G	G12_020	FROM->TO	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	560	0.508	109.1831	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	06ALL		0	13G	G12_020	FROM->TO	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	560	0.508	108.4068	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	06ALL		0	13G	G12_020	FROM->TO	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2	560	0.49657	106.7995	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL		0	13G	G12_020	FROM->TO	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2	560	0.49657	105.8934	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	00G12_020		0	13WP	G12_020	FROM->TO	SPSSPTIESB	620	0.42443	127.0779	BASE CASE
FDNS	00G12_020		0	13WP	G12_020	FROM->TO	SPSSPTIESC1	620	0.42443	127.0779	BASE CASE
FDNS	06G12_020		0	13G	G12_020	FROM->TO	SPSSPTIESB	620	0.42264	119.7434	BASE CASE
FDNS	06G12_020		0	13G	G12_020	FROM->TO	SPSSPTIESC1	620	0.42264	119.7434	BASE CASE
FDNS	06ALL		0	13G	G12_020	FROM->TO	SPSSPTIESB	620	0.42239	117.9842	BASE CASE
FDNS	06ALL		0	13G	G12_020	FROM->TO	SPSSPTIESC1	620	0.42239	117.9842	BASE CASE
FDNS	00G12_020		0	18WP	G12_020	FROM->TO	SPSSPTIESB	620	0.42027	118.5258	BASE CASE
FDNS	00G12_020		0	18WP	G12_020	FROM->TO	SPSSPTIESC1	620	0.42027	118.5258	BASE CASE
FDNS	06G12_020		0	13G	G12_020	FROM->TO	SPSSPTIESB1	620	0.37952	102.4563	BASE CASE
FDNS	06G12_020		0	13G	G12_020	FROM->TO	SPSSPTIESC	620	0.37952	102.4563	BASE CASE
FDNS	00G12_020		0	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.06023	114.8706	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00G12_020		0	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.06023	111.5483	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	0		0	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.06015	106.843	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	0		0	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.06015	103.6566	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00G12_020		0	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2	252	0.05906	112.7136	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00G12_020		0	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2	252	0.05906	109.3435	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2	252	0.05898	104.8472	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2	252	0.05898	101.6152	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00G12_020		0	23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05617	125.4692	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		0	23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05612	120.0514	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	1		0	13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.05188	141.7044	DBL-WWRD-G12
FDNS	01ALL		0	13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.05177	170.3527	DBL-WWRD-G12
FDNS	01ALL		0	13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03497	135.852	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	1		0	13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03496	113.4355	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	00G12_020		0	13SP	G12_020	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1	351	0.11072	102.3033	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
FDNS	03ALL		0	13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08873	109.2008	DBL-TGA-MATT
FDNS	03ALL		0	13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08873	103.923	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY	
FDNS	03ALL		0	13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08873	103.5031	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	00G12_020		0	13SP	G12_020	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1	351	0.08585	104.5112	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1
FDNS	03ALL		0	13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.067	115.7825	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03ALL		0	13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06614	104.3366	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		0	13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06614	101.9316	HUNTERS7 345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	6		0	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05246	122.6276	DBL-WWRD-G12
FDNS	06G12_020		0	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05219	136.2772	DBL-WWRD-G12
FDNS	06ALL		0	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05216	135.1686	DBL-WWRD-G12
FDNS	1		0	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05188	214.3169	DBL-WWRD-G12
FDNS	01ALL		0	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05177	255.3534	DBL-WWRD-G12
FDNS	06G12_020		0	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03531	106.4143	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		0	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03528	105.7502	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		0	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03497	189.973	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	1		0	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03496	163.0037	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	0		0	13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03415	112.5741	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	00G12_020		0	13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03405	124.8494	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	00G12_020		2	13WP	G12_020	FROM->TO	SPSSPTIESB	620	0.4244	127.0786	BASE CASE
FDNS	00G12_020		2	13WP	G12_020	FROM->TO	SPSSPTIESC1	620	0.4244	127.0786	BASE CASE
FDNS	06G12_020		2	13G	G12_020	FROM->TO	SPSSPTIESB	620	0.42261	119.7467	BASE CASE
FDNS	06G12_020		2	13G	G12_020	FROM->TO	SPSSPTIESC1	620	0.42261	119.7467	BASE CASE
FDNS	06ALL		2	13G	G12_020	FROM->TO	SPSSPTIESB	620	0.42235	117.9724	BASE CASE
FDNS	06ALL		2	13G	G12_020	FROM->TO	SPSSPTIESC1	620	0.42235	117.9724	BASE CASE
FDNS	00G12_020		2	18WP	G12_020	FROM->TO	SPSSPTIESB	620	0.42061	118.5665	BASE CASE
FDNS	00G12_020		2	18WP	G12_020	FROM->TO	SPSSPTIESC1	620	0.42061	118.5665	BASE CASE
FDNS	06G12_020		2	13G	G12_020	FROM->TO	SPSSPTIESB1	620	0.38213	103.0209	BASE CASE
FDNS	06G12_020		2	13G	G12_020	FROM->TO	SPSSPTIESC	620	0.38213	103.0209	BASE CASE
FDNS	06ALL		2	13G	G12_020	FROM->TO	SPSSPTIESB1	620	0.38192	100.3088	BASE CASE
FDNS	06ALL		2	13G	G12_020	FROM->TO	SPSSPTIESC	620	0.38192	100.3088	BASE CASE
FDNS	00G12_020		2	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.05891	114.9233	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00G12_020		2	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	252	0.05891	111.6	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00G12_020		2	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2	252	0.05776	112.7648	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00G12_020		2	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2	252	0.05776	109.3937	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00G12_020		2	23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05489	125.5021	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	00G12_020		2	13SP	G12_020	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1	351	0.10952	102.1382	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
FDNS	00G12_020		2	13SP	G12_020	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1	351	0.08333	103.9102	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1
FDNS	6		2	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05261	122.7075	DBL-WWRD-G12
FDNS	06G12_020		2	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05234	136.331	DBL-WWRD-G12
FDNS	06ALL		2	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05232	135.2555	DBL-WWRD-G12
FDNS	06G12_020		2	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03542	106.4834	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		2	13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.8169	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	0		2	13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03314	112.3466	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	00G12_020		2	13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03304	124.228	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	03ALL		0	13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07961	105.151	BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		0	13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07961	104.9363	BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		0	13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06571	114.0042	BENTON - WICHITA 345KV CKT 1
FDNS	0		0	18WP	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05149	101.232	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00G12_023		0	18WP	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05145	106.5802	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00G12_023		0	18WP	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05145	102.5005	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00G12_023		0	13WP	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05095	103.4427	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	8		0	13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05036	110.8253	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	8		0	13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05036	107.0601	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	08ALL		0	13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05036	109.5413	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	08ALL		0	13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05036	105.9304	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00G12_023		0	18WP	G12_023	FROM->TO	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.04832	100.241	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	8		0	13G	G12_023	FROM->TO	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.04735	104.2996	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	8		0	13G	G12_023	FROM->TO	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.04735	100.4102	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	08ALL		0	13G	G12_023	FROM->TO	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.04735	102.867	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	06ALL		0	13G	G12_023	FROM->TO	TUCXFR345230	300	0.03802	117.3	BASE CASE
FDNS	03ALL		0	13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32311	104.3366	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		0	13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32311	101.9316	HUNTERS7 345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	03ALL		0	13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.1941	109.2008	DBL-TGA-MATT
FDNS	03ALL		0	13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.1941	103.923	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		0	13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.1941	103.5031	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		0	13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19174	115.7825	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03ALL		0	13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06571	111.2885	BENTON - WICHITA 345KV CKT 1
FNLS-Blown up	03ALL		0	13G	G12_024		Non-Converged Contingency	0	0.44168	-	DBL-THIS-CLR
FNLS-Blown up	03ALL		0	13G	G12_024		Non-Converged Contingency	0	0.17042	-	DBL-SPRVL-MU
FNLS-Blown up	03ALL		0	13G	G12_024		Non-Converged Contingency	0	0.17042	-	DBL-MUL-RENO
FNLS-Blown up	01ALL		0	13G	G12_024		Non-Converged Contingency	0	0.13694	-	DBL-TGA-MATT
FDNS	03G12_024		0	13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05551	102.8611	BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		0	13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.0555	105.151	BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		0	13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.0555	104.9363	BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		0	13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05535	114.0042	BENTON - WICHITA 345KV CKT 1
FDNS	00G12_024		0	18SP	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.04121	129.7876	DBL-WICH-THI
FDNS	0		0	13WP	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.04006	117.4261	DBL-WICH-THI
FDNS	00G12_024		0	13WP	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03999	159.1144	DBL-WICH-THI

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY	
FDNS	0		0	18WP	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03982	120.0354	DBL-WICH-THI
FDNS	00G12_024		0	18WP	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03972	161.1254	DBL-WICH-THI
FDNS	00G12_024		0	23SP	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03928	106.7331	DBL-WICH-THI
FDNS	00G12_024		0	18WP	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03359	107.5809	DBL-SPRVL-CL
FDNS	00G12_024		0	13WP	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03354	106.3333	DBL-SPRVL-CL
FDNS	00G12_024		0	13SP	G12_024	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	95.6	0.03241	114.6401	DBL-WICH-THI
FDNS	7		0	13G	G12_024	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	95.6	0.03208	108.0236	DBL-WICH-THI
FDNS	07ALL		0	13G	G12_024	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	95.6	0.03203	113.0727	DBL-WICH-THI
FDNS	07ALL		0	13G	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03203	102.0492	DBL-WICH-THI
FDNS	1		0	13G	G12_024	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	95.6	0.03199	144.4823	DBL-WICH-THI
FDNS	1		0	13G	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03199	133.3824	DBL-WICH-THI
FDNS	01ALL		0	13G	G12_024	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	95.6	0.03192	166.7027	DBL-WICH-THI
FDNS	01ALL		0	13G	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03192	145.358	DBL-WICH-THI
FDNS	6		0	13G	G12_024	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	95.6	0.03188	113.6009	DBL-WICH-THI
FDNS	6		0	13G	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03188	102.5893	DBL-WICH-THI
FDNS	06ALL		0	13G	G12_024	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	95.6	0.03177	120.6223	DBL-WICH-THI
FDNS	06ALL		0	13G	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03177	109.601	DBL-WICH-THI
FDNS	3		0	13G	G12_024	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	95.6	0.03169	194.4844	DBL-WICH-THI
FDNS	3		0	13G	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03169	172.8121	DBL-WICH-THI
FDNS	03G12_024		0	13G	G12_024	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	95.6	0.03159	203.3966	DBL-WICH-THI
FDNS	03G12_024		0	13G	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03159	181.6373	DBL-WICH-THI
FDNS	03ALL		0	13G	G12_024	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	95.6	0.03142	233.1508	DBL-WICH-THI
FDNS	03ALL		0	13G	G12_024	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03142	211.3029	DBL-WICH-THI
FDNS	03ALL		0	13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18771	104.3366	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		0	13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18771	101.9316	HUNTERS7 345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	03ALL		0	13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17694	109.2008	DBL-TGA-MATT
FDNS	03ALL		0	13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17694	103.923	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		0	13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17694	103.5031	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03G12_024		0	13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.15614	103.4048	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03ALL		0	13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.15547	115.7825	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03ALL		0	13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06602	122.4029	G12-11T 345.00 - POST ROCK 345KV CKT 1
FDNS	03ALL		0	13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06602	110.221	G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	3		0	13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.0657	103.4578	G12-11T 345.00 - POST ROCK 345KV CKT 1
FDNS	03G12_024		0	13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06565	107.9942	G12-11T 345.00 - POST ROCK 345KV CKT 1
FDNS	03G12_024		0	13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05551	100.1513	BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		0	13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05535	111.2885	BENTON - WICHITA 345KV CKT 1
FDNS	00G12_024		0	18SP	G12_024	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	0.04121	102.0812	DBL-WICH-THI
FDNS	00G12_024		0	13WP	G12_024	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	0.03999	131.0031	DBL-WICH-THI
FDNS	00G12_024		0	18WP	G12_024	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	0.03972	132.4656	DBL-WICH-THI
FDNS	1		0	13G	G12_024	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	0.03199	110.2162	DBL-WICH-THI
FDNS	01ALL		0	13G	G12_024	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	0.03192	118.1706	DBL-WICH-THI
FDNS	3		0	13G	G12_024	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	0.03169	139.5476	DBL-WICH-THI
FDNS	03G12_024		0	13G	G12_024	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	0.03159	144.6163	DBL-WICH-THI
FDNS	03ALL		0	13G	G12_024	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	0.03142	167.0267	DBL-WICH-THI
FDNS	08ALL		0	13G	G12_027	FROM->TO	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1	174	0.4838	108.9954	SHIDLER - WEST PAWHUSKA 138KV CKT 1
FDNS	08ALL		0	13G	G12_027	FROM->TO	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1	174	0.4838	108.6465	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
FDNS	08ALL		0	13G	G12_027	FROM->TO	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1	174	0.4838	106.335	DOMES - PAWHUSKA TAP 138KV CKT 1
FDNS	08ALL		0	13G	G12_027	FROM->TO	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1	174	0.4838	105.2629	DOMES - MOUND ROAD 138KV CKT 1
FDNS	00G12_027		0	18SP	G12_027	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	0.11963	105.5386	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
FDNS	00G12_027		0	23SP	G12_027	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	0.11963	109.3149	FAIRFAX - FAPTAP4 138.00 138KV CKT 1
FDNS	06ALL		0	13G	G12_027	FROM->TO	TUCFR345230	300	0.04289	117.3	BASE CASE
FDNS	07ALL		0	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05507	102.3686	SPP-SWPS-03
FDNS	07ALL		0	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6159	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	01ALL		0	13G	G12_028	FROM->TO	CANTON - OKEENE 69KV CKT 1	48	0.04579	101.6509	CEDARDALE - MOORELAND 138KV CKT 1
FDNS	01ALL		0	13G	G12_028	FROM->TO	CANTON - OKEENE 69KV CKT 1	48	0.04579	100.1593	CEDARDALE - OKEENE 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	110.2176	CLINTON - G07-32T 138.00 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	109.7168	CLINTON - WEATHERFORD 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	108.9535	HYDRO - WEATHERFORD 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	108.08	HYDRO - SICKLES 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	106.479	BINGER NIJECT - SICKLES 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	104.8784	BINGER NIJECT - ONEY 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	104.3209	ONEY - WASHITA 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04287	104.3026	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		0	13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04287	101.2228	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		0	13G	G12_028	FROM->TO	TUCFR345230	300	0.03513	117.3	BASE CASE
FDNS	07ALL		0	13G	G12_028	TO->FROM	SOUTHWESTERN STATION - WASHITA 138KV CKT 1	287	0.15829	100.4376	GRACEMONT (BANK 1) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05507	101.5103	SPP-SWPS-03
FDNS	07ALL		0	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7293	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	01ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04894	112.1852	DEWEY - SOUTHARD 138KV CKT 1
FDNS	01ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04894	109.928	ROMAN NOSE - SOUTHARD 138KV CKT 1
FDNS	01ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04894	108.4963	EL RENO - ROMAN NOSE 138KV CKT 1
FDNS	01ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04812	107.9752	DBL-G1216-TH
FDNS	01ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04769	102.568	DBL-WICH-THI
FDNS	01ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04746	101.2278	DBL-WWRD-G12
FDNS	1		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04742	116.9322	DBL-TGA-MATT
FDNS	01ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.0473	105.8363	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY	
FDNS	03ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04723	104.1579	DBL-TGA-MATT
FDNS	01ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04579	132.1212	CEDARDALE - MOORELAND 138KV CKT 1
FDNS	01ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04579	130.2537	CEDARDALE - OKEENE 138KV CKT 1
FDNS	1		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04574	112.8898	CEDARDALE - MOORELAND 138KV CKT 1
FDNS	1		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04574	111.195	CEDARDALE - OKEENE 138KV CKT 1
FDNS	03ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04553	111.3686	CEDARDALE - MOORELAND 138KV CKT 1
FDNS	03ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04553	109.6747	CEDARDALE - OKEENE 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	108.6922	CLINTON - G07-32T 138.00 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	108.2464	CLINTON - WEATHERFORD 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	107.5694	HYDRO - WEATHERFORD 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	106.7966	HYDRO - SICKLES 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	105.3731	BINGER NIJECT - SICKLES 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	103.9459	BINGER NIJECT - ONEY 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	HINTON - WEATHERFORD JCT. 138KV CKT 1	214	0.04403	103.8801	CLINTON - G07-32T 138.00 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	103.4488	ONEY - WASHITA 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	HINTON - WEATHERFORD JCT. 138KV CKT 1	214	0.04403	103.4369	CLINTON - WEATHERFORD 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	HINTON - WEATHERFORD JCT. 138KV CKT 1	214	0.04403	102.7651	HYDRO - WEATHERFORD 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	HINTON - WEATHERFORD JCT. 138KV CKT 1	214	0.04403	101.9992	HYDRO - SICKLES 138KV CKT 1
FDNS	07ALL		0	13G	G12_028	TO->FROM	HINTON - WEATHERFORD JCT. 138KV CKT 1	214	0.04403	100.5851	BINGER NIJECT - SICKLES 138KV CKT 1
FDNS	01ALL		0	13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.03428	104.4057	OKEENE (OKEENE) 138/69/13.8KV TRANSFORMER CKT 1
FDNS	03ALL		0	13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03132	109.2008	DBL-TGA-MATT
FDNS	03ALL		0	13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03132	103.923	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		0	13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03132	103.5031	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		0	13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03018	115.7825	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	07ALL		2	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05507	102.3686	SPP-SWPS-03
FDNS	07ALL		2	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6159	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		2	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	110.2176	CLINTON - G07-32T 138.00 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	109.7168	CLINTON - WEATHERFORD 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	108.9535	HYDRO - WEATHERFORD 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	108.08	HYDRO - SICKLES 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	106.479	BINGER NIJECT - SICKLES 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	104.8784	BINGER NIJECT - ONEY 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.04403	104.3209	ONEY - WASHITA 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04287	104.3026	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		2	13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04287	101.2228	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	SOUTHWESTERN STATION - WASHITA 138KV CKT 1	287	0.15829	100.4376	GRACEMONT (BANK 1) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05507	101.5103	SPP-SWPS-03
FDNS	07ALL		2	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7293	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	108.6922	CLINTON - G07-32T 138.00 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	108.2464	CLINTON - WEATHERFORD 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	107.5694	HYDRO - WEATHERFORD 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	106.7966	HYDRO - SICKLES 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	105.3731	BINGER NIJECT - SICKLES 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	103.9459	BINGER NIJECT - ONEY 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	HINTON - WEATHERFORD JCT. 138KV CKT 1	214	0.04403	103.8801	CLINTON - G07-32T 138.00 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.04403	103.4488	ONEY - WASHITA 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	HINTON - WEATHERFORD JCT. 138KV CKT 1	214	0.04403	103.4369	CLINTON - WEATHERFORD 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	HINTON - WEATHERFORD JCT. 138KV CKT 1	214	0.04403	102.7651	HYDRO - WEATHERFORD 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	HINTON - WEATHERFORD JCT. 138KV CKT 1	214	0.04403	101.9992	HYDRO - SICKLES 138KV CKT 1
FDNS	07ALL		2	13G	G12_028	TO->FROM	HINTON - WEATHERFORD JCT. 138KV CKT 1	214	0.04403	100.5851	BINGER NIJECT - SICKLES 138KV CKT 1
FDNS	06ALL		0	13G	G12_031	FROM->TO	TUCXFR345230	300	0.04726	117.3	BASE CASE
FDNS	06ALL		0	13G	G12_032	FROM->TO	TUCXFR345230	300	0.04033	117.3	BASE CASE
FDNS	08ALL		0	13G	G12_033	FROM->TO	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1	174	0.04778	108.9954	SHIDLER - WEST PAWHUSKA 138KV CKT 1
FDNS	08ALL		0	13G	G12_033	FROM->TO	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1	174	0.04778	108.6465	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
FDNS	08ALL		0	13G	G12_033	FROM->TO	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1	174	0.04778	106.335	DOMES - PAWHUSKA TAP 138KV CKT 1
FDNS	08ALL		0	13G	G12_033	FROM->TO	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1	174	0.04778	105.2629	DOMES - MOUND ROAD 138KV CKT 1
FDNS	06ALL		0	13G	G12_033	FROM->TO	TUCXFR345230	300	0.04191	117.3	BASE CASE
FDNS	0		0	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14017	106.9947	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13973	102.7386	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	00G12_034		0	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1224	102.0722	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12199	108.4937	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12025	100.5112	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	00G12_034		0	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11925	107.8079	BASE CASE
FDNS	0		0	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11884	115.7998	BASE CASE
FDNS	00G12_034		0	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11723	112.9171	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	0		0	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11682	119.1815	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	0		0	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11682	104.282	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
FDNS	00G12_034		0	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09671	118.0383	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09639	122.589	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00G12_034		0	23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09044	105.6999	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09043	103.9428	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00G12_034		0	18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09035	103.2258	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08998	108.3721	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	23SP	G12_034	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.0587	106.1701	YOAKUM COUNTY INTERCHANGE (GE M100899) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	23SP	G12_034	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.0587	101.661	YOAKUM COUNTY INTERCHANGE (GE M100899) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00G12_034		0	23SP	G12_034	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.0587	105.7804	YOAKUM COUNTY INTERCHANGE (GE M100899) 230/115/13.2KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY	
FDNS	0		2	13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	112.3466	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		0	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14017	106.9947	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13973	102.7386	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	00G12_036		0	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1224	102.0722	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12199	108.4937	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12025	100.5112	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	00G12_036		0	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11925	107.8079	BASE CASE
FDNS	0		0	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11884	115.7998	BASE CASE
FDNS	00G12_036		0	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11723	112.9171	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	0		0	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11682	119.1815	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	0		0	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11682	104.282	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
FDNS	00G12_036		0	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09671	118.0383	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09639	122.589	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00G12_036		0	23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09044	105.6999	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09043	103.9428	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00G12_036		0	18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09035	103.2258	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08998	108.3721	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		0	23SP	G12_036	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.0587	106.1701	YOAKUM COUNTY INTERCHANGE (GE M100899) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	23SP	G12_036	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.0587	101.661	YOAKUM COUNTY INTERCHANGE (GE M100899) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00G12_036		0	23SP	G12_036	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.0587	105.7804	YOAKUM COUNTY INTERCHANGE (GE M100899) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00G12_036		0	23SP	G12_036	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.0587	101.2598	YOAKUM COUNTY INTERCHANGE (GE M100899) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	18SP	G12_036	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.05864	102.1044	YOAKUM COUNTY INTERCHANGE (GE M100899) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	23SP	G12_036	FROM->TO	YOAKUM COUNTY INTERCHANGE (GE M100899) 230/115/13.2KV TRANSFORMER CKT 1	150	0.05663	102.4106	YOAKUM COUNTY INTERCHANGE (ENRC C010585) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00G12_036		0	23SP	G12_036	FROM->TO	YOAKUM COUNTY INTERCHANGE (GE M100899) 230/115/13.2KV TRANSFORMER CKT 1	150	0.05663	103.2208	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00G12_036		0	13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03067	108.3395	LUBBOCK EAST INTERCHANGE (ENRC C136162) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00G12_036		0	13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03067	103.7701	LUBBOCK EAST INTERCHANGE (ENRC C136162) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03058	108.6577	LUBBOCK EAST INTERCHANGE (ENRC C136162) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03058	104.2367	LUBBOCK EAST INTERCHANGE (ENRC C136162) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00G12_036		0	18SP	G12_036	TO->FROM	DENVER CITY INTERCHANGE N. - MUSTANG STATION N. 115KV CKT 1	309	0.09911	102.2094	DENVER CITY INTERCHANGE S. - MUSTANG STATION N. 115KV CKT 2
FDNS	0		0	23SP	G12_036	TO->FROM	DENVER CITY INTERCHANGE N. - MUSTANG STATION N. 115KV CKT 1	309	0.09908	102.3602	DENVER CITY INTERCHANGE S. - MUSTANG STATION N. 115KV CKT 2
FDNS	00G12_036		0	23SP	G12_036	TO->FROM	DENVER CITY INTERCHANGE N. - MUSTANG STATION N. 115KV CKT 1	309	0.09908	106.1124	DENVER CITY INTERCHANGE S. - MUSTANG STATION N. 115KV CKT 2
FDNS	00G12_036		0	18SP	G12_036	TO->FROM	DENVER CITY INTERCHANGE S. - MUSTANG STATION N. 115KV CKT 2	309	0.09736	101.0139	DENVER CITY INTERCHANGE N. - MUSTANG STATION N. 115KV CKT 1
FDNS	0		0	23SP	G12_036	TO->FROM	DENVER CITY INTERCHANGE S. - MUSTANG STATION N. 115KV CKT 2	309	0.09734	101.2126	DENVER CITY INTERCHANGE N. - MUSTANG STATION N. 115KV CKT 1
FDNS	00G12_036		0	23SP	G12_036	TO->FROM	DENVER CITY INTERCHANGE S. - MUSTANG STATION N. 115KV CKT 2	309	0.09734	104.9183	DENVER CITY INTERCHANGE N. - MUSTANG STATION N. 115KV CKT 1
FDNS	00G12_036		0	13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05662	104.3726	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		0	13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05616	112.5741	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		2	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	107.1129	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		2	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	102.8549	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		2	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12249	108.6195	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		2	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	100.6095	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		2	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	115.9287	BASE CASE
FDNS	0		2	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11732	119.2769	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	0		2	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11732	104.3813	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
FDNS	0		2	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	122.6492	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		2	18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	108.393	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		2	18SP	G12_036	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.05873	102.1092	YOAKUM COUNTY INTERCHANGE (GE M100899) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		2	13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03067	108.6704	LUBBOCK EAST INTERCHANGE (ENRC C136162) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		2	13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03067	104.2484	LUBBOCK EAST INTERCHANGE (ENRC C136162) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		2	13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	112.3466	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		0	23SP	G12_037	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.05335	106.843	TUCO INTERCHANGE (ENRC C136401) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	0		0	23SP	G12_037	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.05335	103.6566	TUCO INTERCHANGE (ENRC C136401) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	0		0	23SP	G12_037	FROM->TO	TUCO INTERCHANGE (ENRC C136401) 230/115/13.2KV TRANSFORMER CKT 2	252	0.05232	104.8472	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	23SP	G12_037	FROM->TO	TUCO INTERCHANGE (ENRC C136401) 230/115/13.2KV TRANSFORMER CKT 2	252	0.05232	101.6152	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	0		0	23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04953	120.0514	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	08ALL		0	13G	G12_040	FROM->TO	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1	37	0.09348	108.1214	SPP-WERE-08B
FDNS	08ALL		0	13G	G12_040	FROM->TO	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1	37	0.09348	108.0545	CRESWELL - OXFORD 138KV CKT 1
FDNS	08ALL		0	13G	G12_040	FROM->TO	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1	37	0.09348	107.1975	OXFORD - SUMNER 4 138KV CKT 1
FDNS	08ALL		0	13G	G12_040	FROM->TO	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1	174	0.07891	108.9954	SHIDLER - WEST PAWHUSKA 138KV CKT 1
FDNS	08ALL		0	13G	G12_040	FROM->TO	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1	174	0.07891	108.6465	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
FDNS	08ALL		0	13G	G12_040	FROM->TO	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1	174	0.07891	106.335	DOMES - PAWHUSKA TAP 138KV CKT 1
FDNS	08ALL		0	13G	G12_040	FROM->TO	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1	174	0.07891	105.2629	DOMES - MOUND ROAD 138KV CKT 1
FDNS	08ALL		0	13G	G12_040	FROM->TO	OAK - RAINBOW 69KV CKT 1	43	0.04661	105.3822	OAK - STROTHER FIELD (CITY OF WINFIELD) 69KV CKT 1
FDNS	06ALL		0	13G	G12_040	FROM->TO	TUCXFR345230	300	0.04056	117.3	BASE CASE
FDNS	08ALL		0	13G	G12_040	TO->FROM	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1	37	0.09348	105.0962	SPP-WERE-08B
FDNS	08ALL		0	13G	G12_040	TO->FROM	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1	37	0.09348	105.0284	CRESWELL - OXFORD 138KV CKT 1
FDNS	08ALL		0	13G	G12_040	TO->FROM	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1	37	0.09348	104.1667	OXFORD - SUMNER 4 138KV CKT 1
FDNS	00NR		0	18SP	G12_040	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05029	103.6346	DBL-WWRD-G12
FDNS	00NR		0	13SP	G12_040	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05025	111.4461	DBL-WWRD-G12
FDNS	08ALL		0	13G	G12_040	TO->FROM	CITY OF WINFIELD - RAINBOW 69KV CKT 1	43	0.04661	102.3562	OAK - STROTHER FIELD (CITY OF WINFIELD) 69KV CKT 1

I: Power Flow Analysis (Constraints from Category C Contingencies)

See next page.

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FNSL-Blown up	08ALL	1	13G	G12_023		EMPORIA ENERGY CENTER - LANG 345KV CKT 1 &G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1	0	1.00255	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		G10-15 345.00 - SPEARVILLE 345KV CKT 1 &CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		G08-124 345.00 - SPEARVILLE 345KV CKT 1 &CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		G05-12 345.00 - SPEARVILLE 345KV CKT 1 &CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		G06-06 345.00 - SPEARVILLE 345KV CKT 1 &CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		G11_016_1 345.00 - SPEARVILLE 345KV CKT 1 &CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		BUCKNER7 345.00 - G07-40 345.00 345KV CKT 1 &CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		BUCKNER7 345.00 - G10-45 345.00 345KV CKT 1 &CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		G04_014 230.00 - SPEARVILLE 230KV CKT 1 &CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1 &CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - G11_023_1 345.00 345KV CKT 1 &CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1 &G11_044_1 345.00 - THISTLE7 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1 &G10_061_1 345.00 - G11-17T 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1 &G11-17T 345.00 - G11_017_1 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1 &G12-11T 345.00 - G12_011_1 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	08ALL	1	13G	G12_023		CANEYRV7 345.00 - G05-13 345.00 345KV CKT 1 &G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	08ALL	1	13G	G12_023		G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1 &ANDERSONCO 345.00 - G08-98 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	08ALL	1	13G	G12_023		G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1 &ANDERSONCO 345.00 - G10-03 345.00 345KV CKT 1	0	1	9999	BASE CASE
FNSL-Blown up	08ALL	1	13G	G12_023		87th STREET - STRANGER CREEK 345KV CKT 1 &G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1	0	0.99084	9999	BASE CASE
FNSL-Blown up	08ALL	1	13G	G12_023		G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1 &MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1	0	0.9861	9999	BASE CASE
FNSL-Blown up	08ALL	1	13G	G12_023		G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1 &LAWRENCE HILL - SWISSVALE 230KV CKT 1	0	0.98107	9999	BASE CASE
FNSL-Blown up	08ALL	1	13G	G12_023		JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 &G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1	0	0.94667	9999	BASE CASE
FNSL-Blown up	08ALL	1	13G	G12_023		RENO COUNTY - SUMMIT 345KV CKT 1 &G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1	0	0.93591	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - THISTLE7 345.00 345KV CKT 1 &CLARKCOUNTY7345.00 - THISTLE7 345.00 345KV CKT 2	0	0.44175	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - THISTLE7 345.00 345KV CKT 1 &CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.22087	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - THISTLE7 345.00 345KV CKT 1 &G11-17T 345.00 - G11_017_1 345.00 345KV CKT 1	0	0.22087	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - THISTLE7 345.00 345KV CKT 2 &CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.22087	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - THISTLE7 345.00 345KV CKT 2 &G11-17T 345.00 - G11_017_1 345.00 345KV CKT 1	0	0.22087	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		G11-17T 345.00 - SPEARVILLE 345KV CKT 1 &G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.21851	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1 &G05-12 345.00 - SPEARVILLE 345KV CKT 1	0	0.21045	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1 &CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.21045	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		G05-12 345.00 - SPEARVILLE 345KV CKT 1 &G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.10926	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		G06-06 345.00 - SPEARVILLE 345KV CKT 1 &G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.10926	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		BUCKNER7 345.00 - G07-40 345.00 345KV CKT 1 &G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.10926	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1 &G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.10926	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		CLARKCOUNTY7345.00 - G11_023_1 345.00 345KV CKT 1 &G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.10926	9999	BASE CASE
FNSL-Blown up	03ALL	1	13G	G12_024		G11-17T 345.00 - G11_017_1 345.00 345KV CKT 1 &G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.10926	9999	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FNSL-Blown up	03ALL		1 13G	G12_024		G11-17T 345.00 - SPEARVILLE 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.10925	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_024		BUCKNER7 345.00 - HOLCOMB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.10519	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_024		BUCKNER7 345.00 - HOLCOMB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11_023_1 345.00 345KV CKT 1	0	0.10519	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		G11-17T 345.00 - SPEARVILLE 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.08109	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_020		G11-17T 345.00 - SPEARVILLE 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.07582	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_023		BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1 & G05-12 345.00 - SPEARVILLE 345KV CKT 1	0	0.06302	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_023		BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.06302	9999	BASE CASE
FNSL-Blown up	08ALL		1 13G	G12_018		87th STREET - STRANGER CREEK 345KV CKT 1 & G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1	0	0.06182	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_018		CLARKCOUNTY7345.00 - THISTLE7 345.00 345KV CKT 1 & CLARKCOUNTY7345.00 - THISTLE7 345.00 345KV CKT 2	0	0.05239	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		HOLCOMB - SETAB 345KV CKT 1 & G05-12 345.00 - SPEARVILLE 345KV CKT 1	0	0.05216	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		HOLCOMB - SETAB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.05216	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_028		G11-17T 345.00 - SPEARVILLE 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.05056	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		MINGO - SETAB 345KV CKT 1 & G05-12 345.00 - SPEARVILLE 345KV CKT 1	0	0.04996	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		MINGO - SETAB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.04996	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		MINGO - SETAB 345KV CKT 1 & G12-11T 345.00 - G12_011_1 345.00 345KV CKT 1	0	0.04996	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_020		HOLCOMB - SETAB 345KV CKT 1 & G05-12 345.00 - SPEARVILLE 345KV CKT 1	0	0.04527	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_020		HOLCOMB - SETAB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.04527	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_032		BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1 & G05-12 345.00 - SPEARVILLE 345KV CKT 1	0	0.04463	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_032		BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.04463	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_020		MINGO - SETAB 345KV CKT 1 & G05-12 345.00 - SPEARVILLE 345KV CKT 1	0	0.04343	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_020		MINGO - SETAB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.04343	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_020		MINGO - SETAB 345KV CKT 1 & G12-11T 345.00 - G12_011_1 345.00 345KV CKT 1	0	0.04343	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_024		G05-12 345.00 - SPEARVILLE 345KV CKT 1 & MULLERGREEN - SPEARVILLE 230KV CKT 1	0	0.04241	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_024		MULLERGREEN - SPEARVILLE 230KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.04241	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_024		MULLERGREEN - SPEARVILLE 230KV CKT 1 & CLARKCOUNTY7345.00 - G11_023_1 345.00 345KV CKT 1	0	0.04241	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_023		G11-17T 345.00 - SPEARVILLE 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.04209	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_023		BUCKNER7 345.00 - HOLCOMB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.04083	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_023		BUCKNER7 345.00 - HOLCOMB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11_023_1 345.00 345KV CKT 1	0	0.04083	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		G11-17T 345.00 - SPEARVILLE 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.04054	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		G05-12 345.00 - SPEARVILLE 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.04054	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		G06-06 345.00 - SPEARVILLE 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.04054	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		BUCKNER7 345.00 - G07-40 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.04054	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.04054	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		CLARKCOUNTY7345.00 - G11_023_1 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.04054	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	ASGI_12_002		G11-17T 345.00 - G11_017_1 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.04054	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_040		BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1 & G05-12 345.00 - SPEARVILLE 345KV CKT 1	0	0.03987	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_040		BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.03987	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_020		G11-17T 345.00 - SPEARVILLE 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.03791	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_020		G05-12 345.00 - SPEARVILLE 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.03791	9999	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FNSL-Blown up	03ALL		1 13G	G12_020		G06-06 345.00 - SPEARVILLE 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.03791	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_020		BUCKNER7 345.00 - G07-40 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.03791	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_020		CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.03791	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_020		CLARKCOUNTY7345.00 - G11_023_1 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.03791	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_020		G11-17T 345.00 - G11_017_1 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.03791	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_033		G11-17T 345.00 - SPEARVILLE 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.03727	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_031		G11-17T 345.00 - SPEARVILLE 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1	0	0.03454	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_018		BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1 & G05-12 345.00 - SPEARVILLE 345KV CKT 1	0	0.03444	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_018		BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.03444	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_024		MINGO - SETAB 345KV CKT 1 & G05-12 345.00 - SPEARVILLE 345KV CKT 1	0	0.03275	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_024		MINGO - SETAB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.03275	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_024		MINGO - SETAB 345KV CKT 1 & G12-11T 345.00 - G12_011_1 345.00 345KV CKT 1	0	0.03275	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_032		BUCKNER7 345.00 - HOLCOMB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.03193	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_032		BUCKNER7 345.00 - HOLCOMB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11_023_1 345.00 345KV CKT 1	0	0.03193	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_040		BUCKNER7 345.00 - HOLCOMB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.03144	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_040		BUCKNER7 345.00 - HOLCOMB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11_023_1 345.00 345KV CKT 1	0	0.03144	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_024		HOLCOMB - SETAB 345KV CKT 1 & G05-12 345.00 - SPEARVILLE 345KV CKT 1	0	0.03064	9999	BASE CASE
FNSL-Blown up	03ALL		1 13G	G12_024		HOLCOMB - SETAB 345KV CKT 1 & CLARKCOUNTY7345.00 - G11-008 345.00 345KV CKT 1	0	0.03064	9999	BASE CASE
FDNS	06ALL		1 13G	G12_031	FROM->TO	LAWEASOKLUNI	425	0.05621	146.3	BASE CASE
FDNS	06ALL		1 13G	G12_028	FROM->TO	LAWEASOKLUNI	425	0.0488	146.3	BASE CASE
FDNS	06ALL		1 13G	G12_027	FROM->TO	LAWEASOKLUNI	425	0.04172	146.3	BASE CASE
FDNS	06ALL		1 13G	G12_033	FROM->TO	LAWEASOKLUNI	425	0.03455	146.3	BASE CASE
FDNS	06ALL		1 13G	G12_040	FROM->TO	LAWEASOKLUNI	425	0.03291	146.3	BASE CASE
FDNS	06ALL		1 13G	G12_032	FROM->TO	LAWEASOKLUNI	425	0.03268	146.3	BASE CASE
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.07119	128.4714	BENTON - WICHITA 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.07245	127.5091	MINGO - SETAB 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.02996	127.5091	MINGO - SETAB 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.07119	125.7342	BENTON - WICHITA 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.07891	125.2237	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06309	125.2237	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.03004	125.2237	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06752	124.7939	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05745	124.7939	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.07165	123.4692	HOLCOMB - SETAB 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.07891	122.4933	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06309	122.4933	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.03004	122.4933	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.079	122.4637	CLARKCOUNTY7345.00 - THISTLE7 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.079	122.4637	CLARKCOUNTY7345.00 - THISTLE7 345.00 345KV CKT 2 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06763	122.4496	HOYT - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05756	122.4496	HOYT - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06752	122.0654	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05745	122.0654	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.07047	120.9866	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05921	120.9866	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06371	120.6492	BENTON - WICHITA 345KV CKT 1 & BENTON - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05422	120.6492	BENTON - WICHITA 345KV CKT 1 & BENTON - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06763	119.7282	HOYT - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05756	119.7282	HOYT - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06453	119.2147	BENTON - WICHITA 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05484	119.2147	BENTON - WICHITA 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06907	118.903	RENO COUNTY - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05894	118.903	RENO COUNTY - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.07047	118.2638	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05921	118.2638	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	SPSSPPTIESB	620	0.4264	117.9588	BASE CASE
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	SPSSPPTIESC1	620	0.4264	117.9588	BASE CASE
FDNS	06ALL		1 13G	G12_020	FROM->TO	SPSSPPTIESB	620	0.42237	117.9588	BASE CASE
FDNS	06ALL		1 13G	G12_020	FROM->TO	SPSSPPTIESC1	620	0.42237	117.9588	BASE CASE
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06371	117.9146	BENTON - WICHITA 345KV CKT 1 & BENTON - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05422	117.9146	BENTON - WICHITA 345KV CKT 1 & BENTON - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06852	117.4123	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05931	117.4123	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07245	116.7091	BENTON - WICHITA 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.03122	116.7091	BENTON - WICHITA 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06453	116.4808	BENTON - WICHITA 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05484	116.4808	BENTON - WICHITA 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07245	116.4147	BENTON - WICHITA 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.03122	116.4147	BENTON - WICHITA 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06573	116.3478	BENTON - WICHITA 345KV CKT 1 & ELKRV17 345.00 - LATHAM57 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05536	116.3478	BENTON - WICHITA 345KV CKT 1 & ELKRV17 345.00 - LATHAM57 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06579	116.2348	87th STREET - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05569	116.2348	87th STREET - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.07778	116.2247	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06907	116.1808	RENO COUNTY - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05894	116.1808	RENO COUNTY - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.09592	115.8792	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.06506	115.8792	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.03614	115.8792	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.03409	115.8792	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19179	115.7724	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.15551	115.7724	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07271	115.7724	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06657	115.7724	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03023	115.7724	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.09592	115.663	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.06506	115.663	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.03614	115.663	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.03409	115.663	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06614	115.422	BENTON - WICHITA 345KV CKT 1 & SUMMIT - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05625	115.422	BENTON - WICHITA 345KV CKT 1 & SUMMIT - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06614	115.2126	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05625	115.2126	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06573	115.1465	CANEYRV7 345.00 - G05-13 345.00 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05536	115.1465	CANEYRV7 345.00 - G05-13 345.00 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06574	115.0726	BENTON - WICHITA 345KV CKT 1 & AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05543	115.0726	BENTON - WICHITA 345KV CKT 1 & AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06607	114.739	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05579	114.739	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06852	114.6948	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05931	114.6948	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06583	114.5592	BENTON - WICHITA 345KV CKT 1 & CIRCLE - EAST MCPHERSON 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.0556	114.5592	BENTON - WICHITA 345KV CKT 1 & CIRCLE - EAST MCPHERSON 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06573	114.4554	BENTON - WICHITA 345KV CKT 1 &ANDERSONCO 345.00 - G08-98 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05536	114.4554	BENTON - WICHITA 345KV CKT 1 &ANDERSONCO 345.00 - G08-98 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06573	114.4549	BENTON - WICHITA 345KV CKT 1 &ANDERSONCO 345.00 - G10-03 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05536	114.4549	BENTON - WICHITA 345KV CKT 1 &ANDERSONCO 345.00 - G10-03 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06573	114.3299	BENTON - WICHITA 345KV CKT 1 &AUBURN ROAD - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05542	114.3299	BENTON - WICHITA 345KV CKT 1 &AUBURN ROAD - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06592	114.3241	BENTON - WICHITA 345KV CKT 1 &EAST MCPHERSON - SUMMIT 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05571	114.3241	BENTON - WICHITA 345KV CKT 1 &EAST MCPHERSON - SUMMIT 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06576	114.1945	BENTON - WICHITA 345KV CKT 1 &LAWRENCE HILL - MIDLAND JUNCTION 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05538	114.1945	BENTON - WICHITA 345KV CKT 1 &LAWRENCE HILL - MIDLAND JUNCTION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.066	114.1504	BENTON - WICHITA 345KV CKT 1 &LAWRENCE HILL - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05561	114.1504	BENTON - WICHITA 345KV CKT 1 &LAWRENCE HILL - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06575	114.0436	BENTON - WICHITA 345KV CKT 1 &MCDOWELL CREEK - MORRIS COUNTY 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05536	114.0436	BENTON - WICHITA 345KV CKT 1 &MCDOWELL CREEK - MORRIS COUNTY 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06574	113.9841	BENTON - WICHITA 345KV CKT 1 &EAST MANHATTAN - NORTHWEST MANHATTAN 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05538	113.9841	BENTON - WICHITA 345KV CKT 1 &EAST MANHATTAN - NORTHWEST MANHATTAN 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06573	113.982	BENTON - WICHITA 345KV CKT 1 &SWISSVALE - TECUMSEH HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05536	113.982	BENTON - WICHITA 345KV CKT 1 &SWISSVALE - TECUMSEH HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06573	113.8432	EMPORIA ENERGY CENTER - LANG 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05537	113.8432	EMPORIA ENERGY CENTER - LANG 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06615	113.7443	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05543	113.7443	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06578	113.6992	BENTON - WICHITA 345KV CKT 1 &EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05546	113.6992	BENTON - WICHITA 345KV CKT 1 &EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06573	113.6763	BENTON - WICHITA 345KV CKT 1 &G12-023 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05536	113.6763	BENTON - WICHITA 345KV CKT 1 &G12-023 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06573	113.6291	BENTON - WICHITA 345KV CKT 1 &ELKRV17 345.00 - LATHAM57 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05536	113.6291	BENTON - WICHITA 345KV CKT 1 &ELKRV17 345.00 - LATHAM57 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06579	113.515	87th STREET - STRANGER CREEK 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05569	113.515	87th STREET - STRANGER CREEK 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06621	113.509	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05563	113.509	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06573	113.0999	BENTON - WICHITA 345KV CKT 1 &G10-05 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05536	113.0999	BENTON - WICHITA 345KV CKT 1 &G10-05 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06614	112.7031	BENTON - WICHITA 345KV CKT 1 &SUMMIT - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05625	112.7031	BENTON - WICHITA 345KV CKT 1 &SUMMIT - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06614	112.4942	BENTON - WICHITA 345KV CKT 1 &MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05625	112.4942	BENTON - WICHITA 345KV CKT 1 &MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06573	112.4258	CANEYRV7 345.00 - G05-13 345.00 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05536	112.4258	CANEYRV7 345.00 - G05-13 345.00 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.0619	112.411	BENTON - ROSE HILL 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.0511	112.411	BENTON - ROSE HILL 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06574	112.3539	BENTON - WICHITA 345KV CKT 1 &AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05543	112.3539	BENTON - WICHITA 345KV CKT 1 &AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06573	112.2445	BENTON - WICHITA 345KV CKT 1 &LAWRENCE ENERGY CENTER UNIT 5 - LAWRENCE HILL 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05536	112.2445	BENTON - WICHITA 345KV CKT 1 & LAWRENCE ENERGY CENTER UNIT 5 - LAWRENCE HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06573	112.0906	BENTON - WICHITA 345KV CKT 1 & G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05536	112.0906	BENTON - WICHITA 345KV CKT 1 & G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08109	112.0477	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05722	112.0477	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06607	112.022	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05579	112.022	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08109	111.9544	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05722	111.9544	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06583	111.8414	CIRCLE - WICHITA 345KV CKT 1 & CIRCLE - EAST MCPHERSON 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.0556	111.8414	BENTON - WICHITA 345KV CKT 1 & CIRCLE - EAST MCPHERSON 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06573	111.7394	BENTON - WICHITA 345KV CKT 1 & ANDERSONCO 345.00 - G08-98 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05536	111.7394	BENTON - WICHITA 345KV CKT 1 & ANDERSONCO 345.00 - G08-98 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06573	111.7388	BENTON - WICHITA 345KV CKT 1 & ANDERSONCO 345.00 - G10-03 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05536	111.7388	BENTON - WICHITA 345KV CKT 1 & ANDERSONCO 345.00 - G10-03 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06573	111.6134	BENTON - WICHITA 345KV CKT 1 & AUBURN ROAD - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05542	111.6134	BENTON - WICHITA 345KV CKT 1 & AUBURN ROAD - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06592	111.6074	BENTON - WICHITA 345KV CKT 1 & EAST MCPHERSON - SUMMIT 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05571	111.6074	BENTON - WICHITA 345KV CKT 1 & EAST MCPHERSON - SUMMIT 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.05873	111.5097	CLARKCOUNTY7345.00 - SPEARVILLE 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.05873	111.5097	CLARKCOUNTY7345.00 - SPEARVILLE 345KV CKT 2 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06576	111.4785	BENTON - WICHITA 345KV CKT 1 & LAWRENCE HILL - MIDLAND JUNCTION 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05538	111.4785	BENTON - WICHITA 345KV CKT 1 & LAWRENCE HILL - MIDLAND JUNCTION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.066	111.4339	BENTON - WICHITA 345KV CKT 1 & LAWRENCE HILL - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05561	111.4339	BENTON - WICHITA 345KV CKT 1 & LAWRENCE HILL - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06575	111.3279	BENTON - WICHITA 345KV CKT 1 & MCDOWELL CREEK - MORRIS COUNTY 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05536	111.3279	BENTON - WICHITA 345KV CKT 1 & MCDOWELL CREEK - MORRIS COUNTY 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06574	111.2684	BENTON - WICHITA 345KV CKT 1 & EAST MANHATTAN - NORTHWEST MANHATTAN 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05538	111.2684	BENTON - WICHITA 345KV CKT 1 & EAST MANHATTAN - NORTHWEST MANHATTAN 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06573	111.2664	BENTON - WICHITA 345KV CKT 1 & SWISSVALE - TECUMSEH HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05536	111.2664	BENTON - WICHITA 345KV CKT 1 & SWISSVALE - TECUMSEH HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06573	111.1286	EMPORIA ENERGY CENTER - LANG 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05537	111.1286	EMPORIA ENERGY CENTER - LANG 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.0656	111.1068	CONCORDIA - ELM CREEK 230KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06615	111.0281	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05543	111.0281	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06578	110.9843	BENTON - WICHITA 345KV CKT 1 & EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05546	110.9843	BENTON - WICHITA 345KV CKT 1 & EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06573	110.9607	BENTON - WICHITA 345KV CKT 1 & G12-023 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05536	110.9607	BENTON - WICHITA 345KV CKT 1 & G12-023 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06621	110.7902	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05563	110.7902	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08118	110.75	HOYT - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05731	110.75	HOYT - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08405	110.6801	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05911	110.6801	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.03117	110.6801	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08405	110.6624	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05911	110.6624	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.03117	110.6624	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08118	110.6382	HOYT - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05731	110.6382	HOYT - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06573	110.3848	BENTON - WICHITA 345KV CKT 1 & G10-05 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05536	110.3848	BENTON - WICHITA 345KV CKT 1 & G10-05 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06603	110.2265	G12-042 345.00 - SPEARVILLE 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1 CLARKCOUNTY7345.00 - G10-53 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06603	110.2265	MRWYP16 - MRWYP26 230KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06603	110.1472	ELM CREEK - MRWYP16 230KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.0619	109.6924	BENTON - ROSE HILL 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.0511	109.6924	BENTON - ROSE HILL 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06573	109.5311	BENTON - WICHITA 345KV CKT 1 & LAWRENCE ENERGY CENTER UNIT 5 - LAWRENCE HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05536	109.5311	BENTON - WICHITA 345KV CKT 1 & LAWRENCE ENERGY CENTER UNIT 5 - LAWRENCE HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06573	109.3728	BENTON - WICHITA 345KV CKT 1 & G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05536	109.3728	BENTON - WICHITA 345KV CKT 1 & G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.20885	109.1898	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17182	109.1898	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08202	109.1898	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07543	109.1898	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03663	109.1898	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07807	109.0119	BENTON - WICHITA 345KV CKT 1 & BENTON - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05463	109.0119	BENTON - WICHITA 345KV CKT 1 & BENTON - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06603	108.9516	G08-17 345.00 - SETAB 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07807	108.948	BENTON - WICHITA 345KV CKT 1 & BENTON - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05463	108.948	BENTON - WICHITA 345KV CKT 1 & BENTON - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06	108.8941	BENTON - WICHITA 345KV CKT 1 & LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05081	108.8941	BENTON - WICHITA 345KV CKT 1 & LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07847	108.8758	BENTON - WICHITA 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05501	108.8758	BENTON - WICHITA 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07847	108.8279	BENTON - WICHITA 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05501	108.8279	BENTON - WICHITA 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08272	108.2139	RENO COUNTY - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05883	108.2139	RENO COUNTY - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.03097	108.2139	RENO COUNTY - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19335	108.1919	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07619	108.1919	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06756	108.1919	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03053	108.1919	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MOUNDRIDGE - RENO COUNTY 115KV CKT 1	245	0.03779	107.9868	RENO COUNTY - SUMMIT 345KV CKT 1 & RENO COUNTY - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08272	107.855	RENO COUNTY - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05883	107.855	RENO COUNTY - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.03097	107.855	RENO COUNTY - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.20883	107.7759	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08971	107.7759	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08109	107.7759	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.0817	106.8559	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05844	106.8559	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.03068	106.8559	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	0.03715	106.8378	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	106.8288	BENTON - WICHITA 345KV CKT 1 & ELKRV17 345.00 - LATHAM57 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	106.8288	BENTON - WICHITA 345KV CKT 1 & ELKRV17 345.00 - LATHAM57 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.07523	106.7292	RENO COUNTY - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05077	106.7292	RENO COUNTY - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	106.6662	BENTON - WICHITA 345KV CKT 1 & ELKRV17 345.00 - LATHAM57 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	106.6662	BENTON - WICHITA 345KV CKT 1 & ELKRV17 345.00 - LATHAM57 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06603	106.6423	G11_043_1 345.00 - THISTLE7 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06603	106.6423	G11_044_1 345.00 - THISTLE7 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07968	106.5661	87th STREET - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05578	106.5661	87th STREET - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.0817	106.52	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05844	106.52	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.03068	106.52	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07968	106.3774	87th STREET - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05578	106.3774	87th STREET - STRANGER CREEK 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06	106.344	CANEYRV7 345.00 - LATHAM57 345.00 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05081	106.344	CANEYRV7 345.00 - LATHAM57 345.00 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06	106.1693	BENTON - WICHITA 345KV CKT 1 & LATHAM57 345.00 - ROSE HILL 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05081	106.1693	BENTON - WICHITA 345KV CKT 1 & LATHAM57 345.00 - ROSE HILL 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	105.8937	CANEYRV7 345.00 - G05-13 345.00 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	105.8937	CANEYRV7 345.00 - G05-13 345.00 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	01ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.0473	105.8523	BASE CASE
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07975	105.824	EMPORIA ENERGY CENTER - LANG 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05544	105.824	EMPORIA ENERGY CENTER - LANG 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	105.7358	CANEYRV7 345.00 - G05-13 345.00 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	105.7358	CANEYRV7 345.00 - G05-13 345.00 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07989	105.7322	BENTON - WICHITA 345KV CKT 1 & SUMMIT - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05607	105.7322	BENTON - WICHITA 345KV CKT 1 & SUMMIT - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07964	105.7234	BENTON - WICHITA 345KV CKT 1 & AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05556	105.7234	BENTON - WICHITA 345KV CKT 1 & AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07989	105.6416	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05607	105.6416	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07975	105.6301	EMPORIA ENERGY CENTER - LANG 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05544	105.6301	EMPORIA ENERGY CENTER - LANG 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07988	105.569	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05582	105.569	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07989	105.5194	BENTON - WICHITA 345KV CKT 1 & SUMMIT - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05607	105.5194	BENTON - WICHITA 345KV CKT 1 & SUMMIT - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07964	105.5051	BENTON - WICHITA 345KV CKT 1 & AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05556	105.5051	BENTON - WICHITA 345KV CKT 1 & AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19365	105.5033	HOYT - STRANGER CREEK 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07646	105.5033	HOYT - STRANGER CREEK 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06782	105.5033	HOYT - STRANGER CREEK 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03171	105.5033	HOYT - STRANGER CREEK 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	105.4696	BENTON - WICHITA 345KV CKT 1 & ANDERSONCO 345.00 - G08-98 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	105.4696	BENTON - WICHITA 345KV CKT 1 & ANDERSONCO 345.00 - G08-98 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	105.4692	BENTON - WICHITA 345KV CKT 1 & ANDERSONCO 345.00 - G10-03 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	105.4692	BENTON - WICHITA 345KV CKT 1 & ANDERSONCO 345.00 - G10-03 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07989	105.4284	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05607	105.4284	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.15629	105.3829	BENTON - WOLF CREEK 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.13236	105.3829	BENTON - WOLF CREEK 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.05333	105.3829	BENTON - WOLF CREEK 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.04733	105.3829	BENTON - WOLF CREEK 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03728	105.3829	BENTON - WOLF CREEK 345KV CKT 1 & ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07988	105.3669	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05582	105.3669	BENTON - WICHITA 345KV CKT 1 & MORRIS COUNTY - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	105.3156	BENTON - WICHITA 345KV CKT 1 & AUBURN ROAD - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05555	105.3156	BENTON - WICHITA 345KV CKT 1 & AUBURN ROAD - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07965	105.2867	BENTON - WICHITA 345KV CKT 1 & LAWRENCE HILL - MIDLAND JUNCTION 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05553	105.2867	BENTON - WICHITA 345KV CKT 1 & LAWRENCE HILL - MIDLAND JUNCTION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	105.2622	BENTON - WICHITA 345KV CKT 1 & ANDERSONCO 345.00 - G08-98 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	105.2622	BENTON - WICHITA 345KV CKT 1 & ANDERSONCO 345.00 - G08-98 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	105.2618	BENTON - WICHITA 345KV CKT 1 & ANDERSONCO 345.00 - G10-03 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	105.2618	BENTON - WICHITA 345KV CKT 1 & ANDERSONCO 345.00 - G10-03 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07986	105.2152	BENTON - WICHITA 345KV CKT 1 & LAWRENCE HILL - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05572	105.2152	BENTON - WICHITA 345KV CKT 1 & LAWRENCE HILL - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07964	105.191	BENTON - WICHITA 345KV CKT 1 & MCDOWELL CREEK - MORRIS COUNTY 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	105.191	BENTON - WICHITA 345KV CKT 1 & MCDOWELL CREEK - MORRIS COUNTY 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	105.1548	BENTON - WICHITA 345KV CKT 1 & SWISSVALE - TECUMSEH HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	105.1548	BENTON - WICHITA 345KV CKT 1 & SWISSVALE - TECUMSEH HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	105.1434	BENTON - WICHITA 345KV CKT 1 & EAST MANHATTAN - NORTHWEST MANHATTAN 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05553	105.1434	BENTON - WICHITA 345KV CKT 1 & EAST MANHATTAN - NORTHWEST MANHATTAN 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	105.1016	BENTON - WICHITA 345KV CKT 1 & AUBURN ROAD - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05555	105.1016	BENTON - WICHITA 345KV CKT 1 & AUBURN ROAD - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07959	105.0776	BENTON - WICHITA 345KV CKT 1 & EAST MCPHERSON - SUMMIT 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05543	105.0776	BENTON - WICHITA 345KV CKT 1 & EAST MCPHERSON - SUMMIT 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07965	105.0773	BENTON - WICHITA 345KV CKT 1 & LAWRENCE HILL - MIDLAND JUNCTION 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05553	105.0773	BENTON - WICHITA 345KV CKT 1 & LAWRENCE HILL - MIDLAND JUNCTION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.06	105.0404	CANEYRV7 345.00 - NEOSHO 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1	382	0.05081	105.0404	CANEYRV7 345.00 - NEOSHO 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07961	105.0169	BENTON - WICHITA 345KV CKT 1 & CIRCLE - EAST MCPHERSON 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05547	105.0169	BENTON - WICHITA 345KV CKT 1 & CIRCLE - EAST MCPHERSON 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07966	105.0092	BENTON - WICHITA 345KV CKT 1 & EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05557	105.0092	BENTON - WICHITA 345KV CKT 1 & EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07986	104.9933	BENTON - WICHITA 345KV CKT 1 & LAWRENCE HILL - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05572	104.9933	BENTON - WICHITA 345KV CKT 1 & LAWRENCE HILL - SWISSVALE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07964	104.9804	BENTON - WICHITA 345KV CKT 1 & MCDOWELL CREEK - MORRIS COUNTY 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	104.9804	BENTON - WICHITA 345KV CKT 1 & MCDOWELL CREEK - MORRIS COUNTY 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CENTENNIAL - COWSKIN 138KV CKT 1	232	0.03099	104.9635	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	104.9416	BENTON - WICHITA 345KV CKT 1 & SWISSVALE - TECUMSEH HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	104.9416	BENTON - WICHITA 345KV CKT 1 & SWISSVALE - TECUMSEH HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	104.929	BENTON - WICHITA 345KV CKT 1 & EAST MANHATTAN - NORTHWEST MANHATTAN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05553	104.929	BENTON - WICHITA 345KV CKT 1 & EAST MANHATTAN - NORTHWEST MANHATTAN 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07959	104.8655	BENTON - WICHITA 345KV CKT 1 & EAST MCPHERSON - SUMMIT 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05543	104.8655	BENTON - WICHITA 345KV CKT 1 & EAST MCPHERSON - SUMMIT 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07961	104.8064	BENTON - WICHITA 345KV CKT 1 & CIRCLE - EAST MCPHERSON 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05547	104.8064	BENTON - WICHITA 345KV CKT 1 & CIRCLE - EAST MCPHERSON 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	104.7994	BENTON - WICHITA 345KV CKT 1 & G12-023 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	104.7994	BENTON - WICHITA 345KV CKT 1 & G12-023 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07966	104.7902	BENTON - WICHITA 345KV CKT 1 & EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05557	104.7902	BENTON - WICHITA 345KV CKT 1 & EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06603	104.7252	BUCKNER7 345.00 - G10-09 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.20821	104.697	HOYT - STRANGER CREEK 345KV CKT 1 & EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17118	104.697	HOYT - STRANGER CREEK 345KV CKT 1 & EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0818	104.697	HOYT - STRANGER CREEK 345KV CKT 1 & EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07523	104.697	HOYT - STRANGER CREEK 345KV CKT 1 & EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03653	104.697	HOYT - STRANGER CREEK 345KV CKT 1 & EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.0778	104.5942	BENTON - ROSE HILL 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05348	104.5942	BENTON - ROSE HILL 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.22438	104.5801	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17514	104.5801	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0879	104.5801	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0816	104.5801	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.04359	104.5801	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	104.5723	BENTON - WICHITA 345KV CKT 1 & G12-023 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	104.5723	BENTON - WICHITA 345KV CKT 1 & G12-023 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08027	104.4503	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05562	104.4503	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.23874	104.4264	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & RENO COUNTY - SUMMIT 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18748	104.4264	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & RENO COUNTY - SUMMIT 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09711	104.4264	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & RENO COUNTY - SUMMIT 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09072	104.4264	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & RENO COUNTY - SUMMIT 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.05193	104.4264	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 & RENO COUNTY - SUMMIT 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08012	104.4105	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05578	104.4105	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.0778	104.3638	BENTON - ROSE HILL 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05348	104.3638	BENTON - ROSE HILL 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	104.2192	BENTON - WICHITA 345KV CKT 1 & G10-05 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	104.2192	BENTON - WICHITA 345KV CKT 1 & G10-05 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08027	104.1493	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05562	104.1493	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08012	104.1023	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05578	104.1023	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.07523	104.0155	RENO COUNTY - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05077	104.0155	RENO COUNTY - WICHITA 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	RENO COUNTY (RENO 2X) 345/115/14.4KV TRANSFORMER CKT 1	308	0.04453	104.0058	RENO COUNTY - SUMMIT 345KV CKT 1 & RENO COUNTY - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	103.9779	BENTON - WICHITA 345KV CKT 1 & G10-05 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	103.9779	BENTON - WICHITA 345KV CKT 1 & G10-05 345.00 - G7-25&G12-23345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	103.9039	BENTON - WICHITA 345KV CKT 1 & LAWRENCE ENERGY CENTER UNIT 5 - LAWRENCE HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	103.9039	BENTON - WICHITA 345KV CKT 1 & LAWRENCE ENERGY CENTER UNIT 5 - LAWRENCE HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06	103.6218	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05081	103.6218	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	103.5956	BENTON - WICHITA 345KV CKT 1 & LAWRENCE ENERGY CENTER UNIT 5 - LAWRENCE HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	103.5956	BENTON - WICHITA 345KV CKT 1 & LAWRENCE ENERGY CENTER UNIT 5 - LAWRENCE HILL 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06603	103.5673	CLARKCOUNTY7345.00 - G12-024 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	RENO COUNTY (RENO 2X) 345/115/14.4KV TRANSFORMER CKT 1	308	0.04453	103.5502	RENO COUNTY - SUMMIT 345KV CKT 1 & RENO COUNTY - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19787	103.5191	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08002	103.5191	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07134	103.5191	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03337	103.5191	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	102.8568	BENTON - WICHITA 345KV CKT 1 & G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	102.8568	BENTON - WICHITA 345KV CKT 1 & G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19594	102.7676	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.16149	102.7676	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07506	102.7676	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06868	102.7676	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03112	102.7676	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06603	102.6913	G10_061_1 345.00 - G11-17T 345.00 345KV CKT 1 & G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MAIZE - MAIZEW 4 138.00 138KV CKT 1	478	0.07119	102.664	BENTON - WICHITA 345KV CKT 1 & VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07963	102.5011	BENTON - WICHITA 345KV CKT 1 & G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05551	102.5011	BENTON - WICHITA 345KV CKT 1 & G7-25&G12-23345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.08928	102.4536	HOYT - STRANGER CREEK 345KV CKT 1 & ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.08688	102.4536	HOYT - STRANGER CREEK 345KV CKT 1 & ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.04983	102.4536	HOYT - STRANGER CREEK 345KV CKT 1 & ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.047	102.4536	HOYT - STRANGER CREEK 345KV CKT 1 & ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_032	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.0455	102.4536	HOYT - STRANGER CREEK 345KV CKT 1 & ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_040	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.04452	102.4536	HOYT - STRANGER CREEK 345KV CKT 1 & ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_033	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.03461	102.4536	HOYT - STRANGER CREEK 345KV CKT 1 & ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.03222	102.4536	HOYT - STRANGER CREEK 345KV CKT 1 & ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.06	102.3292	CANEYRV7 345.00 - NEOSHO 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1	382	0.05081	102.3292	CANEYRV7 345.00 - NEOSHO 345KV CKT 1 & BENTON - WICHITA 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.22428	102.3076	HOYT - STRANGER CREEK 345KV CKT 1 &EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17509	102.3076	HOYT - STRANGER CREEK 345KV CKT 1 &EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08794	102.3076	HOYT - STRANGER CREEK 345KV CKT 1 &EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08164	102.3076	HOYT - STRANGER CREEK 345KV CKT 1 &EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.04364	102.3076	HOYT - STRANGER CREEK 345KV CKT 1 &EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	0.06087	101.7568	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 &AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	0.05102	101.7568	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1 &AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.23514	101.5537	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 &EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18794	101.5537	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 &EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09691	101.5537	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 &EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09038	101.5537	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 &EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.05118	101.5537	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 &EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19785	101.5512	RENO COUNTY - SUMMIT 345KV CKT 1 &VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07997	101.5512	RENO COUNTY - SUMMIT 345KV CKT 1 &VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07134	101.5512	RENO COUNTY - SUMMIT 345KV CKT 1 &VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03351	101.5512	RENO COUNTY - SUMMIT 345KV CKT 1 &VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.06294	101.3884	BENTON - WICHITA 345KV CKT 1 &VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MOUNDRIDGE - RENO COUNTY 115KV CKT 1	245	0.0378	101.3697	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1 &RENO COUNTY - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.06294	101.1489	BENTON - WICHITA 345KV CKT 1 &VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07448	101.0218	BENTON - WICHITA 345KV CKT 1 &LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05143	101.0218	BENTON - WICHITA 345KV CKT 1 &LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MULLERGREN - SPEARVILLE 230KV CKT 1	355.3	0.06603	100.9999	G04_014 230.00 - SPEARVILLE 230KV CKT 1 &G11-17T 345.00 - G12-11T 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.07448	100.8511	BENTON - WICHITA 345KV CKT 1 &LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT12X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05143	100.8511	BENTON - WICHITA 345KV CKT 1 &LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18079	100.716	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &BENTON - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.14976	100.716	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &BENTON - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06728	100.716	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &BENTON - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06114	100.716	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &BENTON - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08333	100.6678	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05652	100.6678	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.0314	100.6678	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17717	100.5139	BENTON - WOLF CREEK 345KV CKT 1 &VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06701	100.5139	BENTON - WOLF CREEK 345KV CKT 1 &VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.05883	100.5139	BENTON - WOLF CREEK 345KV CKT 1 &VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0426	100.5139	BENTON - WOLF CREEK 345KV CKT 1 &VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.08333	100.4961	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.05652	100.4961	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	WICHITA (WICHT11X) 345/138/13.8KV TRANSFORMER CKT 1	440	0.0314	100.4961	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	MAIZE - MAIZEE 4 138.00 138KV CKT 1	478	0.07119	100.4893	BENTON - WICHITA 345KV CKT 1 &VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL		1 13G	G12_024	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	0.03293	100.4138	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 &AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	FROM->TO	SPSSPTIESB1	620	0.38193	100.2999	BASE CASE
FDNS	06ALL		1 13G	G12_020	FROM->TO	SPSSPTIESC	620	0.38193	100.2999	BASE CASE
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	SPSSPTIESB1	620	0.34539	100.2999	BASE CASE
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	SPSSPTIESC	620	0.34539	100.2999	BASE CASE
FDNS	03ALL		1 13G	G12_024	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.08342	100.0776	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.08174	100.0776	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.04656	100.0776	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_020	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.04393	100.0776	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_032	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.04262	100.0776	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_040	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.04171	100.0776	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_033	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.03239	100.0776	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	956	0.03013	100.0776	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	BENTON - ROSE HILL 345KV CKT 1	956	0.13735	100.0723	ROSE HILL - WOLF CREEK 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	BENTON - ROSE HILL 345KV CKT 1	956	0.12193	100.0723	ROSE HILL - WOLF CREEK 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	BENTON - ROSE HILL 345KV CKT 1	956	0.04667	100.0723	ROSE HILL - WOLF CREEK 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	FROM->TO	BENTON - ROSE HILL 345KV CKT 1	956	0.04093	100.0723	ROSE HILL - WOLF CREEK 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	FROM->TO	BENTON - ROSE HILL 345KV CKT 1	956	0.03475	100.0723	ROSE HILL - WOLF CREEK 345KV CKT 1 &ANDERSONCO 345.00 - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	MAIZE - MAIZEW 4 138.00 138KV CKT 1	478	0.07891	100.0717	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	MAIZE - MAIZEW 4 138.00 138KV CKT 1	478	0.06309	100.0717	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	MAIZE - MAIZEW 4 138.00 138KV CKT 1	478	0.03004	100.0717	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1 &BENTON - WICHITA 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19081	100	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.15742	100	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07193	100	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06559	100	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &ROSE HILL - WOLF CREEK 345KV CKT 1
FNSL-Blown up	09ALL		1 13G	G12_017		BKR-CPR-3310	0	1.14907	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_020		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1	0	0.9494	9999	BASE CASE
FNSL-Blown up	09ALL		1 13G	G12_018		TWNCRHS1051	0	0.75395	9999	BASE CASE
FNSL-Blown up	09ALL		1 13G	G12_018		G10-51T 230.00 - HOSKINS 230KV CKT 1 &G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	0	0.72912	9999	BASE CASE
FNSL-Blown up	06ALL		1 13G	ASGI_12_002		OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 &CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1	0	0.42764	9999	BASE CASE
FNSL-Blown up	06ALL		1 13G	G12_020		OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 &TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1	0	0.1922	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	ASGI_12_002		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	0	0.17064	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.16868	9999	BASE CASE
FNSL-Blown up	01ALL		1 13G	ASGI_12_002		MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 &MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2	0	0.14947	9999	BASE CASE
FNSL-Blown up	01ALL		1 13G	G12_020		MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 &MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2	0	0.13773	9999	BASE CASE
FNSL-Blown up	01ALL		1 13G	G12_024		MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 &MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2	0	0.137	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	ASGI_12_002		Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.12017	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	ASGI_12_002		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &PLANT X STATION - TOLK STATION EAST 230KV CKT 2	0	0.11131	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1	0	0.10505	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	0	0.10283	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	0	0.10279	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1	0	0.1026	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	0	0.09943	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1	0	0.09648	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	0	0.09477	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1	0	0.09387	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &CHAVESCO 345.00 - TOLK STATION 345KV CKT 1	0	0.09284	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1	0	0.09284	9999	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FNSL-Blown up	06ALL	1	13G	ASGI_12_002		CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1	0	0.09219	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1	0	0.09196	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1	0	0.09193	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	0	0.08938	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1	0	0.08856	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & EDDY COUNTY INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1	0	0.08828	9999	BASE CASE
FNSL-Blown up	06ALL	1	13G	ASGI_12_002		OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & PLANT X STATION - TOLK STATION WEST 230KV CKT 1	0	0.08761	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	0	0.08726	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1	0	0.08714	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.08709	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1	0	0.08658	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	0	0.08658	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	0	0.0865	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1	0	0.08609	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.08598	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.08597	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.08596	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230	0	0.08521	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 & STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.08475	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.08451	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.08434	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1	0	0.08434	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1	0	0.08434	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1	0	0.08434	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1	0	0.08434	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1	0	0.08434	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1	0	0.08434	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1	0	0.08434	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1	0	0.08434	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1	0	0.08434	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	0	0.08428	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1	0	0.08394	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1	0	0.08305	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1	0	0.08255	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1	0	0.08242	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1	0	0.08069	9999	BASE CASE
FNSL-Blown up	07ALL	1	13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1	0	0.08037	9999	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.0802	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_020		Hitcland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.07898	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1	0	0.07458	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	0	0.07248	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1	0	0.07089	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & PLANT X STATION - TOLK STATION EAST 230KV CKT 2	0	0.07085	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	0	0.07033	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1	0	0.0671	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	0	0.06217	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1	0	0.0536	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_031		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1	0	0.0509	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_031		GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.04465	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_028		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2	0	0.04464	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_033		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1	0	0.04349	9999	BASE CASE
FNSL-Blown up	06ALL		1 13G	G12_020		OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & PLANT X STATION - TOLK STATION WEST 230KV CKT 1	0	0.04337	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_027		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1	0	0.04304	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_031		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1	0	0.04262	9999	BASE CASE
FNSL-Blown up	01ALL		1 13G	G12_018		MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2	0	0.04213	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_040		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1	0	0.0389	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_020		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1	0	0.03825	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_032		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1	0	0.03804	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_033		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1	0	0.03766	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_033		GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.03677	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_027		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1	0	0.03676	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_031		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	0	0.03615	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_031		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	0	0.03579	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_033		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	0	0.03496	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_027		GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	0	0.0346	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	ASGI_12_002		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1	0	0.03441	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_031		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1	0	0.03392	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_023		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1	0	0.0337	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_040		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1	0	0.03368	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_027		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	0	0.0334	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_031		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1	0	0.03311	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_032		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1	0	0.03292	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_040		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	0	0.03198	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_032		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	0	0.0314	9999	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FNSL-Blown up	07ALL		1 13G	G12_031		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1	0	0.03107	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_031		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &CHAVESCO 345.00 - TOLK STATION 345KV CKT 1	0	0.03049	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_031		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1	0	0.03049	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_033		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	0	0.03029	9999	BASE CASE
FNSL-Blown up	07ALL		1 13G	G12_033		STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1	0	0.03026	9999	BASE CASE
FNSL	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	105.3145	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FNSL	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04277	105.1751	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 &GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FNSL	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6146	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FNSL	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.5777	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FNSL	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.9324	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FNSL	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04277	101.7939	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 &GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FNSL	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7316	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FNSL	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.6984	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05862	219.6819	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05825	219.6819	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03899	217.9214	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03899	217.9214	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03795	217.9214	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03795	217.9214	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05862	210.288	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05825	210.288	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03401	196.809	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03401	196.809	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03105	196.809	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03105	196.809	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03675	196.634	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03517	196.634	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03584	194.0298	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03453	194.0298	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03545	192.0688	CIMARRON - DRAPER LAKE 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03412	192.0688	CIMARRON - DRAPER LAKE 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03451	191.3212	GRACEMONT - MINCO 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03329	191.3212	GRACEMONT - MINCO 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03581	191.0984	NORTHWEST - SPRING CREEK 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0344	191.0984	NORTHWEST - SPRING CREEK 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03581	191.0832	SOONER - SPRING CREEK 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0344	191.0832	SOONER - SPRING CREEK 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	G12_027	FROM->TO	LAWEASOKLUNI	425	0.04172	146.3	BASE CASE
FDNS	06ALL		1 13G	G12_033	FROM->TO	LAWEASOKLUNI	425	0.03455	146.3	BASE CASE
FDNS	06ALL		1 13G	G12_040	FROM->TO	LAWEASOKLUNI	425	0.03291	146.3	BASE CASE
FDNS	06ALL		1 13G	G12_032	FROM->TO	LAWEASOKLUNI	425	0.03268	146.3	BASE CASE
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - HAYMAKER 138KV CKT 1	308	0.0845	142.9022	CIMARRONR
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.19078	142.6962	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03401	139.7137	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03401	139.7137	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03105	139.7137	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03105	139.7137	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03675	139.5674	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03517	139.5674	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03584	138.1625	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03453	138.1625	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.51123	137.72	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	TO->FROM	DIVISION AVE - HAYMAKER 138KV CKT 1	308	0.0845	137.6448	CIMARRONR
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	137.4932	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03545	137.082	CIMARRON - DRAPER LAKE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03412	137.082	CIMARRON - DRAPER LAKE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03451	136.5997	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03329	136.5997	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.50647	136.5522	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03581	136.5272	NORTHWEST - SPRING CREEK 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.0344	136.5272	NORTHWEST - SPRING CREEK 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03581	136.5171	SOONER - SPRING CREEK 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.0344	136.5171	SOONER - SPRING CREEK 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	136.487	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03567	136.4128	ARCADIA - NORTHWEST 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03434	136.4128	ARCADIA - NORTHWEST 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03511	136.3414	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03511	136.3414	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03381	136.3414	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03381	136.3414	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03451	136.1866	CIMARRON - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03329	136.1866	CIMARRON - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03508	136.1436	G12-041 TAP 345.00 - SOONER 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03372	136.1436	G12-041 TAP 345.00 - SOONER 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03508	136.1384	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03372	136.1384	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	135.7085	G11-010 345.00 - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03488	135.7033	SOONER - WOODRING 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03355	135.7033	SOONER - WOODRING 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	135.6637	MINCO - MINCO WIND 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	135.6637	MINCO - MINCO WIND 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.34868	135.5637	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08216	135.5637	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	135.5471	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	135.5471	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	135.3573	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	135.3573	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	135.0808	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	135.0808	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.34364	135.0562	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08315	135.0562	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1053	135.0256	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	134.9375	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	134.9375	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	134.8613	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	134.8613	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	134.5822	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	134.5822	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	134.5416	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	134.5416	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	134.5117	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	134.5117	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	133.5104	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	133.5104	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0815	133.3894	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	133.0705	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	133.0705	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	133.0387	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	133.0387	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	131.7118	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	131.7118	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	131.701	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	131.701	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G08-19 345.00 - TATONGA7 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY		
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.3442	131.3403	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.22355	131.3403	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.10867	131.3403	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09709	131.3403	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.04912	131.3403	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.3442	130.7905	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_051T	345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.22355	130.7905	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_051T	345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.10867	130.7905	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_051T	345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09709	130.7905	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_051T	345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.04912	130.7905	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_051T	345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	130.115	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-62	345.00 - G07-62-3	
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	130.115	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-62	345.00 - G07-62-4	
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	130.115	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-62	345.00 - G07-62-3	
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	130.115	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-62	345.00 - G07-62-4	
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	130.062	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-62	345.00 - G07-62-1	
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	130.062	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-62	345.00 - G07-62-2	
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	130.062	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-62	345.00 - G07-62-1	
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	130.062	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-62	345.00 - G07-62-2	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.12583	129.7393	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1		
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.12583	129.687	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1		
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.11424	129.1633	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1		
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.11424	128.9362	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1		
FDNS	01ALL		1 13G	G12_023	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.17505	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 1		
FDNS	01ALL		1 13G	G12_023	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.17505	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 2		
FDNS	01ALL		1 13G	G12_024	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.15307	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 1		
FDNS	01ALL		1 13G	G12_024	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.15307	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 2		
FDNS	01ALL		1 13G	G12_033	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.13569	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 1		
FDNS	01ALL		1 13G	G12_033	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.13569	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 2		
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.088	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 1		
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.088	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 2		
FDNS	01ALL		1 13G	G12_040	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.0871	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 1		
FDNS	01ALL		1 13G	G12_040	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.0871	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 2		
FDNS	01ALL		1 13G	G12_032	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.08545	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 1		
FDNS	01ALL		1 13G	G12_032	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.08545	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 2		
FDNS	01ALL		1 13G	G12_020	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.07172	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 1		
FDNS	01ALL		1 13G	G12_020	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.07172	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 2		
FDNS	01ALL		1 13G	G12_018	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.0704	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 &CIMARRON - MATTHEWSON 345.00 345KV CKT 1		

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL		1 13G	G12_018	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.0704	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	01ALL		1 13G	G12_027	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.03038	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.03038	128.6108	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	128.4367	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	128.2208	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.16664	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.16664	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_024	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.14467	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.14467	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_033	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.12729	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_033	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.12729	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.0796	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.0796	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_040	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.07869	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_040	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.07869	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_032	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.07705	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_032	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.07705	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_020	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.06332	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.06332	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_018	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.062	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.062	126.8502	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	126.8297	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	126.8297	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	126.8297	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	126.8297	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	126.3421	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	126.2923	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	138	0.15795	125.2515	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09381	125.1336	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09381	125.0839	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_031	FROM->TO	CIMARRON - HAYMAKER 138KV CKT 1	308	0.0828	124.7274	CIMARRONR
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.20541	124.0916	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.11868	123.095	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.11868	123.0464	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	351	0.21645	119.8007	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_031	TO->FROM	DIVISION AVE - HAYMAKER 138KV CKT 1	308	0.0828	119.4969	CIMARRONR
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0391	119.1856	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0391	119.1856	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03806	119.1856	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03806	119.1856	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.20045	118.8795	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.03323	118.8795	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	SPSSPPTIESB	620	0.4264	117.9588	BASE CASE
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	SPSSPPTIESC1	620	0.4264	117.9588	BASE CASE
FDNS	06ALL		1 13G	G12_020	FROM->TO	SPSSPPTIESB	620	0.42237	117.9588	BASE CASE
FDNS	06ALL		1 13G	G12_020	FROM->TO	SPSSPPTIESC1	620	0.42237	117.9588	BASE CASE
FDNS	01ALL		1 13G	G12_031	FROM->TO	DIVISION AVE - MUSTANG 138KV CKT 1	287	0.05525	117.9224	CIMARRONR
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.25895	117.8281	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.09967	117.8281	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.09959	117.8281	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_028	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08305	117.8281	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08104	117.8281	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07882	117.8281	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07137	117.8281	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04415	117.8281	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04393	117.8281	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.12384	117.6377	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.27357	117.545	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.12384	117.509	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.12253	117.4106	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.12253	117.2408	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.12254	117.0344	CMARN385
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03277	117.0344	CMARN385
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.19633	116.8179	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.11028	116.7029	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.11028	116.6553	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.18584	116.3147	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	01ALL		1 13G	G12_024	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.1665	116.3147	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	01ALL		1 13G	G12_033	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.1395	116.3147	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.11059	116.3147	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	01ALL		1 13G	G12_020	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.09486	116.3147	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	01ALL		1 13G	G12_040	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.08361	116.3147	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	01ALL		1 13G	G12_032	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.0795	116.3147	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	01ALL		1 13G	G12_018	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.07457	116.3147	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1	175	0.19078	115.9776	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19179	115.7724	GENS32751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.15551	115.7724	GENS32751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07271	115.7724	GENS32751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06657	115.7724	GENS32751 1-WOLF CREEK GENERATING STATION UNIT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03023	115.7724	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0812	114.9175	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	154	0.19078	114.885	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0812	114.8694	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.18005	114.7955	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.12254	114.6449	CMARN385
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03277	114.6449	CMARN385
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.28609	114.5745	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0744	114.3975	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0744	114.3077	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09125	114.0641	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09125	114.0166	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.05767	113.7478	NOWST382
FDNS	01ALL		1 13G	G12_023	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.0364	113.7478	NOWST382
FDNS	01ALL		1 13G	G12_032	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03535	113.7478	NOWST382
FDNS	01ALL		1 13G	G12_024	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03104	113.7478	NOWST382
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06297	113.4952	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	09ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05839	113.4548	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	09ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05802	113.4548	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06297	113.448	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03509	112.9767	G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.03375	112.9767	G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.05767	112.2374	NOWST382
FDNS	01ALL		1 13G	G12_023	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.0364	112.2374	NOWST382
FDNS	01ALL		1 13G	G12_032	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03535	112.2374	NOWST382
FDNS	01ALL		1 13G	G12_024	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03104	112.2374	NOWST382
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.22125	112.19	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.09501	112.19	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08759	112.19	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07814	112.19	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07445	112.19	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07231	112.19	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04936	112.19	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04047	112.19	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03219	112.19	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_018	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03041	112.19	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	DEAF SMITH REC-#20 - DEAF SMITH REC-#24 115KV CKT 1	99	0.20541	111.9935	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	09ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05839	111.7831	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	09ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05802	111.7831	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	175	0.19078	111.7251	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	138	0.08541	111.2717	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08849	111.2305	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08849	111.1838	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06572	110.924	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.37369	110.9218	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08014	110.9218	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06572	110.8864	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFORTH INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32678	110.149	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32678	110.149	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19388	110.149	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19388	110.149	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07991	110.149	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07991	110.149	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07096	110.149	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07096	110.149	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.04006	110.149	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.04006	110.149	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.3698	110.0501	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08129	110.0501	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.27642	110.0306	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.11411	109.7854	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.11411	109.6638	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFORTH INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04891	109.4572	BUS16
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	96	0.14878	109.3348	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	FROM->TO	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	96	0.05584	109.3348	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1	175	0.1053	109.1852	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFORTH INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	109.1683	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	109.1683	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	109.1683	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	109.1683	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	109.1683	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.25426	108.7494	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.10275	108.7494	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.10264	108.7494	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.09056	108.7494	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08748	108.7494	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08248	108.7494	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06021	108.7494	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.05229	108.7494	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04838	108.7494	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_018	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04003	108.7494	GRACEMONT - MINCO 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.17638	108.6901	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_024	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.15705	108.6901	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_033	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.13005	108.6901	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	ASGI_12_002	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.10114	108.6901	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_020	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.0854	108.6901	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_040	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.07416	108.6901	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_032	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.07005	108.6901	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_018	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.06512	108.6901	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_031	FROM->TO	DIVISION AVE - MUSTANG 138KV CKT 1	287	0.05395	108.6031	CIMARRON
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.26049	108.59	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.27543	108.1589	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	108.0909	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04692	108.0761	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	108.0447	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09256	107.8233	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.18812	107.804	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.03344	107.804	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09256	107.7766	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03611	107.7722	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0348	107.7722	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.25561	107.7656	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07929	107.7384	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1	175	0.0815	107.7258	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06814	107.7153	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07929	107.6924	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06814	107.6693	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	107.597	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04344	107.5799	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	107.5503	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07292	107.5467	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.27651	107.5008	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07292	107.5003	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.21482	107.3868	GRACEMONT - MINCO 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08535	107.3868	GRACEMONT - MINCO 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08421	107.3868	GRACEMONT - MINCO 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07155	107.3868	GRACEMONT - MINCO 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06905	107.3868	GRACEMONT - MINCO 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06538	107.3868	GRACEMONT - MINCO 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.0459	107.3868	GRACEMONT - MINCO 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03914	107.3868	GRACEMONT - MINCO 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03863	107.3868	GRACEMONT - MINCO 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL		1 13G	G12_018	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03101	107.3868	GRACEMONT - MINCO 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04692	107.3834	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19846	107.1633	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18299	107.1633	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08016	107.1633	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06514	107.1633	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03277	107.1633	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	154	0.1053	107.1331	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.20536	107.0174	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18194	107.0174	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09652	107.0174	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08782	107.0174	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	107.0095	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.9735	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.9637	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03573	106.9354	CIMARRON - DRAPER LAKE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03441	106.9354	CIMARRON - DRAPER LAKE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.9277	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.9075	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.8883	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.8617	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.8425	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	DEAF SMITH REC-#20 - DEAF SMITH REC-#24 115KV CKT 1	99	0.20045	106.731	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	FROM->TO	DEAF SMITH REC-#20 - DEAF SMITH REC-#24 115KV CKT 1	99	0.03323	106.731	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19846	106.7306	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18299	106.7306	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08016	106.7306	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06514	106.7306	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03277	106.7306	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	08ALL		1 13G	G12_031	FROM->TO	CIMARRON - HAYMAKER 138KV CKT 1	308	0.0829	106.6913	CIMARRONR
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.36986	106.6527	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.07377	106.6527	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06246	106.6447	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06246	106.6071	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10448	106.6025	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.20536	106.5987	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18194	106.5987	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09652	106.5987	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08782	106.5987	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	07ALL		1 13G	G12_031	FROM->TO	CIMARRON - HAYMAKER 138KV CKT 1	308	0.08309	106.5409	CIMARRONR
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03542	106.4736	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03411	106.4736	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03542	106.4735	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03411	106.4735	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.3873	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	106.379	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &TOLK STATION EAST - TUOCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.3411	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	QUAIL CREEK - SKYLINE 138KV CKT 1	308	0.03296	106.3181	MSTNG186
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	106.2853	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &TOLK STATION EAST - TUOCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0698	106.2658	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0698	106.2202	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUOCO INTERCHANGE 230KV CKT 1	502	0.28316	106.1914	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUOCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07051	106.1863	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &AMOCO SWITCHING STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	138	0.07143	106.1803	TOLK STATION EAST - TUOCO INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUOCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.161	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07051	106.14	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &AMOCO SWITCHING STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.1154	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.0956	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0724	106.0952	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	106.0877	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	106.0845	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	106.0845	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	106.0816	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	106.0816	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	106.05	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - HAYMAKER 138KV CKT 1	308	0.07088	106.0498	CIMARRON - NORTHWEST 345KV CKT 1 &MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_028	FROM->TO	CIMARRON - HAYMAKER 138KV CKT 1	308	0.04916	106.0498	CIMARRON - NORTHWEST 345KV CKT 1 &MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - HAYMAKER 138KV CKT 1	308	0.03676	106.0498	CIMARRON - NORTHWEST 345KV CKT 1 &MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - HAYMAKER 138KV CKT 1	308	0.036	106.0498	CIMARRON - NORTHWEST 345KV CKT 1 &MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0724	106.0496	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	106.0426	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	DEAF SMITH REC-#24 - PARMER COUNTY SUB 115KV CKT 1	99	0.20541	105.9995	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 &PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03521	105.9631	SOONER - WOODRING 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03387	105.9631	SOONER - WOODRING 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03542	105.9265	G12-041 TAP 345.00 - SOONER 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.9265	G12-041 TAP 345.00 - SOONER 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03542	105.9209	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.9209	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03551	105.9049	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03416	105.9049	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32639	105.8916	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19119	105.8916	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06206	105.8916	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.04896	105.8916	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.04082	105.8916	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.8854	ARCADIA - SEMINOLE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.8854	ARCADIA - SEMINOLE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.8686	MUSKOGEE - PECAN CREEK 345KV CKT 2 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03406	105.8686	MUSKOGEE - PECAN CREEK 345KV CKT 2 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.0473	105.8523	BASE CASE
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03541	105.8442	FT SMITH - MUSKOGEE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03408	105.8442	FT SMITH - MUSKOGEE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.8414	MUSKOGEE - PECAN CREEK 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.8414	MUSKOGEE - PECAN CREEK 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.10168	105.8273	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03542	105.8185	DRAPER LAKE - SEMINOLE 345KV CKT 3 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03408	105.8185	DRAPER LAKE - SEMINOLE 345KV CKT 3 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.8156	G08-46 345.00 - SUNNYSIDE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.8156	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.8156	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.8156	G08-46 345.00 - SUNNYSIDE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.8156	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.8156	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03543	105.8135	DRAPER LAKE - SEMINOLE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03409	105.8135	DRAPER LAKE - SEMINOLE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03543	105.8043	DRAPER LAKE - SEMINOLE 345KV CKT 2 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03409	105.8043	DRAPER LAKE - SEMINOLE 345KV CKT 2 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03544	105.8032	CIMARRON - NORTHWEST 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03411	105.8032	CIMARRON - NORTHWEST 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07086	105.7866	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.7806	G11-010 345.00 - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.7806	G11-010 345.00 - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.10168	105.766	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03541	105.7648	ARCADIA - REDBUD 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03408	105.7648	ARCADIA - REDBUD 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03483	105.7643	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03362	105.7643	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03541	105.758	ARCADIA - REDBUD 345KV CKT 2 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03408	105.758	ARCADIA - REDBUD 345KV CKT 2 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.7553	MINCO - MINCO WIND 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.7553	MINCO - MINCO WIND 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07086	105.7411	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	105.7389	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.7245	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.7245	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	105.6631	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.6472	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.6472	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.36521	105.6091	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.07493	105.6091	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03594	105.5655	ARCADIA - NORTHWEST 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03461	105.5655	ARCADIA - NORTHWEST 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.37851	105.562	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.12336	105.562	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03483	105.5564	CIMARRON - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03362	105.5564	CIMARRON - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.5562	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.5562	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	105.5555	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0356	105.5553	MUSKOGEE - SEMINOLE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03426	105.5553	MUSKOGEE - SEMINOLE 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	105.5097	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03543	105.5065	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.5065	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.4987	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.4987	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	105.4707	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03576	105.4656	NOWST383
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	154	0.0815	105.455	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	105.4252	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32398	105.3863	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18905	105.3863	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07557	105.3863	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06711	105.3863	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03861	105.3863	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07312	105.3838	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07601	105.3692	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07312	105.3378	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	105.3261	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	105.3261	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	105.3261	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	105.3261	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	105.3261	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07601	105.3219	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	105.3198	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04263	105.2961	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	105.274	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	105.2556	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.23062	105.2525	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.05963	105.2525	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.0579	105.2525	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.05435	105.2525	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.05413	105.2525	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04988	105.2525	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04349	105.2525	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03718	105.2525	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03069	105.2525	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	105.1797	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - HAYMAKER 138KV CKT 1	308	0.04127	105.1584	DBLCT37
FDNS	01ALL		1 13G	G12_028	FROM->TO	CIMARRON - HAYMAKER 138KV CKT 1	308	0.04109	105.1584	DBLCT37
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09684	105.1437	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06915	105.1405	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04266	105.1296	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07995	105.1142	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09684	105.0984	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06915	105.0931	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	105.0823	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07995	105.0689	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04293	105.0668	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 &GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32302	105.0509	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32302	105.0509	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18818	105.0509	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18818	105.0509	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07502	105.0509	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07502	105.0509	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06602	105.0509	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06602	105.0509	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03837	105.0509	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03837	105.0509	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07312	105.0454	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	105.0365	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	105.0174	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	105.0174	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	105.0084	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &BUSHLAND INTERCHANGE - WILDOR2_JU56230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07312	105	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	104.9997	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	104.9967	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	104.9967	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	104.9967	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	104.9967	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	104.9967	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07196	104.9889	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07041	104.9877	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	104.9818	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	104.954	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07196	104.9437	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07041	104.9407	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	104.9366	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	104.9273	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	104.9258	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	104.9233	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	175	0.1053	104.9225	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09444	104.922	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	104.9075	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	104.906	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.25734	104.8977	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	104.8965	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	104.8965	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	104.8929	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	104.8929	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.8896	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	104.8852	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09444	104.8767	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	104.8677	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06921	104.8582	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.8536	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08962	104.8404	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08962	104.8343	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	104.8216	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	104.8167	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06921	104.8129	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	104.8107	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.8032	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32357	104.8006	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &CIMARRON - DRAPER LAKE 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18823	104.8006	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &CIMARRON - DRAPER LAKE 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07453	104.8006	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &CIMARRON - DRAPER LAKE 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06612	104.8006	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &CIMARRON - DRAPER LAKE 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03834	104.8006	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &CIMARRON - DRAPER LAKE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	104.7727	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	DEAF SMITH REC-#20 - DEAF SMITH REC-#24 115KV CKT 1	99	0.19633	104.7623	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03717	104.7552	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03559	104.7552	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	104.7444	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04252	104.7311	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09391	104.719	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09391	104.7131	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	104.6988	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	G12_031	FROM->TO	CIMARRON - HAYMAKER 138KV CKT 1	308	0.0826	104.698	CIMARRONR
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.10168	104.6944	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06946	104.6848	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96	0.14878	104.6839	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 &BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	G12_020	TO->FROM	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96	0.05584	104.6839	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & BUFFALO BUSHLAND INTERCHANGE 230KV CKT 1 230.00 -
FDNS	03ALL		1 13G	G12_031	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.0554	104.661	NOWST382
FDNS	03ALL		1 13G	G12_023	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03413	104.661	NOWST382
FDNS	03ALL		1 13G	G12_032	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03309	104.661	NOWST382
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03615	104.6587	NORTHWEST - SPRING CREEK 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03474	104.6587	NORTHWEST - SPRING CREEK 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06973	104.6487	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06946	104.6395	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04273	104.6342	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & HARRINGTON STATION - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03615	104.6283	SOONER - SPRING CREEK 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03474	104.6283	SOONER - SPRING CREEK 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04278	104.6267	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CARLISLE INTERCHANGE - TUOCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06868	104.6234	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06896	104.6098	Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06973	104.6013	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	104.5857	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	104.5857	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	104.5857	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	104.5857	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	104.5857	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-032 345.00 - G12-032 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.10168	104.5826	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUOCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06868	104.5766	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.34868	104.5755	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08216	104.5755	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06896	104.5627	Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07051	104.5404	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & AMOCO SWITCHING STATION SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.5287	G08-09 230.00 - SAN JUAN MESA TAP 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07051	104.4932	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & AMOCO SWITCHING STATION SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32377	104.4845	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18845	104.4845	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07483	104.4845	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06642	104.4845	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03851	104.4845	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - NORTHWEST 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.4834	G08-09 230.00 - SAN JUAN MESA TAP 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32328	104.4748	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32328	104.4748	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18788	104.4748	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18788	104.4748	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.074	104.4748	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.074	104.4748	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06557	104.4748	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06557	104.4748	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03825	104.4748	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03825	104.4748	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06964	104.4722	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	104.4717	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	104.4717	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.0429	104.4709	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	104.4677	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	104.4677	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.37357	104.4466	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.12446	104.4466	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06925	104.4345	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06976	104.4307	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06964	104.4249	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	104.4197	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32312	104.4105	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - PECAN CREEK 345KV CKT 2
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18771	104.4105	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - PECAN CREEK 345KV CKT 2
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07395	104.4105	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - PECAN CREEK 345KV CKT 2
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06554	104.4105	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - PECAN CREEK 345KV CKT 2
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03816	104.4105	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - PECAN CREEK 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06933	104.4103	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & EDDY COUNTY INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.3901	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18782	104.3901	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07453	104.3901	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06623	104.3901	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03814	104.3901	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06925	104.3893	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06903	104.3886	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07009	104.3843	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06976	104.3832	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	104.3745	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32315	104.3723	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - PECAN CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18774	104.3723	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - PECAN CREEK 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07396	104.3723	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - PECAN CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06555	104.3723	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - PECAN CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03818	104.3723	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - PECAN CREEK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32324	104.3646	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18784	104.3646	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07408	104.3646	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06567	104.3646	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03821	104.3646	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06933	104.3634	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & EDDY COUNTY INTERCHANGE SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32321	104.3587	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 3
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.1878	104.3587	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 3
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07403	104.3587	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 3
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06562	104.3587	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 3
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.3587	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 3
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32324	104.3578	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 2
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18784	104.3578	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 2
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07408	104.3578	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 2
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06567	104.3578	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 2
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03821	104.3578	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & DRAPER LAKE - SEMINOLE 345KV CKT 2
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04273	104.355	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04272	104.3439	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06903	104.3434	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06889	104.3409	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07009	104.3376	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G08-46 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G08-46 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G08-46 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G08-46 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G08-46 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.3362	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANHILLS TAP 345.00 - G12-031 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.3283	HUNTERS7 345.00 - WOODRING 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.3283	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.3283	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.3283	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.3283	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04272	104.3274	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04272	104.3248	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.3241	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.3241	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.3241	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.3241	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.3241	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19521	104.3185	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17751	104.3185	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09684	104.3185	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08876	104.3185	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03197	104.3185	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.3088	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MINCO - MINCO WIND 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.3088	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MINCO - MINCO WIND 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.3088	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MINCO - MINCO WIND 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.3088	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MINCO - MINCO WIND 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.3088	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MINCO - MINCO WIND 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	104.3085	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.307	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11-010 345.00 - MINCO 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.307	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11-010 345.00 - MINCO 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.307	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11-010 345.00 - MINCO 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.307	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11-010 345.00 - MINCO 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.307	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11-010 345.00 - MINCO 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.3053	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.3053	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.3053	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.3053	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	104.3053	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.3053	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32321	104.3037	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - REDBUD 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.1878	104.3037	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - REDBUD 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07403	104.3037	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - REDBUD 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06562	104.3037	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - REDBUD 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03822	104.3037	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - REDBUD 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04287	104.3028	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04287	104.3026	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	104.302	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.301	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANHILLS TAP345.00 - CIMARRON 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.301	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANHILLS TAP345.00 - CIMARRON 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.301	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANHILLS TAP345.00 - CIMARRON 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.301	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANHILLS TAP345.00 - CIMARRON 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.301	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CANHILLS TAP345.00 - CIMARRON 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32322	104.2986	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - REDBUD 345KV CKT 2
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18781	104.2986	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - REDBUD 345KV CKT 2
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07403	104.2986	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - REDBUD 345KV CKT 2
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06563	104.2986	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - REDBUD 345KV CKT 2
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03822	104.2986	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - REDBUD 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06889	104.2957	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04277	104.2947	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32314	104.2843	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18772	104.2843	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07395	104.2843	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06555	104.2843	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03819	104.2843	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	104.2823	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04285	104.2818	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	104.2753	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06937	104.2726	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.271	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.271	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	104.2689	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	104.2656	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32305	104.2607	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18775	104.2607	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07441	104.2607	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06607	104.2607	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03813	104.2607	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2596	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	104.2591	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2588	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2586	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19475	104.2577	CIMARRON - DRAPER LAKE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17738	104.2577	CIMARRON - DRAPER LAKE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09669	104.2577	CIMARRON - DRAPER LAKE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0886	104.2577	CIMARRON - DRAPER LAKE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03179	104.2577	CIMARRON - DRAPER LAKE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2538	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2489	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.2143	104.2436	SOONER - WOODRING 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18253	104.2436	SOONER - WOODRING 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.10339	104.2436	SOONER - WOODRING 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09539	104.2436	SOONER - WOODRING 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03984	104.2436	SOONER - WOODRING 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	104.2427	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05361	104.2392	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05361	104.2392	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.2391	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06792	104.2384	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2376	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	104.235	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06925	104.2347	STATELINE INTERCHANGE - STLN-DEMAR6 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	104.234	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06937	104.2313	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2266	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04277	104.2265	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06937	104.2255	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	104.2244	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & EDDY COUNTY INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	104.2235	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2223	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2206	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2205	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G08-09 230.00 - SAN JUAN MESA TAP 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2205	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2201	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2201	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2201	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2201	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2201	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2201	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2194	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2194	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2191	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2181	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	104.2149	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06928	104.2133	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2112	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.2003	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.1997	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07016	104.1972	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.196	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.1954	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06892	104.1939	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.1938	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06792	104.1917	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06925	104.1895	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04293	104.1862	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.1858	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.1858	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.1858	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.1858	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.1858	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06937	104.1845	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	104.1773	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	104.1773	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.1765	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.1765	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06928	104.1682	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06937	104.1642	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06903	104.1636	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04276	104.1628	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06904	104.1595	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04276	104.1509	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.1509	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.1509	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07016	104.1506	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.1502	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06892	104.1472	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04277	104.1468	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04273	104.1381	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CHAVESCO 345.00 - TOLK STATION 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04344	104.1353	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06904	104.1349	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06679	104.1346	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.1293	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04723	104.1284	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	104.1238	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	104.1224	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04276	104.1221	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	104.1202	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	104.1184	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06937	104.1175	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06903	104.1169	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	104.1158	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.115	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	104.1144	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06686	104.1141	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.1137	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.1137	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.1137	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.1137	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.1137	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06904	104.1128	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.112	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.112	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.112	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.112	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.112	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09198	104.1093	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.1073	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0564	104.107	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32235	104.1016	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MINCO 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18714	104.1016	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MINCO 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07624	104.1016	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MINCO 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0684	104.1016	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MINCO 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03761	104.1016	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CIMARRON - MINCO 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32338	104.1006	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - SEMINOLE 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18817	104.1006	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - SEMINOLE 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07507	104.1006	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - SEMINOLE 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06672	104.1006	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - SEMINOLE 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03798	104.1006	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & MUSKOGEE - SEMINOLE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0564	104.0997	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06903	104.099	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0988	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06117	104.0985	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06898	104.0979	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0959	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0905	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06679	104.0899	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06904	104.0888	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.086	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0844	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04273	104.0844	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0843	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0843	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0843	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0843	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0842	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kv Generation Bus - MUSTANG STA
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0683	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06686	104.0675	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04272	104.0675	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06916	104.0656	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06916	104.0651	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0622	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0536	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06117	104.0534	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06903	104.0524	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06898	104.0512	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0493	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06182	104.049	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION W
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06182	104.0489	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04273	104.0489	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0464	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0439	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06886	104.0412	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06886	104.0411	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0393	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0378	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0377	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0377	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0377	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0377	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	104.0376	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STA
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32706	104.0259	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19126	104.0259	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0693	104.0259	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06072	104.0259	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03971	104.0259	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08813	104.0237	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.25804	104.0229	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06906	104.0216	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 23
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06916	104.0205	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06916	104.0199	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07032	104.0046	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06182	104.0039	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION W
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06182	104.0038	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.0029	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.0029	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.0029	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.0029	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.0029	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	104.0025	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	104.0025	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	104.0025	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	104.0025	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	104.0025	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06902	103.9997	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32298	103.9995	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &FT SMITH - MUSKOGEE 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18756	103.9995	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &FT SMITH - MUSKOGEE 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07348	103.9995	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &FT SMITH - MUSKOGEE 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06504	103.9995	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &FT SMITH - MUSKOGEE 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03882	103.9995	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &FT SMITH - MUSKOGEE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0693	103.9948	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06886	103.9942	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06886	103.9941	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19418	103.9917	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17709	103.9917	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09694	103.9917	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08896	103.9917	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB	TDF	TC%LOADING (% MVA)	CONTINGENCY	
							(MVA)				
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03202	103.9917	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.25535	103.9843	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12-020	230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03576	103.9841	NOWST383	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08813	103.9786	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06906	103.975	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 23	
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19411	103.9726	MUSKOGEE - PECAN CREEK 345KV CKT 2 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17694	103.9726	MUSKOGEE - PECAN CREEK 345KV CKT 2 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09623	103.9726	MUSKOGEE - PECAN CREEK 345KV CKT 2 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08815	103.9726	MUSKOGEE - PECAN CREEK 345KV CKT 2 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03137	103.9726	MUSKOGEE - PECAN CREEK 345KV CKT 2 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04289	103.969	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07032	103.9595	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1	
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19262	103.9563	CIMARRON - MINCO 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17667	103.9563	CIMARRON - MINCO 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09969	103.9563	CIMARRON - MINCO 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09226	103.9563	CIMARRON - MINCO 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03689	103.9563	CIMARRON - MINCO 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06944	103.9523	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09198	103.95	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0693	103.9481	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1	
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.9429	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.9429	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.9429	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.9429	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.9429	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.9429	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.9429	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.9429	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.9429	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.9429	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04269	103.9365	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19414	103.9349	MUSKOGEE - PECAN CREEK 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17696	103.9349	MUSKOGEE - PECAN CREEK 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09625	103.9349	MUSKOGEE - PECAN CREEK 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08816	103.9349	MUSKOGEE - PECAN CREEK 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.9349	MUSKOGEE - PECAN CREEK 345KV CKT 1 & G11_051T	345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06926	103.9326	CHERRY1 - HARRINGTON STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19423	103.9157	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17701	103.9157	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09624	103.9157	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08814	103.9157	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03132	103.9157	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19423	103.9156	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17701	103.9156	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09624	103.9156	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08814	103.9156	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03132	103.9156	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19521	103.9153	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17751	103.9153	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09684	103.9153	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08876	103.9153	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03197	103.9153	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19422	103.9073	DRAPER LAKE - SEMINOLE 345KV CKT 3 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17703	103.9073	DRAPER LAKE - SEMINOLE 345KV CKT 3 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09632	103.9073	DRAPER LAKE - SEMINOLE 345KV CKT 3 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08822	103.9073	DRAPER LAKE - SEMINOLE 345KV CKT 3 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03147	103.9073	DRAPER LAKE - SEMINOLE 345KV CKT 3 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06944	103.9057	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19427	103.9042	DRAPER LAKE - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17707	103.9042	DRAPER LAKE - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09636	103.9042	DRAPER LAKE - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08827	103.9042	DRAPER LAKE - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03154	103.9042	DRAPER LAKE - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19427	103.8992	DRAPER LAKE - SEMINOLE 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.8992	G08-46 345.00 - SUNNYSIDE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.8992	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.8992	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17707	103.8992	DRAPER LAKE - SEMINOLE 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.8992	G08-46 345.00 - SUNNYSIDE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.8992	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.8992	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09636	103.8992	DRAPER LAKE - SEMINOLE 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.8992	G08-46 345.00 - SUNNYSIDE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.8992	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING	CONTINGENCY	
							(MVA)	TDF		(% MVA)	
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.8992	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08827	103.8992	DRAPER LAKE - SEMINOLE 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.8992	G08-46 345.00 - SUNNYSIDE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.8992	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.8992	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03154	103.8992	DRAPER LAKE - SEMINOLE 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.8992	G08-46 345.00 - SUNNYSIDE 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.8992	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.8992	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19497	103.8987	ARCADIA - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17757	103.8987	ARCADIA - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09694	103.8987	ARCADIA - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08886	103.8987	ARCADIA - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03215	103.8987	ARCADIA - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32235	103.8934	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1	
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18714	103.8934	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1	
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07624	103.8934	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1	
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0684	103.8934	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1	
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03761	103.8934	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0691	103.8912	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.28316	103.8866	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06926	103.8856	CHERRY1 - HARRINGTON STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06932	103.8821	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1	
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.8758	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.8758	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.8758	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.8758	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.8758	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.8754	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.8754	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.8754	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.8754	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.8754	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.8689	G11-010 345.00 - MINCO 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.8689	G11-010 345.00 - MINCO 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.8689	G11-010 345.00 - MINCO 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.8689	G11-010 345.00 - MINCO 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.8689	G11-010 345.00 - MINCO 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.867	G11-010 345.00 - MINCO 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08823	103.8462	ARCADIA - REDBUD 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0691	103.8462	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03145	103.8462	ARCADIA - REDBUD 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19422	103.8391	ARCADIA - REDBUD 345KV CKT 2 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17704	103.8391	ARCADIA - REDBUD 345KV CKT 2 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09633	103.8391	ARCADIA - REDBUD 345KV CKT 2 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08824	103.8391	ARCADIA - REDBUD 345KV CKT 2 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03146	103.8391	ARCADIA - REDBUD 345KV CKT 2 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06932	103.837	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.8359	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.8359	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.8359	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.8359	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.8359	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04276	103.8334	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.8284	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.8284	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.8284	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.8284	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.8284	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.2143	103.8268	SOONER - WOODRING 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18253	103.8268	SOONER - WOODRING 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.10339	103.8268	SOONER - WOODRING 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09539	103.8268	SOONER - WOODRING 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03984	103.8268	SOONER - WOODRING 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19402	103.8185	CIMARRON - NORTHWEST 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17696	103.8185	CIMARRON - NORTHWEST 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09665	103.8185	CIMARRON - NORTHWEST 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08862	103.8185	CIMARRON - NORTHWEST 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03211	103.8185	CIMARRON - NORTHWEST 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09433	103.7983	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09433	103.7975	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32083	103.7951	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &MATTHEWSON 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18716	103.7951	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &MATTHEWSON 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0768	103.7951	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &MATTHEWSON 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0687	103.7951	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &MATTHEWSON 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03694	103.7951	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &MATTHEWSON 345.00 - WOODRING 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.34868	103.7643	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08216	103.7643	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19433	103.754	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19433	103.754	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17694	103.754	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17694	103.754	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09591	103.754	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09591	103.754	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08808	103.754	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08808	103.754	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03162	103.754	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03162	103.754	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07034	103.7493	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	103.7394	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	103.7394	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	103.7394	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	103.7394	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	103.7334	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	103.7321	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06219	103.7294	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	103.7214	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	103.7214	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	103.7214	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	103.7214	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	103.7214	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	103.7214	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	103.7214	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	103.7214	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	103.7214	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	103.7214	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	103.7178	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-3 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	103.7178	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	103.7178	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	103.7178	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	103.7178	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-3 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	103.7178	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	103.7178	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G07-62 345.00 - G07-62-3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY		
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	103.7178	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G07-62	345.00 - G07-62-4	345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	103.7178	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G07-62	345.00 - G07-62-3	345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	103.7178	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G07-62	345.00 - G07-62-4	345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0576	103.7046	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 &G12-020	230.00 - TUCO INTERCHANGE 230KV CKT 1	
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19391	103.7044	FT SMITH - MUSKOGEE 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17687	103.7044	FT SMITH - MUSKOGEE 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09599	103.7044	FT SMITH - MUSKOGEE 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08788	103.7044	FT SMITH - MUSKOGEE 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03096	103.7044	FT SMITH - MUSKOGEE 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07034	103.7024	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1		
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19262	103.6997	GRACEMONT - MINCO 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17667	103.6997	GRACEMONT - MINCO 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09969	103.6997	GRACEMONT - MINCO 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09226	103.6997	GRACEMONT - MINCO 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03689	103.6997	GRACEMONT - MINCO 345KV CKT 1 &G11_051T	345.00 - TATONGA7	345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05071	103.6933	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1		
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.076	103.6932	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1		
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	103.6895	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &G12_001T	230.00 - GRASSLAND INTERCHANGE 230KV CKT 1	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	103.6883	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &G12_001T	230.00 - G12_001_1 230.00 230KV CKT 1	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0576	103.6866	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 &G12-020	230.00 - TUCO INTERCHANGE 230KV CKT 1	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06219	103.6843	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4833 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1		
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.0425	103.6758	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1		
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	103.6572	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-62	345.00 - G07-62-3	345.00 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	103.6572	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-62	345.00 - G07-62-4	345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	103.6572	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-62	345.00 - G07-62-3	345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	103.6572	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G07-62	345.00 - G07-62-4	345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.076	103.6481	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1		
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	103.6457	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - G11_014_1	345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	103.6457	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - G11_014_1	345.00 345KV CKT 1	
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	103.6457	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - G11_014_1	345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	103.6457	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - G11_014_1	345.00 345KV CKT 1	
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	103.6457	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &BEAVER CO 345.00 - G11_014_1	345.00 345KV CKT 1	
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0695	103.6394	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1		
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.34364	103.6283	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &PLANT X STATION - TOLK STATION WEST 230KV CKT 1		
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08315	103.6283	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &PLANT X STATION - TOLK STATION WEST 230KV CKT 1		
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	103.6187	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1		
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08003	103.6134	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1		

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	103.6071	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05579	103.6	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0695	103.5944	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	103.5937	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	103.5937	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.0427	103.5885	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	351	0.20638	103.586	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.34505	103.5806	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08282	103.5806	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19418	103.5801	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17709	103.5801	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09694	103.5801	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08896	103.5801	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03202	103.5801	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08003	103.5685	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19411	103.5618	MUSKOGEE - PECAN CREEK 345KV CKT 2 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17694	103.5618	MUSKOGEE - PECAN CREEK 345KV CKT 2 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09623	103.5618	MUSKOGEE - PECAN CREEK 345KV CKT 2 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08815	103.5618	MUSKOGEE - PECAN CREEK 345KV CKT 2 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03137	103.5618	MUSKOGEE - PECAN CREEK 345KV CKT 2 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05579	103.5552	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	103.5412	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.5314	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.5314	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.5314	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.5314	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.5314	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.5314	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.5314	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.5314	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.5314	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.5314	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19262	103.5312	CIMARRON - MINCO 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17667	103.5312	CIMARRON - MINCO 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09969	103.5312	CIMARRON - MINCO 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09226	103.5312	CIMARRON - MINCO 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03689	103.5312	CIMARRON - MINCO 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	103.5298	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	103.5284	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19475	103.5232	MUSKOGEE - SEMINOLE 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17738	103.5232	MUSKOGEE - SEMINOLE 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09736	103.5232	MUSKOGEE - SEMINOLE 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08935	103.5232	MUSKOGEE - SEMINOLE 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03315	103.5232	MUSKOGEE - SEMINOLE 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19414	103.5195	MUSKOGEE - PECAN CREEK 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17696	103.5195	MUSKOGEE - PECAN CREEK 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09625	103.5195	MUSKOGEE - PECAN CREEK 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08816	103.5195	MUSKOGEE - PECAN CREEK 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.5195	MUSKOGEE - PECAN CREEK 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	103.51	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19423	103.5059	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19423	103.5059	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17701	103.5059	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17701	103.5059	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09624	103.5059	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09624	103.5059	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08814	103.5059	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08814	103.5059	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03132	103.5059	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03132	103.5059	CIMARRON - MATTHEWSON 345.00 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19422	103.4919	DRAPER LAKE - SEMINOLE 345KV CKT 3 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17703	103.4919	DRAPER LAKE - SEMINOLE 345KV CKT 3 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09632	103.4919	DRAPER LAKE - SEMINOLE 345KV CKT 3 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08822	103.4919	DRAPER LAKE - SEMINOLE 345KV CKT 3 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03147	103.4919	DRAPER LAKE - SEMINOLE 345KV CKT 3 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4911	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4911	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4911	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4911	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4911	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19427	103.4889	DRAPER LAKE - SEMINOLE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17707	103.4889	DRAPER LAKE - SEMINOLE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09636	103.4889	DRAPER LAKE - SEMINOLE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08827	103.4889	DRAPER LAKE - SEMINOLE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03154	103.4889	DRAPER LAKE - SEMINOLE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	103.4867	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05599	103.4863	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19497	103.4848	ARCADIA - NORTHWEST 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17757	103.4848	ARCADIA - NORTHWEST 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09694	103.4848	ARCADIA - NORTHWEST 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08886	103.4848	ARCADIA - NORTHWEST 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03215	103.4848	ARCADIA - NORTHWEST 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19427	103.4839	DRAPER LAKE - SEMINOLE 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4839	G08-46 345.00 - SUNNYSIDE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4839	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4839	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17707	103.4839	DRAPER LAKE - SEMINOLE 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4839	G08-46 345.00 - SUNNYSIDE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4839	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4839	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09636	103.4839	DRAPER LAKE - SEMINOLE 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4839	G08-46 345.00 - SUNNYSIDE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4839	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4839	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08827	103.4839	DRAPER LAKE - SEMINOLE 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4839	G08-46 345.00 - SUNNYSIDE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4839	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4839	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03154	103.4839	DRAPER LAKE - SEMINOLE 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4839	G08-46 345.00 - SUNNYSIDE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4839	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-016 345.00 - G12-016 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4839	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-041 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05599	103.4837	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	103.4757	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 &GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.473	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.473	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.473	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.473	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.473	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4645	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4645	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4645	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4645	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4645	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	175	0.0815	103.4572	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.456	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.456	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.456	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.456	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.456	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANHILLS TAP345.00 - G12-031 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4554	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4554	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4554	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4554	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4554	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11-007 345.00 - MATTHEWSON 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4549	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4549	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4549	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4549	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4549	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CRSRDSW7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4535	G11-010 345.00 - MINCO 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19414	103.4535	ARCADIA - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4535	G11-010 345.00 - MINCO 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17697	103.4535	ARCADIA - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4535	G11-010 345.00 - MINCO 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4535	ARCADIA - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4535	G11-010 345.00 - MINCO 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4535	ARCADIA - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4535	G11-010 345.00 - MINCO 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4535	ARCADIA - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.45	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.45	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.45	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.45	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.45	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-21 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	103.449	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05497	103.4406	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09063	103.4401	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19422	103.4356	ARCADIA - REDBUD 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17703	103.4356	ARCADIA - REDBUD 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09632	103.4356	ARCADIA - REDBUD 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08823	103.4356	ARCADIA - REDBUD 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03145	103.4356	ARCADIA - REDBUD 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	103.4352	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.435	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.435	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.435	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.435	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.435	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G08-19 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4347	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4347	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4347	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4347	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4347	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_024_1 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4322	MINCO - MINCO WIND 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4322	MINCO - MINCO WIND 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4322	MINCO - MINCO WIND 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4322	MINCO - MINCO WIND 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4322	MINCO - MINCO WIND 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05553	103.4292	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19422	103.4285	ARCADIA - REDBUD 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17704	103.4285	ARCADIA - REDBUD 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09633	103.4285	ARCADIA - REDBUD 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08824	103.4285	ARCADIA - REDBUD 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03146	103.4285	ARCADIA - REDBUD 345KV CKT 2 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04285	103.4282	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 &GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4258	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4258	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4258	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4258	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4258	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G11_051T 345.00 - G11_051_1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09063	103.4173	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4161	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4161	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4161	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4161	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4161	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CANADIN7 345.00 - CANHILLS TAP345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	103.4128	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	103.4128	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	103.4128	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	103.4128	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	103.4128	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	103.4128	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	103.4128	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	103.4128	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	103.4128	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	103.4128	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.4122	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.4122	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.4122	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.4122	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	103.4122	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	103.4122	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.4122	CANHILLS TAP345.00 - CIMARRON 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	103.4096	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	103.4063	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	103.4063	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19402	103.4032	CIMARRON - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17696	103.4032	CIMARRON - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09665	103.4032	CIMARRON - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08862	103.4032	CIMARRON - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03211	103.4032	CIMARRON - NORTHWEST 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	103.3957	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.24195	103.3873	GRACEMONT - MINCO 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.0797	103.3873	GRACEMONT - MINCO 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07759	103.3873	GRACEMONT - MINCO 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06623	103.3873	GRACEMONT - MINCO 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06416	103.3873	GRACEMONT - MINCO 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06086	103.3873	GRACEMONT - MINCO 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04359	103.3873	GRACEMONT - MINCO 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03687	103.3873	GRACEMONT - MINCO 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03657	103.3873	GRACEMONT - MINCO 345KV CKT 1 & CIMARRON - NORTHWEST 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05553	103.3844	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19433	103.3819	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19433	103.3819	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17694	103.3819	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17694	103.3819	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09591	103.3819	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09591	103.3819	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08808	103.3819	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08808	103.3819	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03162	103.3819	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03162	103.3819	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	103.3724	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19473	103.3598	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17724	103.3598	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09458	103.3598	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0865	103.3598	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03178	103.3598	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	103.3586	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0791	103.3519	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	103.345	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	103.345	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	103.345	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	103.345	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	103.345	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	103.3437	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	103.3437	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	103.3437	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	103.3437	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	103.3437	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	103.3436	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	103.3436	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	103.3436	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	103.3436	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	103.3436	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	103.3174	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0791	103.3069	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	103.3005	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0576	103.2889	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	103.2847	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19391	103.2814	FT SMITH - MUSKOGEE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17687	103.2814	FT SMITH - MUSKOGEE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09599	103.2814	FT SMITH - MUSKOGEE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08788	103.2814	FT SMITH - MUSKOGEE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03096	103.2814	FT SMITH - MUSKOGEE 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	103.2785	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05497	103.2766	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19262	103.2731	GRACEMONT - MINCO 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17667	103.2731	GRACEMONT - MINCO 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09969	103.2731	GRACEMONT - MINCO 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09226	103.2731	GRACEMONT - MINCO 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03689	103.2731	GRACEMONT - MINCO 345KV CKT 1 &G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	103.2475	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	103.2398	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.2383	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.2383	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.2383	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.2383	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.2383	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.2383	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.2383	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.2383	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.2383	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.2383	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05462	103.2364	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05071	103.2298	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.2275	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-3 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.2275	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.2275	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-3 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.2275	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.2275	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-3 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.2275	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.2275	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-3 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.2275	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.2275	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-3 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.2275	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 &G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04225	103.2252	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05462	103.206	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0576	103.2002	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.193	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.193	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.193	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.193	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.193	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24081	103.1797	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.36757	103.1774	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08267	103.1774	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04249	103.1677	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19475	103.1049	MUSKOGEE - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17738	103.1049	MUSKOGEE - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09736	103.1049	MUSKOGEE - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08935	103.1049	MUSKOGEE - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03315	103.1049	MUSKOGEE - SEMINOLE 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.3208	103.0893	SOONER - WOODRING 345KV CKT 1 & HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18798	103.0893	SOONER - WOODRING 345KV CKT 1 & HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07828	103.0893	SOONER - WOODRING 345KV CKT 1 & HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0701	103.0893	SOONER - WOODRING 345KV CKT 1 & HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03686	103.0893	SOONER - WOODRING 345KV CKT 1 & HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55755	103.0808	KELLY - MADISONCO 230.00 230KV CKT 1 & G10-51T 230.00 - HOSKINS 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.0427	103.0767	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	103.0708	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	103.0708	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	103.0708	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	103.0708	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	103.0708	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05936	103.025	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19473	103.0155	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17724	103.0155	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09458	103.0155	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0865	103.0155	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03178	103.0155	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09389	103.0017	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_031	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.0554	102.9929	NOWST382
FDNS	03ALL		1 13G	G12_023	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03413	102.9929	NOWST382
FDNS	03ALL		1 13G	G12_032	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03309	102.9929	NOWST382
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.34868	102.9346	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08216	102.9346	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05433	102.918	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09389	102.9155	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	102.8993	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.25389	102.8932	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	102.8863	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05433	102.8731	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	102.8619	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09051	102.8603	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	102.8515	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.8444	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.8444	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.8444	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.8444	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.8444	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.8444	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.8444	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.8444	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.8444	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.8444	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-2 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	102.8385	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.8377	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-3 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.8377	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.8377	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-3 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.8377	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.8377	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.8377	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-3 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.8377	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-3 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.8377	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.8377	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-3 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.8377	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G07-62 345.00 - G07-62-4 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	DEAF SMITH REC-#20 - DEAF SMITH REC-#24 115KV CKT 1	99	0.18005	102.8285	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09051	102.8152	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.8142	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.8118	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.8118	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.8118	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.8118	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.8118	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.8103	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.8103	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.8103	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.8103	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.8103	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & BEAVER CO 345.00 - G11_014_1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	102.8066	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.34364	102.8025	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08315	102.8025	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.8006	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.8006	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.8006	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.8006	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.8006	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.7981	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.7981	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.7981	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.7981	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.7981	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.7939	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.7939	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.7939	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.7939	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.7939	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.7939	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.7939	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.7939	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.7939	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.7939	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09112	102.7887	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09112	102.7439	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05499	102.7161	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.7159	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.697	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05484	102.6595	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.0432	102.6571	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - CZECH HALL 138KV CKT 1	382	0.06177	102.6554	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_028	FROM->TO	CIMARRON - CZECH HALL 138KV CKT 1	382	0.03895	102.6554	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - CZECH HALL 138KV CKT 1	382	0.03144	102.6554	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - CZECH HALL 138KV CKT 1	382	0.03115	102.6554	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05492	102.6548	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6485	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6456	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6446	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	102.6417	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6378	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6297	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6296	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06686	102.6264	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6218	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6198	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6197	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6181	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6168	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6168	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6166	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6163	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05494	102.6161	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6161	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6159	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6158	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6158	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6158	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6157	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6157	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6156	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6155	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6154	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G08-09 230.00 - SAN JUAN MESA TAP 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6154	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6154	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &Golden Spread REC - Mustang Interchange 230 kv Generation Bus - MUSTANG S
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6153	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6152	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6148	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6148	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6146	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6145	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6145	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6144	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6144	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6142	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - TOLK STATION 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6134	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6132	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6131	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05494	102.6128	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6125	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6111	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6111	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6106	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.61	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6095	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &HARRINGTON STATION - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6093	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	102.6092	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.609	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6072	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6071	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.607	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6065	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6063	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &EDDY COUNTY INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6062	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6061	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6059	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6055	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.605	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.605	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	102.605	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6048	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6046	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.6044	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.604	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.5995	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.5986	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.5985	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05494	102.5981	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.5957	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05491	102.5919	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05493	102.5885	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08892	102.5864	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04249	102.5811	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06686	102.5796	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05494	102.5681	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	102.5601	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	102.5545	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05491	102.5539	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09	102.5495	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05225	102.5425	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08892	102.5416	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.34004	102.5216	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08376	102.5216	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	102.5207	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0354	102.5207	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	102.5207	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03407	102.5207	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09	102.5047	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07709	102.4989	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05225	102.4977	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05435	102.4946	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09093	102.4836	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0791	102.4674	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	102.4633	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07755	102.4558	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07709	102.4545	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05435	102.45	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09093	102.4387	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0547	102.4315	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0791	102.4222	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	102.4182	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	102.4165	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07755	102.4105	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.4081	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.4081	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.4081	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.4081	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.4081	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G08-47 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24081	102.4026	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.3967	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.3967	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.3967	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.3967	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.3967	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G10-01 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.3912	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.3912	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.3912	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.3912	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.3912	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - G11_021_1 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05355	102.3891	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.21271	102.3806	GRACEMONT - MINCO 345KV CKT 1 &BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08541	102.3806	GRACEMONT - MINCO 345KV CKT 1 &BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08236	102.3806	GRACEMONT - MINCO 345KV CKT 1 &BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07199	102.3806	GRACEMONT - MINCO 345KV CKT 1 &BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07022	102.3806	GRACEMONT - MINCO 345KV CKT 1 &BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.0678	102.3806	GRACEMONT - MINCO 345KV CKT 1 &BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04348	102.3806	GRACEMONT - MINCO 345KV CKT 1 &BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL		1 13G	G12_018	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03214	102.3806	GRACEMONT - MINCO 345KV CKT 1 & BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	102.3716	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05507	102.3676	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	102.3659	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	102.3569	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05458	102.3496	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0547	102.3479	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.31932	102.3448	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.1865	102.3448	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07764	102.3448	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06964	102.3448	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0361	102.3448	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05355	102.3444	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.31932	102.3369	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.1865	102.3369	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07764	102.3369	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06964	102.3369	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0361	102.3369	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	102.321	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05414	102.3198	Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	102.3122	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05458	102.3048	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09069	102.299	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07886	102.2901	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05414	102.2749	Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09069	102.2542	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04734	102.2466	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07886	102.245	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05388	102.2371	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	Canadian Pump Station - JENSEN ROAD 138KV CKT 1	191	0.05482	102.2269	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.2267	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	102.2267	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.2267	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	102.2267	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.2267	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	102.2267	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.2267	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	102.2267	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.2267	G11_020_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	102.2267	G11_019_1 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.14393	102.2208	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07678	102.2125	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05388	102.1924	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.34868	102.1789	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08216	102.1789	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05497	102.1669	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07678	102.1674	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0556	102.1548	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24081	102.1509	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24081	102.1505	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05438	102.1481	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04277	102.132	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.36261	102.1294	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.0836	102.1294	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05497	102.1243	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0556	102.11	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05319	102.1066	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05438	102.1033	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09093	102.0797	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05421	102.0747	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09198	102.0712	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05319	102.0618	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05306	102.0518	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	102.0474	G08-09 230.00 - SAN JUAN MESA TAP 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09093	102.0354	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05421	102.0299	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09198	102.0263	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05449	102.0155	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05306	102.007	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	102.0026	G08-09 230.00 - SAN JUAN MESA TAP 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05438	101.9918	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09228	101.9899	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	101.9794	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	101.9794	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	101.9794	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	101.9794	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	101.9794	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &CHSHLMV7 345.00 - HUNTERS7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05449	101.9707	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05449	101.9647	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.34364	101.9576	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 &PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08315	101.9576	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 &PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08982	101.9515	Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05438	101.9471	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09228	101.9452	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05437	101.9315	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &EDDY COUNTY INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.32318	101.9237	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.18776	101.9237	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.07397	101.9237	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.06556	101.9237	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_018	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0382	101.9237	HUNTERS7 345.00 - WOODRING 345KV CKT 1 &G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05449	101.92	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	09ALL		1 13G	G12_031	FROM->TO	CIMARRON - HAYMAKER 138KV CKT 1	308	0.08274	101.9165	CIMARRONR
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05442	101.9111	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04263	101.9096	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08982	101.9068	Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05411	101.9045	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.9035	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.898	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05437	101.8867	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &EDDY COUNTY INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05442	101.8665	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05411	101.8598	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.8533	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05484	101.8491	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09139	101.8472	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24565	101.8338	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.8337	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05421	101.8306	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05421	101.8285	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05499	101.8199	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05439	101.8158	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.8154	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05484	101.8044	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09139	101.8025	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.8014	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05421	101.801	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7989	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09076	101.7943	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05445	101.7943	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04352	101.7919	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7901	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7891	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05421	101.7858	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05438	101.7852	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05421	101.7838	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05437	101.7812	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08892	101.7776	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.777	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05439	101.7711	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05484	101.7685	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05492	101.7672	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7648	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05421	101.7642	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7638	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7616	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05415	101.7599	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CK
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7591	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7567	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05421	101.7563	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7559	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7557	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7549	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.752	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05445	101.7514	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7502	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05418	101.7502	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7501	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7501	G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7501	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7501	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7501	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL	1	13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09076	101.7497	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7495	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	06ALL	1	13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7454	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7416	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7415	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL	1	13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05438	101.7405	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	06ALL	1	13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05437	101.7365	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7356	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1
FDNS	06ALL	1	13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.04804	101.7353	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL	1	13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.04804	101.7352	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 23
FDNS	06ALL	1	13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05407	101.7341	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1
FDNS	06ALL	1	13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05407	101.734	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7337	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7335	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1
FDNS	06ALL	1	13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08892	101.7329	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL	1	13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7323	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7314	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7302	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7302	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7299	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7297	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05494	101.7295	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7295	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7293	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7293	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7292	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7292	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7292	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7291	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7291	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.729	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7289	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G08-09 230.00 - SAN JUAN MESA TAP 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7289	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7289	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7289	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33
FDNS	07ALL	1	13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG 5	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7288	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7287	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7284	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7283	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7282	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1	
FDNS	06ALL	1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0543	101.7282	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7281	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7281	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.728	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.728	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7277	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7277	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - TOLK STATION 345KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7273	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.727	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7269	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7268	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05494	101.7265	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7261	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7243	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7242	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7238	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7238	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7236	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7236	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & HARRINGTON STATION - NICHOLS STATION 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7231	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1	
FDNS	07ALL	1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7229	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7229	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7228	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7226	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08944	101.7224	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7222	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7222	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7221	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7216	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7214	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7213	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7213	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7201	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05421	101.7195	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7193	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7191	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7186	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7169	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7169	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.18363	101.7155	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.03123	101.7155	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05415	101.7152	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7144	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7135	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05494	101.7129	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7111	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0898	101.7096	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7086	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05491	101.7078	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7072	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7055	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7054	G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7054	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05418	101.7054	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7053	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7053	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0542	101.7053	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 &G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0487	101.7046	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05493	101.7043	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04293	101.6918	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.04804	101.6906	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.04804	101.6905	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 23
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05444	101.6902	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05407	101.6895	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05407	101.6894	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05424	101.6883	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05494	101.6868	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0543	101.6836	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08944	101.6779	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05491	101.6769	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09076	101.6768	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05441	101.672	CHERRY1 - HARRINGTON STATION 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05441	101.6679	CHERRY1 - HARRINGTON STATION 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0898	101.665	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0487	101.6599	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05444	101.6455	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05424	101.6436	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.6414	G08-09 230.00 - SAN JUAN MESA TAP 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24501	101.6399	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05481	101.6342	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05447	101.6331	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.6326	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09076	101.6321	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05494	101.6234	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24081	101.6191	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04725	101.6139	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04725	101.6139	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07628	101.6092	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05447	101.6092	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04266	101.5993	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.5968	G08-09 230.00 - SAN JUAN MESA TAP 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05232	101.5962	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05481	101.5895	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96	0.14878	101.579	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96	0.05584	101.579	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05494	101.5787	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09048	101.5689	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07628	101.5642	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04272	101.5529	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24794	101.542	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.26079	101.5402	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04278	101.5395	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05232	101.5314	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.5267	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G08-09 230.00 - SAN JUAN MESA TAP 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09048	101.5242	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09008	101.5191	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06814	101.5177	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CHAVESCO 345.00 - TOLK STATION 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.5137	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05507	101.5094	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.4828	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.4821	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G08-09 230.00 - SAN JUAN MESA TAP 230KV CKT 1
FDNS	08ALL		1 13G	G12_031	TO->FROM	DIVISION AVE - HAYMAKER 138KV CKT 1	308	0.0829	101.4764	CIMARRONR
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09008	101.4746	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06814	101.4725	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CHAVESCO 345.00 - TOLK STATION 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05447	101.4463	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.23908	101.4438	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08977	101.437	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & TOLK STATION EAST TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07751	101.4346	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.4336	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07664	101.4324	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0555	101.4247	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.04929	101.4124	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07655	101.4066	Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - CZECH HALL 138KV CKT 1	382	0.05575	101.4046	DBLCT3
FDNS	01ALL		1 13G	G12_028	FROM->TO	CIMARRON - CZECH HALL 138KV CKT 1	382	0.03354	101.4046	DBLCT3
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05447	101.4013	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09095	101.3986	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08977	101.3924	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & TOLK STATION EAST TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07751	101.3899	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.0429	101.3883	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07664	101.3876	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0555	101.38	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1	214	0.05482	101.3794	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G12-038 TAP 345.00 - TUCO INTERCHANGE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08979	101.3693	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.04929	101.3678	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08985	101.3665	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08967	101.3657	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0898	101.3642	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07655	101.3617	Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_031	TO->FROM	DIVISION AVE - HAYMAKER 138KV CKT 1	308	0.08309	101.36	CIMARRONR
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09095	101.3541	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04252	101.3504	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09012	101.3492	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08979	101.3248	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.34868	101.3229	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08216	101.3229	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08985	101.3219	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08967	101.3212	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.3204	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0898	101.3196	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19083	101.3062	NORTHWEST - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.1745	101.3062	NORTHWEST - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09767	101.3062	NORTHWEST - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09005	101.3062	NORTHWEST - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0363	101.3062	NORTHWEST - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09012	101.3047	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.18005	101.3045	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0898	101.3038	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07685	101.3037	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07685	101.3036	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19083	101.3007	SOONER - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.1745	101.3007	SOONER - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09767	101.3007	SOONER - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09005	101.3007	SOONER - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0363	101.3007	SOONER - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2963	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24081	101.2905	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2882	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07755	101.2836	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09029	101.2826	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03879	101.2794	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2757	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08977	101.2715	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08977	101.269	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04273	101.269	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08977	101.2663	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04273	101.2615	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &HARRINGTON STATION - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0898	101.2591	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07685	101.2588	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07685	101.2587	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08977	101.2578	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08981	101.2549	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2544	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2519	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2517	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2516	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2516	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2516	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2515	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 23
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08985	101.2499	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07629	101.2489	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04272	101.247	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04272	101.2445	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0897	101.2439	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2437	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09032	101.2408	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07755	101.2387	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09029	101.2381	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09025	101.2357	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08977	101.227	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08977	101.2245	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04287	101.223	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04287	101.2227	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08977	101.2218	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	101.221	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04277	101.2151	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08977	101.2133	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07653	101.2117	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08981	101.2104	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08211	101.21	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2099	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08211	101.2098	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07652	101.2088	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2074	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2071	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2071	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2071	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.2071	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08976	101.207	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &Golden Spread REC - Mustang Interchange 230 kv Generation Bus - MUSTANG STATION 23
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08985	101.2053	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07629	101.2045	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07681	101.2031	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &EDDY COUNTY INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	101.203	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04285	101.2024	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08348	101.2002	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0897	101.1993	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.22129	101.1975	GRACEMONT - MINCO 345KV CKT 1 &NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07682	101.1975	GRACEMONT - MINCO 345KV CKT 1 &NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.0745	101.1975	GRACEMONT - MINCO 345KV CKT 1 &NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06442	101.1975	GRACEMONT - MINCO 345KV CKT 1 &NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.05541	101.1975	GRACEMONT - MINCO 345KV CKT 1 &NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.05508	101.1975	GRACEMONT - MINCO 345KV CKT 1 &NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04318	101.1975	GRACEMONT - MINCO 345KV CKT 1 &NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03653	101.1975	GRACEMONT - MINCO 345KV CKT 1 &NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03244	101.1975	GRACEMONT - MINCO 345KV CKT 1 &NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.34364	101.1963	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 &PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08315	101.1963	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 &PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09032	101.196	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1924	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1923	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09025	101.1909	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	101.1887	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.1885	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	101.1866	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1806	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1804	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1796	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.22129	101.1769	GRACEMONT - MINCO 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07682	101.1769	GRACEMONT - MINCO 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.0745	101.1769	GRACEMONT - MINCO 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06442	101.1769	GRACEMONT - MINCO 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.05541	101.1769	GRACEMONT - MINCO 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.05508	101.1769	GRACEMONT - MINCO 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04318	101.1769	GRACEMONT - MINCO 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03653	101.1769	GRACEMONT - MINCO 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03244	101.1769	GRACEMONT - MINCO 345KV CKT 1 & SOONER - SPRING CREEK 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	101.1744	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1732	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1701	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07657	101.1695	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07653	101.1672	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08211	101.1662	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08211	101.1666	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	101.1641	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07652	101.164	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09019	101.1613	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1592	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07681	101.1583	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & EDDY COUNTY INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06746	101.1569	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	101.1564	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08348	101.1557	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	101.1554	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1484	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04277	101.1481	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	101.1465	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & EDDY COUNTY INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	101.1451	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.1435	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1427	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1424	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1422	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G08-09 230.00 - SAN JUAN MESA TAP 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1422	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1418	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1418	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1418	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1418	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1418	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1418	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1412	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1412	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1409	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1399	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	101.1366	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.34868	101.1348	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 &PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08216	101.1348	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 &PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1319	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09017	101.1279	CHERRY1 - HARRINGTON STATION 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06697	101.1266	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06697	101.1264	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITC
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07657	101.125	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08983	101.1245	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1224	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1196	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.1178	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09019	101.1168	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06746	101.1122	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04293	101.1071	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 &GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.0979	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 &GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08948	101.0978	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09017	101.0972	CHERRY1 - HARRINGTON STATION 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07651	101.087	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K3
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04276	101.0856	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06697	101.0819	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06697	101.0817	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITC
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.08	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08983	101.0798	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09028	101.0779	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07684	101.0779	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.074	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.074	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04276	101.0739	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04277	101.0698	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.0692	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07663	101.0691	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.0619	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04273	101.0616	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CHAVESCO 345.00 - TOLK STATION 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07732	101.0558	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09087	101.0541	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08948	101.0535	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.0486	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07656	101.0457	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09112	101.0432	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	101.0423	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07651	101.0422	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K3
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.0412	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.0403	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04276	101.0397	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	101.0375	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.0374	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.0355	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07629	101.0352	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.0346	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09028	101.0334	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07684	101.0331	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.0301	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.03	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.03	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.03	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.03	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.03	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08938	101.029	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08938	101.028	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05225	101.0274	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.0267	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07605	101.0257	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07698	101.0252	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0766	101.0252	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07663	101.0243	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.0243	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07663	101.0237	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.017	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09162	101.0118	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07732	101.0111	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09087	101.0096	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04273	101.0076	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07675	101.0057	CHERRY1 - HARRINGTON STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	101.0038	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07656	101.0012	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09112	100.9987	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	100.9964	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07607	100.9958	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	100.9955	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	100.9926	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04272	100.992	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07629	100.9908	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	100.9898	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05225	100.9871	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	100.9853	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	100.9852	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	100.9852	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	100.9852	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	100.9852	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kv Generation Bus - MUSTANG
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	100.9852	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-038 345.00 - G12-038 TAP 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08938	100.9846	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08938	100.9836	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07662	100.9819	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07605	100.9809	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07698	100.9807	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0766	100.9807	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07686	100.979	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07663	100.9789	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.18005	100.977	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19083	100.9765	NORTHWEST - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.1745	100.9765	NORTHWEST - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09767	100.9765	NORTHWEST - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09005	100.9765	NORTHWEST - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0363	100.9765	NORTHWEST - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04273	100.974	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07689	100.9732	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19083	100.971	SOONER - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.1745	100.971	SOONER - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09767	100.971	SOONER - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09005	100.971	SOONER - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.0363	100.971	SOONER - SPRING CREEK 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07679	100.9689	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07675	100.9609	CHERRY1 - HARRINGTON STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	96	0.13172	100.9592	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07607	100.9511	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - CZECH HALL 138KV CKT 1	382	0.03684	100.9503	DVISN138PCBA
FDNS	03ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04733	100.9419	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07688	100.9401	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	TO->FROM	DIVISION AVE - HAYMAKER 138KV CKT 1	308	0.07088	100.9401	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_028	TO->FROM	DIVISION AVE - HAYMAKER 138KV CKT 1	308	0.04916	100.9401	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	TO->FROM	DIVISION AVE - HAYMAKER 138KV CKT 1	308	0.03676	100.9401	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	TO->FROM	DIVISION AVE - HAYMAKER 138KV CKT 1	308	0.036	100.9401	CIMARRON - NORTHWEST 345KV CKT 1 & MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07667	100.9357	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07686	100.9342	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07624	100.9332	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07679	100.929	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07689	100.9284	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07535	100.9245	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07679	100.9241	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1	351	0.1459	100.9133	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1	351	0.04915	100.9133	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08364	100.9072	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07619	100.9062	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24672	100.8972	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07624	100.8954	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04289	100.8954	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07688	100.8953	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07667	100.8908	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07624	100.8885	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07679	100.8842	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07535	100.8801	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.35327	100.8753	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.07957	100.8753	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.0471	100.8743	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08364	100.8627	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07619	100.8618	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04269	100.8538	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07624	100.8507	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09025	100.8434	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04738	100.8385	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04738	100.8385	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09766	100.8297	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07634	100.8203	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07744	100.8001	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09025	100.7989	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07634	100.775	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.0427	100.7586	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07744	100.7554	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	CARGILL SUB - PARMER COUNTY SUB 115KV CKT 1	96	0.20541	100.7421	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 &PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24431	100.7359	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06935	100.7272	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07692	100.716	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	100.7029	G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	100.7029	G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	100.7029	G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	100.7029	G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	100.7029	G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06935	100.6827	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09107	100.6729	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03444	100.672	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03444	100.672	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03148	100.672	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.03148	100.672	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 &BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07692	100.6715	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.23504	100.6568	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.22125	100.635	CIMARRON - MINCO 345KV CKT 1 &ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.09501	100.635	CIMARRON - MINCO 345KV CKT 1 &ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08759	100.635	CIMARRON - MINCO 345KV CKT 1 &ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07814	100.635	CIMARRON - MINCO 345KV CKT 1 &ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07445	100.635	CIMARRON - MINCO 345KV CKT 1 &ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07231	100.635	CIMARRON - MINCO 345KV CKT 1 &ARCADIA - SEMINOLE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04936	100.635	CIMARRON - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04047	100.635	CIMARRON - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03219	100.635	CIMARRON - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	01ALL		1 13G	G12_018	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03041	100.635	CIMARRON - MINCO 345KV CKT 1 & ARCADIA - SEMINOLE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.09107	100.6285	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.0425	100.6059	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55484	100.6015	G10-51T 230.00 - HOSKINS 230KV CKT 1 & HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	01ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04756	100.5985	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55595	100.5678	G10-51T 230.00 - HOSKINS 230KV CKT 1 & GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06532	100.5577	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	DEAF SMITH REC-#24 - PARMER COUNTY SUB 115KV CKT 1	99	0.20045	100.5494	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	FROM->TO	DEAF SMITH REC-#24 - PARMER COUNTY SUB 115KV CKT 1	99	0.03323	100.5494	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08638	100.5305	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04767	100.5267	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04767	100.5267	MATTHEWSON 345.00 - WOODRING 345KV CKT 1 & MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.18005	100.5217	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.0427	100.5178	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.06532	100.5134	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.18838	100.5112	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55589	100.4961	G10-51T 230.00 - HOSKINS 230KV CKT 1 & KELLY - SHELL CREEK 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08638	100.486	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55594	100.4841	G10-51T 230.00 - HOSKINS 230KV CKT 1 & MCCOOL - MOORE 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04276	100.4629	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	100.4626	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55604	100.4382	G10-51T 230.00 - HOSKINS 230KV CKT 1 & AXTELL - SWEETWATER 345KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55601	100.426	G10-51T 230.00 - HOSKINS 230KV CKT 1 & GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24631	100.4248	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	100.4093	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55582	100.4074	G10-51T 230.00 - HOSKINS 230KV CKT 1 & MOORE - PAULINE 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07555	100.4053	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55597	100.3774	G10-51T 230.00 - HOSKINS 230KV CKT 1 & COLUMEA - KELLY 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.21383	100.3723	SOONER - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08803	100.3723	SOONER - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08648	100.3723	SOONER - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06838	100.3723	SOONER - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06112	100.3723	SOONER - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06091	100.3723	SOONER - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04317	100.3723	SOONER - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03619	100.3723	SOONER - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03591	100.3723	SOONER - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.0471	100.3712	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04285	100.37	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07555	100.3606	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55606	100.3581	G10-51T 230.00 - HOSKINS 230KV CKT 1 & GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55594	100.3537	G10-51T 230.00 - HOSKINS 230KV CKT 1 & GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06407	100.3499	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07579	100.3443	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.21178	100.3401	GRACEMONT - MINCO 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.0841	100.3401	GRACEMONT - MINCO 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07613	100.3401	GRACEMONT - MINCO 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06388	100.3401	GRACEMONT - MINCO 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06291	100.3401	GRACEMONT - MINCO 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04948	100.3401	GRACEMONT - MINCO 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04265	100.3401	GRACEMONT - MINCO 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03962	100.3401	GRACEMONT - MINCO 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03285	100.3401	GRACEMONT - MINCO 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55583	100.3389	G10-51T 230.00 - HOSKINS 230KV CKT 1 & AXTELL - PAULINE 345KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.21178	100.337	GRACEMONT - MINCO 345KV CKT 1 & G12-041 TAP 345.00 - SOONER 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.0841	100.337	GRACEMONT - MINCO 345KV CKT 1 & G12-041 TAP 345.00 - SOONER 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.07613	100.337	GRACEMONT - MINCO 345KV CKT 1 & G12-041 TAP 345.00 - SOONER 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06388	100.337	GRACEMONT - MINCO 345KV CKT 1 & G12-041 TAP 345.00 - SOONER 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06291	100.337	GRACEMONT - MINCO 345KV CKT 1 & G12-041 TAP 345.00 - SOONER 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04948	100.337	GRACEMONT - MINCO 345KV CKT 1 & G12-041 TAP 345.00 - SOONER 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04265	100.337	GRACEMONT - MINCO 345KV CKT 1 & G12-041 TAP 345.00 - SOONER 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03962	100.337	GRACEMONT - MINCO 345KV CKT 1 & G12-041 TAP 345.00 - SOONER 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03285	100.337	GRACEMONT - MINCO 345KV CKT 1 & G12-041 TAP 345.00 - SOONER 345KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55594	100.3322	G10-51T 230.00 - HOSKINS 230KV CKT 1 & GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24236	100.3187	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.34364	100.3178	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08315	100.3178	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55597	100.3144	G10-51T 230.00 - HOSKINS 230KV CKT 1 & OGALLALA - SIDNEY 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55595	100.3098	G10-51T 230.00 - HOSKINS 230KV CKT 1 & CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55587	100.3098	G10-51T 230.00 - HOSKINS 230KV CKT 1 & COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04274	100.3097	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	03ALL		1 13G	G12_023	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.19417	100.3006	G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_024	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.17699	100.3006	G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	ASGI_12_002	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.09626	100.3006	G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_020	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.08817	100.3006	G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	BENTON - WICHITA 345KV CKT 1	932	0.03138	100.3006	G07-62 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55595	100.3003	G10-51T 230.00 - HOSKINS 230KV CKT 1 & CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	FROM->TO	SPSSPPTIESB1	620	0.38193	100.2999	BASE CASE
FDNS	06ALL		1 13G	G12_020	FROM->TO	SPSSPPTIESC	620	0.38193	100.2999	BASE CASE
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	SPSSPPTIESB1	620	0.34539	100.2999	BASE CASE
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	SPSSPPTIESC	620	0.34539	100.2999	BASE CASE
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07579	100.2999	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	100.2955	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55596	100.2925	G10-51T 230.00 - HOSKINS 230KV CKT 1 & GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55587	100.2918	G10-51T 230.00 - HOSKINS 230KV CKT 1 & COLUMWEST - KELLY 230KV CKT 1
FDNS	03ALL		1 13G	G12_024	FROM->TO	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1	330	0.0363	100.2917	BKR-AXT-3308
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55576	100.2905	G10-51T 230.00 - HOSKINS 230KV CKT 1 & COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04733	100.2878	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55596	100.2868	G10-51T 230.00 - HOSKINS 230KV CKT 1 & CANADAY - CROOKED CREEK 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05361	100.281	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55596	100.2791	G10-51T 230.00 - HOSKINS 230KV CKT 1 & GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55596	100.2791	G10-51T 230.00 - HOSKINS 230KV CKT 1 & GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 2
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55596	100.2791	G10-51T 230.00 - HOSKINS 230KV CKT 1 & GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 3
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55595	100.2777	G10-51T 230.00 - HOSKINS 230KV CKT 1 & GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55597	100.2753	G10-51T 230.00 - HOSKINS 230KV CKT 1 & GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.34868	100.2742	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08216	100.2742	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.34868	100.2736	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08216	100.2736	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55598	100.2734	G10-51T 230.00 - HOSKINS 230KV CKT 1 & COOPER - MOORE 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	100.2542	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04275	100.2484	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55599	100.2443	G10-51T 230.00 - HOSKINS 230KV CKT 1 & GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24081	100.2406	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.18005	100.2401	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.34868	100.2395	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	502	0.08216	100.2395	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.05361	100.2365	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55586	100.2031	BUS-HOSKINS
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07579	100.1691	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04225	100.1651	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.34364	100.1271	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08315	100.1271	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & PLANT X STATION - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.07579	100.1248	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.04249	100.1091	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1
FDNS	09ALL		1 13G	G12_018	FROM->TO	G10-51T 230.00 - TWIN CHURCH 230KV CKT 1	320	0.55596	100	G08-86N2 230.00 - MADISONCO 230.00 230KV CKT 1 & G10-51T 230.00 - HOSKINS 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24672	100	STATELINE INTERCHANGE - STLN-DEMAR6 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08892	100	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0622	100	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.0622	100	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04708	100	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1 & G12-032 TAP 345.00 - G12-041 TAP 345.00 345KV CKT 1
FDNS	03ALL		1 13G	G12_028	TO->FROM	CANTON - TALOGA 69KV CKT 1	39	0.04708	100	G12-041 TAP 345.00 - SOONER 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	07ALL		1 13G	G12_028	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	129	0.0427	100	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	TO->FROM	DIVISION AVE - HAYMAKER 138KV CKT 1	308	0.04127	100	DBLCT37

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL		1 13G	G12_028	TO->FROM	DIVISION AVE - HAYMAKER 138KV CKT 1	308	0.04109	100	DBLCCT37
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.34827	99.9	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.34364	99.9	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	502	0.24081	99.9	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.21483	99.9	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_031	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.20972	99.9	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.18005	99.9	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	07ALL		1 13G	G12_028	TO->FROM	SOUTHWESTERN STATION - WASHITA 138KV CKT 1	287	0.15302	99.9	CMARN384
FDNS	07ALL		1 13G	G12_028	TO->FROM	SOUTHWESTERN STATION - WASHITA 138KV CKT 1	287	0.15302	99.9	DBLCCT8
FDNS	07ALL		1 13G	G12_028	TO->FROM	SOUTHWESTERN STATION - WASHITA 138KV CKT 1	287	0.1467	99.9	CIMARRONR
FDNS	06ALL		1 13G	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.08892	99.9	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.0883	99.9	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08315	99.9	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	01ALL		1 13G	G12_033	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.08065	99.9	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL		1 13G	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08052	99.9	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.0775	99.9	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06777	99.9	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_032	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06768	99.9	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06467	99.9	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06426	99.9	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_040	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.06348	99.9	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_024	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.05942	99.9	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_023	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.05366	99.9	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.0433	99.9	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.04146	99.9	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_027	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03983	99.9	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	ASGI_12_002	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03922	99.9	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03457	99.9	GRACEMONT - MINCO 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL		1 13G	G12_020	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.03264	99.9	HUNTERS7 345.00 - WOODRING 345KV CKT 1 & GRACEMONT - MINCO 345KV CKT 1
FDNS	04NR		1 13G	G12_026	FROM->TO	KNOLL - N HAYS3 115.00 115KV CKT 1	99	0.13664	129.1571	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1 & KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
FDNS	04NR		1 13G	G12_026	TO->FROM	HAYS PLANT - VINE STREET 115KV CKT 1	88	0.13664	132.3291	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1 & KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
FDNS	04NR		1 13G	G12_026	FROM->TO	N HAYS3 115.00 - VINE STREET 115KV CKT 1	99	0.13664	124.4361	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1 & KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
FDNS	04NR		1 13G	G12_026	TO->FROM	DOBSON - GANO 3 115.00 115KV CKT 1	198	0.10586	101.4446	HOLCOMB - SETAB 345KV CKT 1 & MINGO - SETAB 345KV CKT 1
FDNS	04NR		1 13G	G12_026	TO->FROM	GANO 3 115.00 - PILE 115KV CKT 1	198	0.10586	101.4961	HOLCOMB - SETAB 345KV CKT 1 & MINGO - SETAB 345KV CKT 1
FDNS	04NR		1 13G	G12_026	FROM->TO	G12_002T 115.00 - PILE 115KV CKT 1	198	0.10586	102.3316	HOLCOMB - SETAB 345KV CKT 1 & MINGO - SETAB 345KV CKT 1
FNSL-Blown up	04NR		1 13G	G12_026		KNOLL 230 - POSTROCK6 230.00 230KV CKT 1 & G08-92 230.00 - KNOLL 230 230KV CKT 1	0	0.09473	9999	BASE CASE
FNSL-Blown up	04NR		1 13G	G12_026		KNOLL 230 - POSTROCK6 230.00 230KV CKT 1 & G09-08 230.00 - SOUTH HAYS 230KV CKT 1	0	0.09473	9999	BASE CASE
FNSL-Blown up	04NR		1 13G	G12_026		KNOLL 230 - POSTROCK6 230.00 230KV CKT 1 & SMKYP1 6 230.00 - SMOKYHL6 230.00 230KV CKT 1	0	0.09473	9999	BASE CASE
FNSL-Blown up	04NR		1 13G	G12_026		KNOLL 230 - POSTROCK6 230.00 230KV CKT 1 & SMKYP2 6 230.00 - SMOKYHL6 230.00 230KV CKT 1	0	0.09473	9999	BASE CASE
FNSL-Blown up	04NR		1 13G	G12_026		KNOLL 230 - POSTROCK6 230.00 230KV CKT 1 & G10_057 230.00 - RICE 6 230.00 230KV CKT 1	0	0.09473	9999	BASE CASE
FDNS	00NR		1 13SP	G12_026	FROM->TO	PHILLIPSBURG - SMITH CENTER 115KV CKT 1	79.7	0.0561	101.7141	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1 & MCDOWELL CREEK - MORRIS COUNTY 230KV CKT 1
FDNS	04NR		1 13G	G12_026	TO->FROM	SCOTT CITY - SETAB 115KV CKT 1	198	0.04356	118.7002	HOLCOMB - SETAB 345KV CKT 1 & MINGO - SETAB 345KV CKT 1
FNSL-Blown up	00NR		1 23SP	G12_040		LYDIA - VALLIANT 345KV CKT 1 & CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1	0	0.04774	9999	BASE CASE
FNSL-Blown up	00NR		1 23SP	G12_040		LYDIA - WELSH 345KV CKT 1 & CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1	0	0.04267	9999	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FNSL-Blown up	00NR		1 23SP	G12_040		CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1 & TULSA NORTH - WEKIWA 345KV CKT 1	0	0.03363	9999	BASE CASE
FNSL-Blown up	00NR		1 23SP	G12_040		CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1 & NORTHEAST STATION - ONETA 345KV CKT 1	0	0.03106	9999	BASE CASE
FDNS	00NR		1 18WP	G12_040	FROM->TO	GLASS MOUNTAIN - MOORELAND 138KV CKT 1	124	0.0325	9999	SONR38
FDNS	00NR		1 18WP	G12_040	FROM->TO	GLASS MOUNTAIN - MOORELAND 138KV CKT 1	124	0.0319	9999	SONR181
FDNS	00NR		1 13WP	G12_040	FROM->TO	GLASS MOUNTAIN - MOORELAND 138KV CKT 1	124	0.03175	9999	SONR181
FDNS	00NR		1 13SP	G12_040	FROM->TO	GLASS MOUNTAIN - MOORELAND 138KV CKT 1	124	0.03119	9999	SONR181
FDNS	00NR		1 13WP	G12_040	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.12972	143.0525	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	00NR		1 13WP	G12_040	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.12972	143.0525	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	00NR		1 18WP	G12_040	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.12573	140.3944	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	00NR		1 18WP	G12_040	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.12573	140.3944	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	00NR		1 18WP	G12_040	FROM->TO	DIVISION AVE - MUSTANG 138KV CKT 1	287	0.03374	139.1973	CIMARRONR
FDNS	00NR		1 13WP	G12_040	FROM->TO	DIVISION AVE - MUSTANG 138KV CKT 1	287	0.03481	135.6165	CIMARRONR
FDNS	04NR		1 13G	G12_026	TO->FROM	HAYS PLANT - VINE STREET 115KV CKT 1	88	0.13664	132.3291	MIDW-CATC05
FDNS	04NR		1 13G	G12_026	FROM->TO	KNOLL - N HAYS3 115.00 115KV CKT 1	99	0.13664	129.1571	MIDW-CATC05
FDNS	00NR		1 23SP	G12_026	TO->FROM	ATWOOD - COLBY 115KV CKT 1	77	1	124.8323	MIDW-CATC04B
FDNS	04NR		1 13G	G12_026	FROM->TO	N HAYS3 115.00 - VINE STREET 115KV CKT 1	99	0.13664	124.4361	MIDW-CATC05
FDNS	00NR		1 13WP	G12_040	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.11213	124.1984	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	00NR		1 13SP	G12_040	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.13442	123.8659	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	00NR		1 13SP	G12_040	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.13442	123.8659	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	00NR		1 18WP	G12_040	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.10826	123.2931	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	00NR		1 18WP	G12_040	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03759	120.7767	CMARN385
FDNS	00NR		1 13WP	G12_040	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03837	119.6123	CMARN385
FDNS	00NR		1 18WP	G12_040	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03759	117.2075	CMARN385
FDNS	00NR		1 13WP	G12_040	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03837	116.05	CMARN385
FDNS	00NR		1 13SP	G12_040	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03918	115.9779	CMARN385
FDNS	00NR		1 18SP	G12_040	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 2	956	0.13217	115.1777	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 1
FDNS	00NR		1 18SP	G12_040	TO->FROM	CIMARRON - MATTHEWSON 345.00 345KV CKT 1	956	0.13217	115.1777	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	00NR		1 23SP	G12_040	TO->FROM	CIMARRON - MATHWSN7 345.00 345KV CKT 1	956	0.12792	113.8371	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1 & CIMARRON - MATHWSN7 345.00 345KV CKT 2
FDNS	00NR		1 13SP	G12_040	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03918	113.7572	CMARN385
FDNS	04NR		1 13G	G12_026	TO->FROM	ATWOOD - COLBY 115KV CKT 1	77	1	109.332	MIDW-CATC04B
FDNS	00NR		1 13WP	G12_026	TO->FROM	ATWOOD - COLBY 115KV CKT 1	77	1	109.0462	MIDW-CATC04B
FDNS	00NR		1 23SP	G12_040	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03803	108.2839	CMARN385
FDNS	00NR		1 18WP	G12_026	TO->FROM	ATWOOD - COLBY 115KV CKT 1	77	1	107.9314	MIDW-CATC04B
FDNS	00NR		1 13WP	G12_040	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.06829	107.4427	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR		1 18SP	G12_040	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03874	106.9431	CMARN385
FDNS	00NR		1 13SP	G12_040	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.11645	105.9695	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FDNS	00NR		1 23SP	G12_040	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03803	105.9556	CMARN385
FDNS	00NR		1 18WP	G12_040	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.06921	105.3887	G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR		1 18SP	G12_040	FROM->TO	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03874	105.0521	CMARN385
FDNS	00NR		1 13SP	G12_026	TO->FROM	ATWOOD - COLBY 115KV CKT 1	77	1	104.4178	MIDW-CATC04B
FDNS	00NR		1 18SP	G12_026	TO->FROM	ATWOOD - COLBY 115KV CKT 1	77	1	102.7831	MIDW-CATC04B
FDNS	00NR		1 13WP	G12_040	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.06829	101.0116	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1 & G12-016 TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	00NR		1 13SP	G12_040	FROM->TO	DIVISION AVE - MUSTANG 138KV CKT 1	287	0.03575	100.3025	CIMARRONR
FDNS	00NR		1 18SP	G12_040	FROM->TO	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	1195	0.11428	100.1422	CIMARRON - MATTHEWSON 345.00 345KV CKT 1 & CIMARRON - MATTHEWSON 345.00 345KV CKT 2
FNSL-Blown up	0		1 18SP	G12_024		HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 & JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1	0	0.03545	9999	BASE CASE
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	115.9293	BASE CASE
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	115.9293	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	115.9293	BASE CASE
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	115.9293	BASE CASE
FDNS	0	1	18SP	G12_024	TO->FROM	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1	565	0.03366	110.353	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	0	1	13SP	G12_024	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	0.04408	110.2276	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 &AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	0	1	13SP	G12_026	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	0.03386	110.2276	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 &AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	0	1	23SP	G12_024	TO->FROM	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1	565	0.03343	108.9378	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	0	1	13SP	G12_024	TO->FROM	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1	565	0.03298	108.6443	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1 &EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	0	1	18SP	G12_024	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	0.04608	108.1071	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 &AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	0	1	18SP	G12_026	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	0.03346	108.1071	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 &AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	0	1	13SP	G12_031	FROM->TO	LAWEASOKLUNI	425	0.04858	105.4	BASE CASE
FDNS	0	1	13SP	G12_028	FROM->TO	LAWEASOKLUNI	425	0.04097	105.4	BASE CASE
FDNS	0	1	13SP	G12_027	FROM->TO	LAWEASOKLUNI	425	0.03399	105.4	BASE CASE
FDNS	0	1	23SP	G12_024	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	0.04681	103.7954	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 &AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	0	1	23SP	G12_026	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	0.03337	103.7954	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 &AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	0	1	13SP	G12_024	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	0.03706	101.2793	JEFFREY ENERGY CENTER - MORRIS COUNTY 345KV CKT 1 &EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1
FNSL-Blown up	0	1	23SP	G12_017		BKR-CPR-3310	0	1.15821	9999	BASE CASE
FNSL-Blown up	0	1	13SP	G12_017		BKR-CPR-3310	0	1.15231	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_020		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1	0	1.00442	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_035		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1	0	0.37999	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_034		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1	0	0.37999	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_036		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1	0	0.37999	9999	BASE CASE
FNSL-Blown up	0	1	13SP	G12_017		KCPL-C3	0	0.3433	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_035		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1	0	0.32817	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_034		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1	0	0.32817	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_036		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1	0	0.32817	9999	BASE CASE
FNSL-Blown up	0	1	18SP	G12_017		KCPL-C3	0	0.2987	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_017		KCPL-C3	0	0.29064	9999	BASE CASE
FNSL-Blown up	0	1	13SP	G12_021		KCPL-C3	0	0.25639	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_035		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	0	0.23081	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_034		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	0	0.23081	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_036		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	0	0.23081	9999	BASE CASE
FNSL-Blown up	0	1	13SP	G12_018		KCPL-C3	0	0.22636	9999	BASE CASE
FNSL-Blown up	0	1	18SP	G12_021		KCPL-C3	0	0.20481	9999	BASE CASE
FNSL-Blown up	0	1	23SP	ASGI_12_002		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	0	0.19977	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_021		KCPL-C3	0	0.19522	9999	BASE CASE
FNSL-Blown up	0	1	18SP	G12_018		KCPL-C3	0	0.18072	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_018		KCPL-C3	0	0.16815	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_026		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1	0	0.15558	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_037		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 &TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1	0	0.15281	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_035		CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.14954	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_034		CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.14954	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_036		CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.14954	9999	BASE CASE
FNSL-Blown up	0	1	18SP	G12_035		CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.1484	9999	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FNSL-Blown up	0	1	18SP	G12_034		CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.1484	9999	BASE CASE
FNSL-Blown up	0	1	18SP	G12_036		CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.1484	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_035		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & TOLK STATION EAST - TUO INTERCHANGE 230KV CKT 1	0	0.12199	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_034		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & TOLK STATION EAST - TUO INTERCHANGE 230KV CKT 1	0	0.12199	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_036		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & TOLK STATION EAST - TUO INTERCHANGE 230KV CKT 1	0	0.12199	9999	BASE CASE
FNSL-Blown up	0	1	23SP	ASGI_12_002		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1	0	0.09965	9999	BASE CASE
FNSL-Blown up	0	1	23SP	ASGI_12_002		CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1 & ELK CITY 230KV - SWEETWATER 230KV CKT 1	0	0.09748	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_035		CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1 & ELK CITY 230KV - SWEETWATER 230KV CKT 1	0	0.09045	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_034		CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1 & ELK CITY 230KV - SWEETWATER 230KV CKT 1	0	0.09045	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_036		CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1 & ELK CITY 230KV - SWEETWATER 230KV CKT 1	0	0.09045	9999	BASE CASE
FNSL-Blown up	0	1	23SP	ASGI_12_002		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	0	0.07617	9999	BASE CASE
FNSL-Blown up	0	1	23SP	ASGI_12_002		CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.0756	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_020		CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1 & ELK CITY 230KV - SWEETWATER 230KV CKT 1	0	0.07031	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_035		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	0	0.06615	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_034		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	0	0.06615	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_036		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	0	0.06615	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_037		CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1 & ELK CITY 230KV - SWEETWATER 230KV CKT 1	0	0.06276	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_028		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & STATELINE INTERCHANGE - STLN-DEMARCO 230KV CKT 1	0	0.06255	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_020		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	0	0.06022	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_024		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1	0	0.05843	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_037		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	0	0.0536	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_035		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.05198	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_034		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.05198	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_036		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.05198	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_021		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1	0	0.0519	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_035		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.05019	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_034		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.05019	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_036		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.05019	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_018		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1	0	0.04997	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_041		CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1 & TULSA NORTH - WEKIWA 345KV CKT 1	0	0.0465	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_017		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1	0	0.04525	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_032		CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1 & TULSA NORTH - WEKIWA 345KV CKT 1	0	0.04422	9999	BASE CASE
FNSL-Blown up	0	1	23SP	ASGI_12_002		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1	0	0.04259	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_035		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1	0	0.04236	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_034		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1	0	0.04236	9999	BASE CASE
FNSL-Blown up	0	1	23SP	G12_036		CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1	0	0.04236	9999	BASE CASE
FNSL-Blown up	0	1	23SP	ASGI_12_002		EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	0	0.0363	9999	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 18SP	G12_036	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64362	130.1795	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04221	130.0143	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.03903	130.0143	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	129.8827	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	129.8827	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	129.8827	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04078	129.8827	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.08235	129.6422	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.08235	129.6422	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.08235	129.6422	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.04851	129.6422	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.04707	129.6422	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_037	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.04236	129.6422	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 18SP	G12_035	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26467	129.3229	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26467	129.3229	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26467	129.3229	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	129.0105	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	129.0105	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	129.0105	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04078	129.0105	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64362	128.7307	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64362	128.7307	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64362	128.7307	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.17466	128.6935	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.17466	128.6935	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.17466	128.6935	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10873	128.6935	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05219	128.3827	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.048	128.3827	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64362	128.3491	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64362	128.3491	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64362	128.3491	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03028	128.256	NEWHART 230 - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03028	128.256	NEWHART 230 - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03028	128.256	NEWHART 230 - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03061	128.1687	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03061	128.1687	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0968	122.5605	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04087	122.5605	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09679	122.5537	CHERRY1 - HARRINGTON STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09679	122.5537	CHERRY1 - HARRINGTON STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09679	122.5537	CHERRY1 - HARRINGTON STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04085	122.5537	CHERRY1 - HARRINGTON STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09669	122.5496	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09669	122.5496	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09669	122.5496	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04067	122.5496	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03107	122.548	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &Jones Station Bus#2 LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03107	122.548	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &Jones Station Bus#2 LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03107	122.548	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &Jones Station Bus#2 LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	122.5192	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	122.5192	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	122.5192	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04078	122.5192	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09722	122.5008	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09722	122.5008	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09722	122.5008	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04128	122.5008	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	TO->FROM	CARLSBAD INTERCHANGE - POTASH JUNCTION INTERCHANGE 115KV CKT 1	96	0.05901	122.4488	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	TO->FROM	CARLSBAD INTERCHANGE - POTASH JUNCTION INTERCHANGE 115KV CKT 1	96	0.05901	122.4488	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	TO->FROM	CARLSBAD INTERCHANGE - POTASH JUNCTION INTERCHANGE 115KV CKT 1	96	0.05901	122.4488	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09677	122.3874	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09677	122.3874	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09677	122.3874	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04181	122.3874	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	122.3263	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	122.3263	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09674	122.3263	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04078	122.3263	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05219	122.2672	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.048	122.2672	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	351	0.04374	122.2014	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	351	0.04374	122.2014	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	351	0.04374	122.2014	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.07684	122.1905	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.07066	122.1905	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05474	122.186	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05048	122.186	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09684	122.1732	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09684	122.1732	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09684	122.1732	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04264	122.1732	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09684	122.1294	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09684	122.1294	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09684	122.1294	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04264	122.1294	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04888	122.1159	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04513	122.1159	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09429	122.0675	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09429	122.0675	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09429	122.0675	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03926	122.0675	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09911	122.0502	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09911	122.0502	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09911	122.0502	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03651	122.0502	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09459	122.0207	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09459	122.0207	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09459	122.0207	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03952	122.0207	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09868	121.9984	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09868	121.9984	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09868	121.9984	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04016	121.9984	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03253	121.9907	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03253	121.9907	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03253	121.9907	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64484	121.8141	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64484	121.8141	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64484	121.8141	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09717	121.807	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09717	121.807	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09717	121.807	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04387	121.807	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09596	121.7799	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09596	121.7799	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09596	121.7799	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04081	121.7799	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04888	121.7316	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04513	121.7316	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05473	121.6241	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05043	121.6241	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05167	121.5408	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04765	121.5408	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26467	121.3893	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26467	121.3893	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26467	121.3893	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09429	121.2422	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09429	121.2422	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09429	121.2422	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03926	121.2422	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14685	121.2341	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14685	121.2341	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14685	121.2341	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06547	121.2341	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05473	121.1647	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05043	121.1647	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.0803	121.136	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.0803	121.136	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.0803	121.136	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03258	121.136	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04958	121.1197	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04579	121.1197	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64484	121.0841	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64484	121.0841	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64484	121.0841	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09148	121.0779	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09148	121.0779	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09148	121.0779	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03212	121.0779	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10254	121.0636	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10254	121.0636	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10254	121.0636	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04182	121.0636	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09692	121.0324	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09692	121.0324	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09692	121.0324	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0402	121.0324	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0567	120.993	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0523	120.993	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0951	120.9695	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0951	120.9695	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0951	120.9695	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04	120.9695	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05652	120.9172	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05208	120.9172	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05375	120.907	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04948	120.907	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03136	120.8709	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03136	120.8709	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03136	120.8709	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.14502	120.8633	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.03316	120.8633	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.03316	120.8633	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.03316	120.8633	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05488	120.8505	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05055	120.8505	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	120.8312	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	120.8312	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05488	120.8145	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05055	120.8145	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05356	120.7711	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04936	120.7711	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09831	120.7512	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09831	120.7512	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09831	120.7512	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04161	120.7512	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05217	120.7446	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04814	120.7446	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03242	120.7414	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03242	120.7414	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03242	120.7414	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05486	120.7333	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05053	120.7333	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	120.7277	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	120.7277	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05356	120.7215	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04936	120.7215	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	120.7039	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	120.7039	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	120.6911	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	120.6911	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09839	120.6784	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09839	120.6784	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09839	120.6784	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04165	120.6784	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05407	120.6581	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & HOBBS INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04976	120.6581	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & HOBBS INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	120.6567	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	120.6567	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05518	120.6401	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05082	120.6401	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03062	120.6365	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03062	120.6365	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03062	120.6365	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.06386	120.6234	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.06386	120.6234	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.06386	120.6234	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03446	120.6234	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03025	120.6224	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03025	120.6224	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03025	120.6224	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05483	120.3682	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230K
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0505	120.3682	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230K
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05483	120.3652	HARRINGTON STATION Mid Bus - NICHOLS STATION 230KV CKT 2 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0505	120.3652	HARRINGTON STATION Mid Bus - NICHOLS STATION 230KV CKT 2 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05483	120.3645	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	120.3645	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05489	120.3485	HARRINGTON STATION Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05055	120.3485	HARRINGTON STATION Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05494	120.3419	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0506	120.3419	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05816	120.2963	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05353	120.2963	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05475	120.2907	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05043	120.2907	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05494	120.2649	HARRINGTON STATION East Bus - Harrington Station Mid Bus 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0506	120.2649	HARRINGTON STATION East Bus - Harrington Station Mid Bus 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05468	120.2587	HARRINGTON STATION East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05036	120.2587	HARRINGTON STATION East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	120.2019	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	120.2019	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	120.2008	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	120.2008	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05612	120.1949	TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05612	120.1949	TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04953	120.1949	TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04953	120.1949	TUCO INTERCHANGE - TUCO2 345.00 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05476	120.189	CHAN/TASCOS6230.00 - XIT_INTG 6230.00 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05044	120.189	CHAN/TASCOS6230.00 - XIT_INTG 6230.00 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05476	120.1881	CHAN/TASCOS6230.00 - POTTER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05044	120.1881	CHAN/TASCOS6230.00 - POTTER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	120.1852	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	120.1852	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & G11_012T 230.00 - G11_012_1 230.00 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05337	120.1744	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04921	120.1744	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10254	120.155	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10254	120.155	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10254	120.155	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04182	120.155	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05483	120.137	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0505	120.137	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	120.1105	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	120.1105	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15326	120.1066	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15326	120.1066	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15326	120.1066	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09528	120.1066	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05398	120.0954	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04974	120.0954	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05816	120.0891	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05353	120.0891	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05604	119.9682	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05162	119.9682	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	POTASH JUNCTION INTERCHANGE (GE M100747) 230/115/13.2KV TRANSFORMER CKT 1	173	0.05642	119.9627	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	POTASH JUNCTION INTERCHANGE (GE M100747) 230/115/13.2KV TRANSFORMER CKT 1	173	0.05642	119.9627	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	POTASH JUNCTION INTERCHANGE (GE M100747) 230/115/13.2KV TRANSFORMER CKT 1	173	0.05642	119.9627	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64484	119.9066	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64484	119.9066	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288	0.64484	119.9066	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	119.8691	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	119.8691	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03034	119.8075	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03034	119.8075	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03034	119.8075	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	119.7886	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	119.7886	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26467	119.763	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26467	119.763	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26467	119.763	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	119.7524	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	119.7524	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & G12_001T 230.00 - GRASSLAND INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	119.7168	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	119.7168	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.19415	119.671	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.19415	119.671	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 18SP	G12_036	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.19415	119.671	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05483	119.6707	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0505	119.6707	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05479	119.6643	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05047	119.6643	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	119.6501	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	119.6501	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.29917	119.6468	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.29917	119.6468	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.29917	119.6468	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.19722	119.6468	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05336	119.6321	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0492	119.6321	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	119.5115	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	119.5115	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03028	119.4592	NEWHART 230 - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03028	119.4592	NEWHART 230 - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03028	119.4592	NEWHART 230 - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05454	119.4528	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - HOBBS INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05024	119.4528	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - HOBBS INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03061	119.3488	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03061	119.3488	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03061	119.3488	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05482	119.1442	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0505	119.1442	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1	141	0.1097	119.0361	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1	141	0.1097	119.0361	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1	141	0.1097	119.0361	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.04023	118.8017	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.04023	118.8017	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.04023	118.8017	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05014	118.6948	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.04627	118.6948	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	118.6742	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	118.6742	G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.19415	118.6464	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.19415	118.6464	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 18SP	G12_036	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.19415	118.6464	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10916	118.6384	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10916	118.6384	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10916	118.6384	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03558	118.6384	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14258	118.5201	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14258	118.5201	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14258	118.5201	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08567	118.5201	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26676	118.4572	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26676	118.4572	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26676	118.4572	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_026	FROM->TO	HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT 1	250	0.03077	118.4295	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 & G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	118.406	G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	118.406	G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0548	118.3699	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0505	118.3699	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03362	118.3094	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03362	118.3094	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03362	118.3094	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03277	118.2551	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03277	118.2551	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03277	118.2551	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.06409	118.1924	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.06409	118.1924	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.06409	118.1924	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.04684	118.1924	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_037	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.04232	118.1924	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 23SP	G12_020	TO->FROM	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1	160	0.03115	118.1283	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1	502	0.05543	118.1068	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1	502	0.05101	118.1068	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09195	118.0696	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09195	118.0696	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09195	118.0696	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03258	118.0696	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03089	117.8444	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03089	117.8444	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03009	117.3602	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03011	117.3514	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03011	117.3514	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03011	117.3514	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03002	117.3087	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03002	117.3087	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03002	117.3087	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03052	117.232	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03052	117.232	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03052	117.232	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03107	117.216	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03107	117.216	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03107	117.216	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.08112	117.2042	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.0748	117.2042	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.02999	117.1938	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.02999	117.1938	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.02999	117.1938	OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_026	FROM->TO	HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT 1	250	0.03077	117.1802	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 & G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03136	117.0799	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03136	117.0799	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03136	117.0799	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03018	117.0404	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03018	117.0404	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03018	117.0404	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03107	117.008	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03107	117.008	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03107	117.008	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03576	116.9943	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03576	116.9943	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03576	116.9943	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	116.5944	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	116.5944	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	116.5944	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03314	116.5944	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15598	116.591	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15598	116.591	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15598	116.591	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10138	116.591	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03937	116.405	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03937	116.405	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03937	116.405	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	TO->FROM	Bennett Sub - ODC TAP 115KV CKT 1	154	0.26467	116.3347	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	TO->FROM	Bennett Sub - ODC TAP 115KV CKT 1	154	0.26467	116.3347	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	TO->FROM	Bennett Sub - ODC TAP 115KV CKT 1	154	0.26467	116.3347	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	115.9293	BASE CASE
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	115.9293	BASE CASE
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	115.9293	BASE CASE
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	115.9293	BASE CASE
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.06409	115.7533	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.06409	115.7533	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.06409	115.7533	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.04684	115.7533	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_037	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.04232	115.7533	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	115.6519	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	115.6519	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	115.6519	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03314	115.6519	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03253	115.5414	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03253	115.5414	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03253	115.5414	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	115.5027	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	115.5027	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	115.5027	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03314	115.5027	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	115.3548	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	115.3548	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	115.3548	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06237	115.3548	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 23SP	G12_026	FROM->TO	HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT 1	250	0.03647	115.2617	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 & Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 23SP	G12_024	FROM->TO	HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT 1	250	0.03111	115.2617	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 & Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03418	115.009	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03418	115.009	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03418	115.009	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03473	114.7502	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 18SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03197	114.0482	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03197	114.0482	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03197	114.0482	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	113.921	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	113.921	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	113.921	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06237	113.921	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	113.9062	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	113.9062	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	113.9062	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03314	113.9062	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	113.838	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	113.838	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	113.838	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03314	113.838	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05462	113.8376	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05462	113.8376	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05462	113.8376	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03328	113.8376	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT
FDNS	0		1 13SP	G12_037	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.02997	113.8376	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & OASIS INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT
FDNS	0		1 23SP	G12_026	FROM->TO	HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT 1	250	0.03077	113.7854	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 & G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.1945	113.7674	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.1945	113.7674	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.1945	113.7674	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05484	113.7479	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.05051	113.7479	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	113.746	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	113.746	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	113.746	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03184	113.746	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	113.7459	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	113.7459	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0553	113.7459	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03314	113.7459	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03034	113.6423	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03034	113.6423	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03034	113.6423	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08474	111.4247	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &G12-020 INTERCHANGE 230KV CKT 1 230.00 - TUCO
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14865	111.292	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14865	111.292	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14865	111.292	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06834	111.292	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05633	111.1651	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05633	111.1651	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05633	111.1651	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03281	111.1651	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.04999	111.1517	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.04999	111.1517	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.04999	111.1517	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0903	111.1308	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0903	111.1308	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0903	111.1308	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0319	111.1308	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_026	FROM->TO	HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT 1	250	0.03647	111.0206	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 &Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 23SP	G12_024	FROM->TO	HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT 1	250	0.03111	111.0206	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1 &Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	111.0194	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	111.0194	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	111.0194	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0523	111.0194	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15268	110.9969	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15268	110.9969	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15268	110.9969	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08731	110.9969	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26676	110.9774	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 &MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26676	110.9774	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 &MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26676	110.9774	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 &MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09356	110.9427	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09356	110.9427	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09356	110.9427	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03441	110.9427	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05335	110.9229	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05335	110.9229	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05335	110.9229	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0316	110.9229	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_035	TO->FROM	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1	160	0.07812	110.8925	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1	160	0.07812	110.8925	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1	160	0.07812	110.8925	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	TO->FROM	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1	160	0.03532	110.8925	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.20412	110.8215	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.20412	110.8215	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.20412	110.8215	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0978	110.8215	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15554	110.7814	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15554	110.7814	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15554	110.7814	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10403	110.7814	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FNSL	0		1 13SP	G12_017	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.12542	110.6585	KCPL-C2
FNSL	0		1 13SP	G12_021	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.09503	110.6585	KCPL-C2
FNSL	0		1 13SP	G12_018	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.08311	110.6585	KCPL-C2
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05419	110.531	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05419	110.531	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05419	110.531	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03226	110.531	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09747	110.5302	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09747	110.5302	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09747	110.5302	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03278	110.5302	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26513	110.4333	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26513	110.4333	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26513	110.4333	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09125	110.1949	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09125	110.1949	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09125	110.1949	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03141	110.1949	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	110.1624	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	110.1624	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	110.1624	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03184	110.1624	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10947	110.1528	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10947	110.1528	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10947	110.1528	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.09994	110.0488	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0	1	13SP	G12_035	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.07317	110.0488	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.07317	110.0488	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.07317	110.0488	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	0	1	23SP	G12_020	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.05125	109.993	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0	1	23SP	G12_037	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.04743	109.993	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0	1	18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	109.9486	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	109.9486	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	109.9486	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03184	109.9486	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FNSL	0	1	13SP	G12_017	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.12542	109.9087	KCPLB-6
FNSL	0	1	13SP	G12_021	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.09503	109.9087	KCPLB-6
FNSL	0	1	13SP	G12_018	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.08311	109.9087	KCPLB-6
FNSL	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14093	109.8872	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FNSL	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14093	109.8872	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FNSL	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14093	109.8872	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FNSL	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08474	109.8872	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	0	1	13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05335	109.8605	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0	1	13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05335	109.8605	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0	1	13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05335	109.8605	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0	1	13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.0316	109.8605	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	109.849	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	109.849	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	109.849	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0523	109.849	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14126	109.6553	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14126	109.6553	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14126	109.6553	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08501	109.6553	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14215	109.6528	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14215	109.6528	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14215	109.6528	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08614	109.6528	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	109.6072	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	109.6072	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	109.6072	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08474	109.6072	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09143	109.5929	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0	1	18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09143	109.5929	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09143	109.5929	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.02997	109.5929	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08983	109.5763	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08983	109.5763	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08983	109.5763	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03162	109.5763	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09281	109.5532	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - HOBBS INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09281	109.5532	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - HOBBS INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09281	109.5532	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - HOBBS INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03093	109.5532	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - HOBBS INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09417	109.5436	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09417	109.5436	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09417	109.5436	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03578	109.5436	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.19613	109.5309	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 &MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.19613	109.5309	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 &MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.19613	109.5309	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 &MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09115	109.5036	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09115	109.5036	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09115	109.5036	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03146	109.5036	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14313	109.4518	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14313	109.4518	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14313	109.4518	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0832	109.4518	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09094	109.4424	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09094	109.4424	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09094	109.4424	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03251	109.4424	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	109.4109	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	109.4109	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	109.4109	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08474	109.4109	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03076	109.4087	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03076	109.4087	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03076	109.4087	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14302	109.3804	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14302	109.3804	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14302	109.3804	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08711	109.3804	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09747	109.3456	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09747	109.3456	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09747	109.3456	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03278	109.3456	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	109.3437	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	109.3437	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	109.3437	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	109.3437	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14721	109.3125	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14721	109.3125	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14721	109.3125	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09185	109.3125	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26676	109.2705	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26676	109.2705	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26676	109.2705	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	109.2383	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	109.2383	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	109.2383	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03184	109.2383	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03418	109.2364	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03418	109.2364	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03418	109.2364	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	109.2046	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	109.2046	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	109.2046	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0323	109.2046	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09404	109.1605	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09404	109.1605	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09404	109.1605	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0365	109.1605	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	109.1111	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	109.1111	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	109.1111	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03184	109.1111	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09093	108.9673	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0325	108.9673	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	108.919	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	108.919	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	108.919	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03184	108.919	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14257	108.9139	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14257	108.9139	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14257	108.9139	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08763	108.9139	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FNSL	0		1 13SP	G12_017	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.12542	108.9078	KCPL-C2
FNSL	0		1 13SP	G12_021	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.09503	108.9078	KCPL-C2
FNSL	0		1 13SP	G12_018	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.08311	108.9078	KCPL-C2
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09103	108.8661	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09103	108.8661	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09103	108.8661	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03152	108.8661	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09081	108.8396	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09081	108.8396	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09081	108.8396	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03266	108.8396	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_026	TO->FROM	ATWOOD - COLBY 115KV CKT 1	77	1	108.8323	MIDW-CATC04B
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09144	108.8304	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09144	108.8304	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09144	108.8304	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03305	108.8304	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	108.824	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	108.824	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	108.824	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08474	108.824	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.1945	108.8055	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.1945	108.8055	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.1945	108.8055	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09068	108.8	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09068	108.8	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09068	108.8	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03224	108.8	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09136	108.7889	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0	1	18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09033	108.287	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09033	108.287	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09033	108.287	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03187	108.287	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	108.2668	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	108.2668	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09031	108.2668	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03184	108.2668	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09072	108.2369	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09072	108.2369	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09072	108.2369	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03227	108.2369	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03389	108.2134	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03389	108.2134	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03389	108.2134	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09032	108.2064	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	0	1	18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09032	108.2064	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	0	1	18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09032	108.2064	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	0	1	18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03184	108.2064	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14101	108.2011	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &TOLK STATION EAST TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14101	108.2011	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &TOLK STATION EAST TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14101	108.2011	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &TOLK STATION EAST TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08483	108.2011	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 &TOLK STATION EAST TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09285	108.1701	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09285	108.1701	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09285	108.1701	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FNSL	0	1	13SP	G12_017	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.12542	108.1674	KCPB-6
FNSL	0	1	13SP	G12_021	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.09503	108.1674	KCPB-6
FNSL	0	1	13SP	G12_018	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.08311	108.1674	KCPB-6
FDNS	0	1	18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09385	108.1593	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09385	108.1593	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09385	108.1593	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03611	108.1593	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14186	108.1556	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14186	108.1556	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14186	108.1556	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08268	108.1556	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 &CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0	1	18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09033	108.1491	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 &CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 23SP	G12_035	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.1945	107.9629	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.1945	107.9629	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	MUSTANG STATION N. - SEAGRAVES INTERCHANGE 115KV CKT 1	160	0.1945	107.9629	OXYBRU_TP 6230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09038	107.9395	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09038	107.9395	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09038	107.9395	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03322	107.9395	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09038	107.9039	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09038	107.9039	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09038	107.9039	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03322	107.9039	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE
FDNS	0		1 13SP	G12_035	FROM->TO	CUNNINGHAM STATION - SW3H64_V21 3115.00 115KV CKT 1	160	0.06299	107.9024	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	CUNNINGHAM STATION - SW3H64_V21 3115.00 115KV CKT 1	160	0.06299	107.9024	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	CUNNINGHAM STATION - SW3H64_V21 3115.00 115KV CKT 1	160	0.06299	107.9024	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	107.9016	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	107.9016	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	107.9016	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08474	107.9016	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03018	107.8714	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03018	107.8714	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03018	107.8714	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05551	107.8691	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05551	107.8691	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.05551	107.8691	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	0		1 13SP	G12_020	TO->FROM	BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1	160	0.03319	107.8691	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14087	107.8675	Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14087	107.8675	Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14087	107.8675	Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08477	107.8675	Harrington Station East Bus - Harrington Station Mid Bus 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	PCA INTERCHANGE - SW3H64_V21 3115.00 115KV CKT 1	160	0.06299	107.7852	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	PCA INTERCHANGE - SW3H64_V21 3115.00 115KV CKT 1	160	0.06299	107.7852	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	PCA INTERCHANGE - SW3H64_V21 3115.00 115KV CKT 1	160	0.06299	107.7852	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	107.7641	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	107.7641	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14091	107.7641	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08474	107.7641	WILDOR2_JUS6230.00 - WILDORADO WIND GEN 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14339	107.7601	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 18SP	G12_035	FROM->TO	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1	351	0.07029	106.1233	CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1	351	0.07029	106.1233	CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1	351	0.07029	106.1233	CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	106.0898	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	106.0898	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	106.0898	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06237	106.0898	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09177	106.0355	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09177	106.0355	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09177	106.0355	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03252	106.0355	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.16676	105.9238	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.16676	105.9238	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.16676	105.9238	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05918	105.9238	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.04374	105.9151	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.04045	105.9151	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.14502	105.8606	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.03316	105.8606	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.03316	105.8606	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.03316	105.8606	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12133	105.7158	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12133	105.7158	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12133	105.7158	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05265	105.7158	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03965	105.7106	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03965	105.7106	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03965	105.7106	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15035	105.6553	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15035	105.6553	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15035	105.6553	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0748	105.6553	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0963	105.6149	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0963	105.6149	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0963	105.6149	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03284	105.6149	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.13278	105.59	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_035	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.11063	105.59	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.11063	105.59	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.11063	105.59	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1	141	0.10749	105.5855	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1	141	0.10749	105.5855	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1	141	0.10749	105.5855	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	Bennett Sub - ODC TAP 115KV CKT 1	154	0.26676	105.5605	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	Bennett Sub - ODC TAP 115KV CKT 1	154	0.26676	105.5605	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	Bennett Sub - ODC TAP 115KV CKT 1	154	0.26676	105.5605	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12716	105.537	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12716	105.537	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12716	105.537	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05979	105.537	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.05125	105.5096	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.04743	105.5096	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14337	105.4218	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14337	105.4218	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14337	105.4218	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0865	105.4218	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1287	105.411	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1287	105.411	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1287	105.411	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0605	105.411	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_031	FROM->TO	LAWEASOKLUNI	425	0.04858	105.4	BASE CASE
FDNS	0		1 13SP	G12_028	FROM->TO	LAWEASOKLUNI	425	0.04097	105.4	BASE CASE
FDNS	0		1 13SP	G12_027	FROM->TO	LAWEASOKLUNI	425	0.03399	105.4	BASE CASE
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09171	105.3525	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09171	105.3525	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09171	105.3525	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03187	105.3525	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10157	105.3457	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10157	105.3457	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.10157	105.3457	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04858	105.3457	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13724	105.3396	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13724	105.3396	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13724	105.3396	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08397	105.3396	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1416	105.275	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1416	105.275	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1416	105.275	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06175	105.275	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2	252	0.04905	105.2734	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2	252	0.04539	105.2734	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 18SP	G12_035	TO->FROM	ARCO WILLARD TAP - Bennett Sub 115KV CKT 1	160	0.26467	105.2732	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	TO->FROM	ARCO WILLARD TAP - Bennett Sub 115KV CKT 1	160	0.26467	105.2732	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	TO->FROM	ARCO WILLARD TAP - Bennett Sub 115KV CKT 1	160	0.26467	105.2732	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 & MUSTANG STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12087	105.2672	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12087	105.2672	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12087	105.2672	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05234	105.2672	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14369	105.2655	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14369	105.2655	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14369	105.2655	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08673	105.2655	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14586	105.2482	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - TOLK STATION 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14586	105.2482	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - TOLK STATION 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14586	105.2482	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - TOLK STATION 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08497	105.2482	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - TOLK STATION 345KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	105.2475	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	105.2475	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	105.2475	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0323	105.2475	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.06606	105.1452	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.06134	105.1452	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_017	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.10199	105.1011	KCPL-C2
FDNS	0		1 18SP	G12_021	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.07044	105.1011	KCPL-C2
FDNS	0		1 18SP	G12_018	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.06137	105.1011	KCPL-C2
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09405	105.0609	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09405	105.0609	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09405	105.0609	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0349	105.0609	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	105.0515	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	105.0515	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	105.0515	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0323	105.0515	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & G12-020 230.00 - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09795	105.0014	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - YOAUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09795	105.0014	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - YOAUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09795	105.0014	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - YOAUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03326	105.0014	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - YOAUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03076	104.9776	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03076	104.9776	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03076	104.9776	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	TO->FROM	Bennett Sub - ODC TAP 115KV CKT 1	154	0.26513	104.9285	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 &MUSTANG STATION - YOAUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	TO->FROM	Bennett Sub - ODC TAP 115KV CKT 1	154	0.26513	104.9285	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 &MUSTANG STATION - YOAUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	TO->FROM	Bennett Sub - ODC TAP 115KV CKT 1	154	0.26513	104.9285	AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1 &MUSTANG STATION - YOAUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14127	104.9145	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14127	104.9145	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14127	104.9145	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06337	104.9145	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14389	104.9005	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14389	104.9005	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14389	104.9005	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06096	104.9005	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	104.7569	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	104.7569	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	104.7569	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06237	104.7569	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14192	104.7326	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14192	104.7326	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14192	104.7326	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06407	104.7326	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09327	104.7312	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - HOBBS INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09327	104.7312	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - HOBBS INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09327	104.7312	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - HOBBS INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03139	104.7312	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &CUNNINGHAM STATION - HOBBS INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_017	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.09868	104.7233	KCPL-C2
FDNS	0		1 23SP	G12_021	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.06672	104.7233	KCPL-C2
FDNS	0		1 23SP	G12_018	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.05663	104.7233	KCPL-C2
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15035	104.7066	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15035	104.7066	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.15035	104.7066	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0748	104.7066	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09161	104.6124	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09161	104.6124	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09161	104.6124	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03192	104.6124	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09189	104.6043	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09189	104.6043	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09189	104.6043	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03043	104.6043	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09028	104.5576	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09028	104.5576	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09028	104.5576	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03207	104.5576	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	104.4762	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	104.4762	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	104.4762	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06237	104.4762	G10-14 345.00 - Hitchland Interchange 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.0563	104.4497	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.0563	104.4497	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	252	0.0563	104.4497	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14065	104.4292	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14065	104.4292	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14065	104.4292	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06256	104.4292	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.145	104.4152	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.145	104.4152	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.145	104.4152	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06739	104.4152	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	104.4021	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	104.4021	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	104.4021	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0323	104.4021	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.12504	104.3929	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.11917	104.3929	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.11917	104.3929	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.11917	104.3929	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_020	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.0302	104.3929	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 18SP	G12_017	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.10199	104.3805	KCPMB-6
FDNS	0		1 18SP	G12_021	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.07044	104.3805	KCPMB-6
FDNS	0		1 18SP	G12_018	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.06137	104.3805	KCPMB-6

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	104.0654	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	104.0654	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	104.0654	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06237	104.0654	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_035	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03173	104.0314	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_034	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03173	104.0314	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_036	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.03173	104.0314	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_017	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.09868	104.0107	KCPLB-6
FDNS	0	1	23SP	G12_021	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.06672	104.0107	KCPLB-6
FDNS	0	1	23SP	G12_018	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.05663	104.0107	KCPLB-6
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14268	104.0098	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14268	104.0098	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14268	104.0098	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06365	104.0098	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08959	103.9831	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08959	103.9831	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08959	103.9831	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03125	103.9831	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	ASGI_12_002	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96	0.10439	103.9779	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09149	103.9644	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09149	103.9644	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09149	103.9644	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03199	103.9644	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	103.9115	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	103.9115	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09077	103.9115	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0323	103.9115	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09128	103.9104	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09128	103.9104	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09128	103.9104	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03312	103.9104	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14192	103.9028	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14192	103.9028	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14192	103.9028	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06407	103.9028	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09182	103.897	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09182	103.897	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09182	103.897	TOLK STATION TAP - TOLK STATION WEST 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0	1	23SP	G12_017	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.09868	103.0375	KCPL-C2
FDNS	0	1	23SP	G12_021	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.06672	103.0375	KCPL-C2
FDNS	0	1	23SP	G12_018	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.05663	103.0375	KCPL-C2
FDNS	0	1	23SP	G12_026	TO->FROM	ATWOOD - COLBY 115KV CKT 1	77	1	103.0371	MIDW-CATC048
FDNS	0	1	23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09423	103.0101	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09423	103.0101	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09423	103.0101	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03347	103.0101	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14039	102.981	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14039	102.981	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14039	102.981	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06242	102.981	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14035	102.9354	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14035	102.9354	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14035	102.9354	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06238	102.9354	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12697	102.9345	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12697	102.9345	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12697	102.9345	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06153	102.9345	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	102.9196	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	102.9196	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	102.9196	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06238	102.9196	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14043	102.8977	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14043	102.8977	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14043	102.8977	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0622	102.8977	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14372	102.8785	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14372	102.8785	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14372	102.8785	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05652	102.8785	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_035	FROM->TO	CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	351	0.08759	102.8706	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_034	FROM->TO	CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	351	0.08759	102.8706	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_036	FROM->TO	CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1	351	0.08759	102.8706	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	102.8693	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	102.8693	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	102.8693	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09333	102.665	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08999	102.6452	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08999	102.6452	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.08999	102.6452	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03232	102.6452	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.04374	102.5962	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.04045	102.5962	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09434	102.5642	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09434	102.5642	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09434	102.5642	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0366	102.5642	BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14118	102.5634	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14118	102.5634	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14118	102.5634	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06325	102.5634	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26513	102.5159	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26513	102.5159	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	TO->FROM	ODC TAP - SHELL CO2 GAS SUB 115KV CKT 1	160	0.26513	102.5159	AMOCO WASSON SWITCHING STATION - OXYBRU_TP 6230.00 230KV CKT 1 & MUSTANG STATION YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1237	102.5028	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1237	102.5028	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1237	102.5028	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.051	102.5028	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.091	102.4481	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.091	102.4481	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.091	102.4481	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03427	102.4481	SWISHER COUNTY INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14038	102.4438	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14038	102.4438	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14038	102.4438	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06369	102.4438	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12235	102.4318	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12235	102.4318	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12235	102.4318	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05016	102.4318	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1401	102.4158	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1401	102.4158	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1401	102.4158	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06177	102.4158	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12146	102.4022	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12146	102.4022	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12146	102.4022	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05308	102.4022	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	102.3491	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	102.3491	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14034	102.3491	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06237	102.3491	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1269	102.3358	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1269	102.3358	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1269	102.3358	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05326	102.3358	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_017	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.09868	102.3349	KCPLB-6
FDNS	0	1	23SP	G12_021	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.06672	102.3349	KCPLB-6
FDNS	0	1	23SP	G12_018	FROM->TO	NASHUA (NASH 11) 345/161/13.8KV TRANSFORMER CKT 11	660	0.05663	102.3349	KCPLB-6
FDNS	0	1	18SP	ASGI_12_002	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.04238	102.3032	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_035	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03921	102.3032	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_034	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03921	102.3032	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_036	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03921	102.3032	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_020	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.02997	102.3032	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09434	102.2698	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09434	102.2698	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09434	102.2698	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0366	102.2698	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	23SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09217	102.249	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	0	1	23SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09217	102.249	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	0	1	23SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.09217	102.249	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	0	1	23SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.03295	102.249	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12195	102.236	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12195	102.236	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12195	102.236	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05361	102.236	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12037	102.217	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12037	102.217	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12037	102.217	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05115	102.217	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13676	102.206	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13676	102.206	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13676	102.206	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06012	102.206	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	102.1691	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	102.1691	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	102.1691	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0523	102.1691	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12697	102.1636	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12697	102.1636	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12697	102.1636	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06153	102.1636	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 23SP	ASGI_12_002	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.14337	102.1348	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 23
FDNS	0		1 23SP	G12_020	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08812	102.1348	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 23
FDNS	0		1 23SP	G12_037	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	502	0.08037	102.1348	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 & Golden Spread REC - Mustang Interchange 230 kV Generation Bus - MUSTANG STATION 23
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14249	102.1181	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14249	102.1181	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14249	102.1181	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06267	102.1181	JONES STATION - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12198	102.0965	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12198	102.0965	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12198	102.0965	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04992	102.0965	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14048	102.0744	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV C
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14048	102.0744	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV C
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14048	102.0744	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV C
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06497	102.0744	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV C
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14048	102.0727	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14048	102.0727	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14048	102.0727	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.12504	102.0727	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.11917	102.0727	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.11917	102.0727	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.11917	102.0727	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06497	102.0727	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_020	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	252	0.0302	102.0727	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 & DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11935	102.0519	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11935	102.0519	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12697	100.8791	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06153	100.8791	BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12683	100.87	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12683	100.87	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12683	100.87	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04778	100.87	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14862	100.8507	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14862	100.8507	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14862	100.8507	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06394	100.8507	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11938	100.8303	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11938	100.8303	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11938	100.8303	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05162	100.8303	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03371	100.8233	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03119	100.8233	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03119	100.8233	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03119	100.8233	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13676	100.8165	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13676	100.8165	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13676	100.8165	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06012	100.8165	AMARILLO SOUTH INTERCHANGE - G07-48T 230.00 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_020	TO->FROM	INDIANA SUB - STANTON SUB 115KV CKT 1	160	0.03115	100.811	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12056	100.8044	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12056	100.8044	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12056	100.8044	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05215	100.8044	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12293	100.8014	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12293	100.8014	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12293	100.8014	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0563	100.8014	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.7952	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.7952	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.7952	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	100.7952	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13115	100.7915	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.13115	100.7915	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04845	100.6763	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12075	100.6745	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12075	100.6745	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12075	100.6745	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05231	100.6745	HARRINGTON STATION - NICHOLS STATION 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12014	100.67	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12014	100.67	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12014	100.67	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0513	100.67	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12075	100.663	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12075	100.663	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12075	100.663	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05231	100.663	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12224	100.6551	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12224	100.6551	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12224	100.6551	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05044	100.6551	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CUNNINGHAM STATION - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.6484	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.6484	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.6484	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	100.6484	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & BUFFALO 230.00 - G06-47 230.00 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12082	100.644	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12082	100.644	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12082	100.644	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05214	100.644	ROOSEVELT COUNTY INTERCHANGE - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03173	100.6373	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	0		1 23SP	G12_020	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2	252	0.06322	100.6332	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 23SP	G12_037	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2	252	0.0587	100.6332	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1 & JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.632	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.632	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.632	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	100.632	FINNEY SWITCHING STATION - G08-18 345.00 345KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12158	100.6153	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12158	100.6153	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12158	100.6153	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05322	100.6153	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	100.6101	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 & HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	100.4609	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &HOBBS INTERCHANGE - NEF 230.00 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.4607	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &G11_048_1 230.00 - Golden Spread REC - Mustang Interchange 230 kV Generation Bu
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.4607	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &G11_048_1 230.00 - Golden Spread REC - Mustang Interchange 230 kV Generation Bu
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.4607	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &G11_048_1 230.00 - Golden Spread REC - Mustang Interchange 230 kV Generation Bu
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	100.4607	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &G11_048_1 230.00 - Golden Spread REC - Mustang Interchange 230 kV Generation Bu
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1206	100.4593	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1206	100.4593	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1206	100.4593	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05197	100.4593	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12081	100.4559	CHERRY1 - HARRINGTON STATION 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12081	100.4559	CHERRY1 - HARRINGTON STATION 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12081	100.4559	CHERRY1 - HARRINGTON STATION 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05239	100.4559	CHERRY1 - HARRINGTON STATION 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_035	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.10126	100.4556	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0	1	18SP	G12_034	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.10126	100.4556	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0	1	18SP	G12_036	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.10126	100.4556	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.4547	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.4547	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.4547	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	100.4547	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	100.4452	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	100.4452	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	100.4452	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0523	100.4452	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11915	100.4386	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11915	100.4386	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11915	100.4386	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05157	100.4386	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11918	100.431	AMARILLO SOUTH INTERCHANGE - RANDALL COUNTY INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11918	100.431	AMARILLO SOUTH INTERCHANGE - RANDALL COUNTY INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11918	100.431	AMARILLO SOUTH INTERCHANGE - RANDALL COUNTY INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05163	100.431	AMARILLO SOUTH INTERCHANGE - RANDALL COUNTY INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12016	100.4272	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12016	100.4272	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12016	100.4272	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05263	100.4272	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11942	100.4217	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	100.3847	G11_022_1 345.00 - Hitchland Interchange 345KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.3816	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.3816	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.3816	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	100.3816	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & G12_001T 230.00 - G12_001_1 230.00 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11948	100.3815	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11948	100.3815	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11948	100.3815	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05199	100.3815	PLANT X STATION - TOLK STATION WEST 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1194	100.3529	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1194	100.3529	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.1194	100.3529	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05182	100.3529	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11939	100.3461	CHERRY1 - HARRINGTON STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11939	100.3461	CHERRY1 - HARRINGTON STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11939	100.3461	CHERRY1 - HARRINGTON STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05181	100.3461	CHERRY1 - HARRINGTON STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12078	100.3384	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12078	100.3384	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12078	100.3384	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05351	100.3384	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11942	100.3368	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11942	100.3368	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11942	100.3368	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05179	100.3368	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03173	100.3358	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11937	100.335	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11937	100.335	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11937	100.335	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05176	100.335	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12055	100.3333	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12055	100.3333	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12055	100.3333	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04936	100.3333	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & CHAVES COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.15008	100.3322	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.15008	100.3322	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	YOAKUM COUNTY INTERCHANGE (PENN C010585) 230/115/13.2KV TRANSFORMER CKT 2	150	0.15008	100.3322	TOLK STATION WEST - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12213	100.3265	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12213	100.3265	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12213	100.3265	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04655	100.3265	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	POTASH JUNCTION INTERCHANGE (GE M100747) 230/115/13.2KV TRANSFORMER CKT 1	150	0.0357	100.3215	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	POTASH JUNCTION INTERCHANGE (GE M100747) 230/115/13.2KV TRANSFORMER CKT 1	150	0.0357	100.3215	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	POTASH JUNCTION INTERCHANGE (GE M100747) 230/115/13.2KV TRANSFORMER CKT 1	150	0.0357	100.3215	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14069	100.3034	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14069	100.3034	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14069	100.3034	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.06145	100.3034	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1 &JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.3029	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.3029	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.3029	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	100.3029	G08-51 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03175	100.2919	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.2901	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.2901	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100.2901	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	100.2901	SAN JUAN MESA TAP - SAN JUAN MESA WIND GEN 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11945	100.2855	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11945	100.2855	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11945	100.2855	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05178	100.2855	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	100.2669	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	100.2669	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12074	100.2669	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.0523	100.2669	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 &CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11884	100.2621	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &TUCO INTERCHANGE - TUCO2 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11884	100.2621	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &TUCO INTERCHANGE - TUCO2 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11884	100.2621	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &TUCO INTERCHANGE - TUCO2 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05127	100.2621	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &TUCO INTERCHANGE - TUCO2 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11884	100.2619	TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11884	100.2619	TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11884	100.2619	TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05127	100.2619	TUCO INTERCHANGE - TUCO2 230.00 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11998	100.2444	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11998	100.2444	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11998	100.2444	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05241	100.2444	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.0326	100.2385	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03017	100.2385	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_034	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03017	100.2385	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_036	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03017	100.2385	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 &GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12961	100.2104	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12961	100.2104	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12961	100.2104	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04721	100.2104	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 &EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	DEAF SMITH REC-#20 - DEAF SMITH REC-#24 115KV CKT 1	99	0.14502	100.2043	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	DEAF SMITH REC-#20 - DEAF SMITH REC-#24 115KV CKT 1	99	0.03316	100.2043	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	DEAF SMITH REC-#20 - DEAF SMITH REC-#24 115KV CKT 1	99	0.03316	100.2043	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	DEAF SMITH REC-#20 - DEAF SMITH REC-#24 115KV CKT 1	99	0.03316	100.2043	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &BUFFALO 230.00 - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14306	100.2011	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 &BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14306	100.2011	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 &BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.14306	100.2011	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 &BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.07917	100.2011	PLANT X STATION - POTTER COUNTY INTERCHANGE 230KV CKT 1 &BUFFALO 230.00 - BUSHLAND INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12027	100.1869	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12027	100.1869	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12027	100.1869	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05122	100.1869	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - POTASH JUNCTION INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11609	100.1645	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11609	100.1645	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11609	100.1645	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04972	100.1645	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11994	100.163	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11994	100.163	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11994	100.163	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05239	100.163	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11937	100.1574	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11937	100.1574	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11937	100.1574	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05175	100.1574	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03452	100.1467	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	G12_035	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03115	100.1467	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0	1	18SP	G12_034	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03115	100.1467	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_036	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03115	100.1467	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 &TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_035	FROM->TO	PECOS INTERCHANGE (WH BCS15041) 230/115/13.2KV TRANSFORMER CKT 1	168	0.05536	100.1422	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_034	FROM->TO	PECOS INTERCHANGE (WH BCS15041) 230/115/13.2KV TRANSFORMER CKT 1	168	0.05536	100.1422	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_036	FROM->TO	PECOS INTERCHANGE (WH BCS15041) 230/115/13.2KV TRANSFORMER CKT 1	168	0.05536	100.1422	CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1 &PECOS INTERCHANGE - SEVEN RIVERS INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12053	100.135	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12053	100.135	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12053	100.135	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05303	100.135	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1 &ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11937	100.0992	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11937	100.0992	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11937	100.0992	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05293	100.0992	ROOSEVELT COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 2 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12408	100.0964	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12408	100.0964	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12408	100.0964	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05348	100.0964	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1 &G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0	1	23SP	G12_020	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	0.03492	100.0819	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0	1	23SP	G12_037	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	0.03245	100.0819	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 &JONES STATION - Jones Station Bus#2 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12322	100.0722	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12322	100.0722	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12322	100.0722	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05149	100.0722	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1 &LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11746	100.0545	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11746	100.0545	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11746	100.0545	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05028	100.0545	G07-48T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12868	100	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12868	100	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12868	100	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12604	100	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12604	100	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12604	100	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 &AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12572	100	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12572	100	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12572	100	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 &G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0	1	13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12359	100	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 &Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12359	100	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12359	100	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12194	100	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12194	100	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12194	100	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12086	100	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTER
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12086	100	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTER
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12086	100	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTER
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12086	100	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12086	100	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.12086	100	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	100	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05639	100	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & G10-46 230.00 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05482	100	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1 & CUNNINGHAM STATION - EDDY COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05458	100	Roosevelt County Interchange SOUTH - Roosevelt County Interchange SWITCH #4K33 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTER
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05458	100	Roosevelt County Interchange SOUTH - TOLK STATION EAST 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05277	100	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	100	G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1 & CHAVESCO 345.00 - G08-22 345.00 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05171	100	ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1 & AMOCO WASSON SWITCHING STATION - MUSTANG STATION 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.04707	100	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03175	100	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03175	100	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	99.9	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	99.9	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11933	99.9	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_035	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11919	99.9	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_034	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11919	99.9	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_036	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.11919	99.9	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05172	99.9	BUSHLAND INTERCHANGE - WILDOR2_JUS6230.00 230KV CKT 1 & ANTELOPE 1 - TUCO INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	ASGI_12_002	FROM->TO	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1	154	0.05139	99.9	PLANT X STATION - TOLK STATION EAST 230KV CKT 2 & G12-037 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	0		1 13SP	G12_035	TO->FROM	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1	160	0.04011	99.9	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_034	TO->FROM	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1	160	0.04011	99.9	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 13SP	G12_036	TO->FROM	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1	160	0.04011	99.9	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1 & Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.0326	99.9	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0		1 18SP	ASGI_12_002	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03108	99.9	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1 & Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	0	1	18SP	G12_035	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03017	99.9	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_034	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03017	99.9	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	0	1	18SP	G12_036	FROM->TO	GRAPEVINE INTERCHANGE (PENN 0257751) 230/115/13.2KV TRANSFORMER CKT 1	112	0.03017	99.9	Harrington Station East Bus - PRINGLE INTERCHANGE 230KV CKT 1 & GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1

J: Group 3 Dynamic Stability Analysis Report

See Mitsubishi report on next page.

Southwest Power Pool, Inc. (SPP)

DISIS-2012-002-2 (Group 3) Definitive Impact Study

Final Report

**PXE-0716
Revision #01**

August 2013

**Submitted By:
Mitsubishi Electric Power Products, Inc. (MEPPI)
Power Systems Engineering Services Department
Warrendale, PA**

Title: DISIS-2012-002-2 (Group 3) Definitive Impact Study: Final Report for PXE-0716
Date: August 2013
Author: Elizabeth C. Gall; Engineer I, Power Systems Engineering Dept. Elizabeth C. Gall
Reviewed: Nicholas W. Tenza; Engineer I, Power Systems Engineering Dept. Nicholas W. Tenza
Approved: Robert T. Hellested; Deputy Manager, Power Systems Engineering Dept. Robert T. Hellested

EXECUTIVE SUMMARY

SPP requested a Definitive Interconnection System Impact Study (DISIS). The DISIS required a Power Factor Analysis and a Stability Analysis detailing the impacts of the interconnecting project as shown in Table ES-1.

Table ES-1
Interconnection Project Evaluated

Request	Size (MW)	Turbine Model	Point of Interconnection (POI)
GEN-2012-024	180	Vestas V112-3.0MW	Clark County 345kV (539800)

SUMMARY OF STABILITY ANALYSIS

For the 2014 Summer and Winter Peak conditions, the Stability Analysis determined that there were no voltage violations or wind turbine tripping that occurs from interconnecting GEN-2012-024 at 100% output. Low voltage recovery was observed for several contingencies during the summer peak condition, but no voltages were observed to exceed 1.20 p.u. or fall below 0.70 p.u. at any time after the fault was cleared.

For the winter peak condition, low voltages were observed for several contingencies. For Contingency #25, 3 phase double circuit fault on the Thistle to Wichita 345 kV line, and Contingency #26, 3 phase double circuit fault on the Thistle to Clark County 345 kV line, there are low voltages observed that do not recover to 0.90 p.u. post-fault. After discussion with SPP, no mitigation was required for these double circuit faults.

SUMMARY OF POWER FACTOR ANALYSIS

The Power Factor Analysis shows that GEN-2012-024 has a power factor range of 0.3775 lagging (supplying) to 0.8504 lagging (supplying).

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SECTION 1: OBJECTIVES

The objective of this report is to provide Southwest Power Pool, Inc. (SPP) with the deliverables for the “GEN-2012-002-2 (Group 3) Definitive Impact Study.” SPP requested an Interconnection System Impact Study for GEN-2012-024, which requires a Power Factor Analysis, a Stability Analysis, and an Impact Study Report.

SECTION 2: BACKGROUND

The Siemens Power Technologies, Inc. PSS/E power system simulation program Version 32.2.0 was used for this study. SPP provided the stability database cases for summer peak and winter peak seasons and a list of contingencies to be examined. The model includes the study project and the previously queued projects as listed in Table 2-1 and Table 2-2, respectively. Refer to Appendix A for the steady-state and dynamic model data for the study project. A power flow one-line diagram of GEN-2012-024 interconnection project is shown in Figure 2-1.

The Power Factor analysis will determine the power factor at the point of interconnection for the wind interconnection project for pre-contingency and post-contingency conditions. Table 2-3 lists the contingencies developed from the three-phase fault definitions provided in the Group’s interconnection impact study request.

The Stability Analysis will determine the impacts of the new interconnecting project on the stability and voltage recovery of the nearby system 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 will be investigated. Three-phase and single-phase faults will be examined as listed in Table 2-3.

**Table 2-1
Interconnection Project Evaluated**

Request	Size (MW)	Turbine Model	Point of Interconnection (POI)
GEN-2012-024	180	Vestas V112-3.0MW	Clark County 345kV (539800)

Table 2-2
Previously Queued Nearby Interconnection Projects Included

Request	Size (MW)	Turbine Model	Point of Interconnection (POI)
GEN-2001-039A	104	GE 1.6MW	Shooting Star 115kV (539763)
GEN-2002-025A	150	GE 1.5 MW	Spearville 230kV (539695)
GEN-2004-014	154.5	GE 1.5 MW	Spearville 230kV (539695)
GEN-2005-012	250.7	Siemens 2.3MW	Spearville 345kV (531469)
GEN-2006-006	205.5	GE 1.5 MW	Spearville 345kV (531469)
GEN-2006-021	100	Clipper 2.5MW	Flat Ridge 138kV (539638)
GEN-2006-022	150	Clipper 2.5MW	Pratt 115kV (539687)
GEN-2007-038	200	Clipper 2.5MW	Spearville 345kV (531469)
GEN-2007-040	200.1	Siemens 2.3MW	Buckner 345kV (531501)
GEN-2008-018	405	GE 1.5 MW	Finney 345kV (523853)
GEN-2008-079	98.9	Siemens 2.3MW	Tap on Cudahy – Fort Dodge 115kV line (560229)
GEN-2008-124	200.1	Siemens 2.3MW	Spearville 345kV (531469)
GEN-2010-009	165.6	Siemens 2.3MW	Buckner 345kV (531501)
GEN-2010-015	200.1	Siemens 2.3MW	Spearville 345kV (531469)
GEN-2010-045	197.8	Siemens 2.3MW	Buckner 345kV (531501)
GEN-2010-061	179.4	Siemens 2.3MW	Tap on Spearville – Post Rock 345kV line (G11-017 POI, 560242)
GEN-2011-008	600	GE 1.6MW	Clark County 345kV (539800)
GEN-2011-016	200.1	Siemens 2.3MW	Spearville 345kV (531469)
GEN-2011-017	299	Siemens 2.3MW	Tap on Spearville – Post Rock 345kV line (G11-017 POI, 560242)
GEN-2011-023	299	Siemens 2.3MW	Clark County 345kV (539800)
GEN-2011-043	149.5	Siemens 2.3MW	Thistle 345kV (539801)
GEN-2011-044	149.5	Siemens 2.3MW	Thistle 345kV (539801)
GEN-2012-007	96/120	GENSAL	Tap on Rubart 115kV (562116)
GEN-2012-011	200	GE 1.6MW	Tap on Spearville – Post Rock 345kV line (G12-011POI, 562334)
ASGI-2012-006	20.74/21.21	GENSAL	Tap on Rolla – Hugoton 69kV (562114)

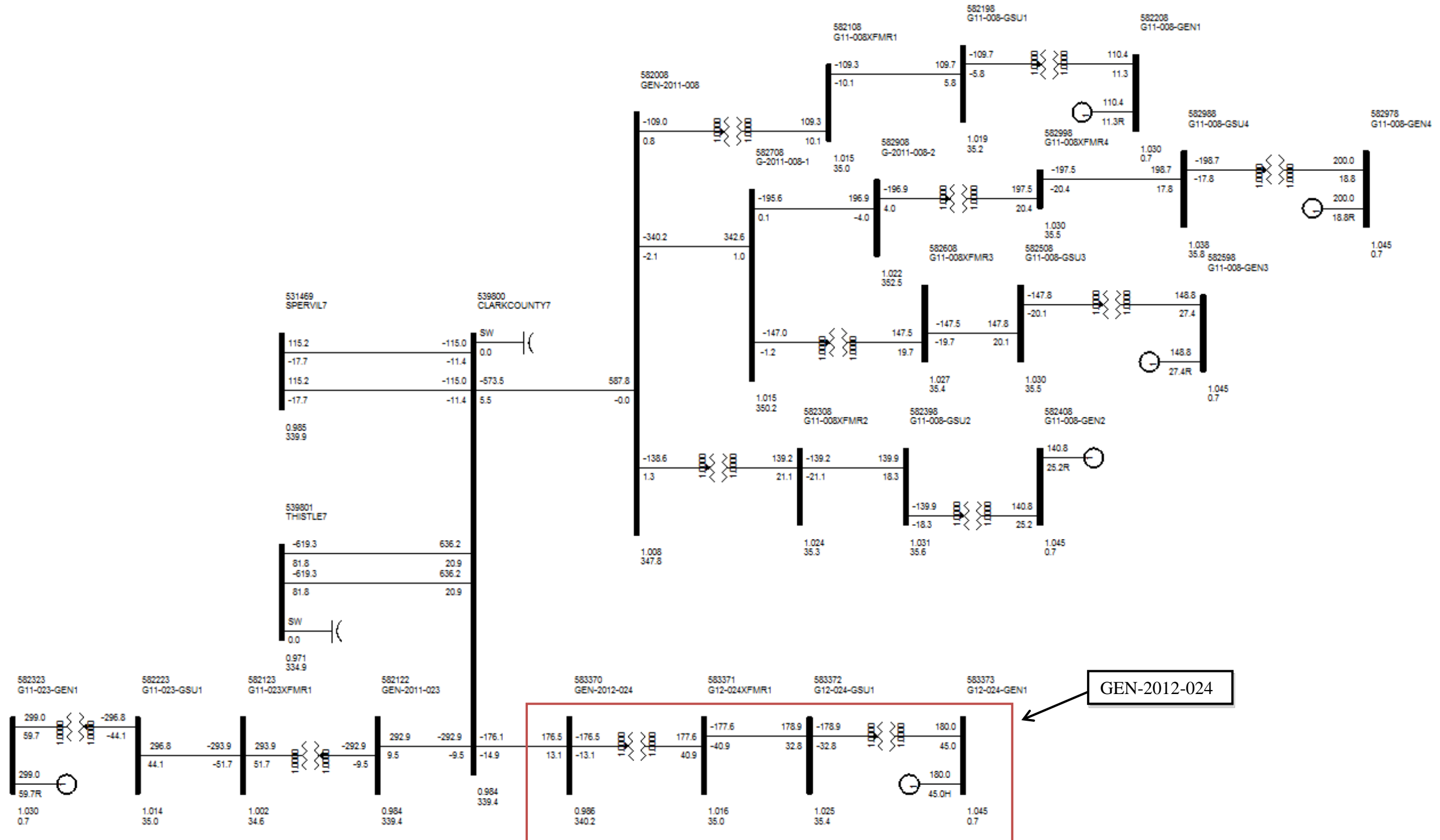


Figure 2-1. Power flow one-line diagram for interconnection project GEN-2012-024 (180 MW).

**Table 2-3
Case List with Contingency Description**

Ref. No.	Case Name	Description
1	FLT01-3PH	3 phase fault on the G11-017 POI (560242) to G12-011POI (562334) 345kV line, near G11-017 POI. a. Apply fault at the G11-017 POI 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.
2	FLT02-1PH	<i>Single phase fault and sequence like previous</i>
3	FLT03-3PH	3 phase fault on the G11-017 POI (560242) to Spearville (531469) 345kV line, near G11-017 POI. a. Apply fault at the G11-017 POI 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	FLT04-1PH	<i>Single phase fault and sequence like previous</i>
5	FLT05-3PH	3 phase fault on Postrock (530583) to Axtell (640065) 345kV line, near Postrock. a. Apply fault at the Postrock 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.
6	FLT06-1PH	<i>Single phase fault and sequence like previous</i>
7	FLT07-3PH	3 phase fault on Spearville (531469) to Buckner (531501) 345kV line, near Spearville. a. Apply fault at the Spearville 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	FLT08-1PH	<i>Single phase fault and sequence like previous</i>
9	FLT09-3PH	3 phase fault on Holcomb (531449) to Finney (523853) 345kV line, ckt1, near Holcomb. a. Apply fault at the Holcomb 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.
10	FLT10-1PH	<i>Single phase fault and sequence like previous</i>
11	FLT11-3PH	3 phase fault on Spearville (531469) to Clark County (539800) 345kV line, ckt1, near Spearville. a. Apply fault at the Spearville 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.
12	FLT12-1PH	<i>Single phase fault and sequence like previous</i>
13	FLT13-3PH	3 phase fault on Buckner (531501) to Holcomb (531449) 345kV line, near Buckner. a. Apply fault at the Buckner 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.
14	FLT14-1PH	<i>Single phase fault and sequence like previous</i>
15	FLT15-3PH	3 phase fault on Buckner (531501) to Beaver County (580500) 345kV line, near Buckner. a. Apply fault at the Buckner 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.
16	FLT16-1PH	<i>Single phase fault and sequence like previous</i>

Table 2-3 (Continued)
Case List with Contingency Description

Ref. No.	Case Name	Description
17	FLT17-3PH	3 phase fault on Thistle (539801) to Woodward (515375) 345kV line, ckt 1, near Thistle. a. Apply fault at the Thistle 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.
18	FLT18-1PH	<i>Single phase fault and sequence like previous</i>
19	FLT19-3PH	3 phase fault on Thistle (539801) to Wichita (532796) 345kV line, ckt1, near Thistle. a. Apply fault at the Thistle 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.
20	FLT20-1PH	<i>Single phase fault and sequence like previous</i>
21	FLT21-3PH	3 phase fault on Thistle (539801) to Clark County (539800) 345kV line, ckt 1, near Thistle. a. Apply fault at the Thistle 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	FLT22-1PH	<i>Single phase fault and sequence like previous</i>
23	FLT23-3PH	3 phase fault on Thistle (539801) to G12-016-TAP (562286) 345kV line, ckt 1, near Thistle. a. Apply fault at the Thistle 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.
24	FLT24-1PH	<i>Single phase fault and sequence like previous</i>
25	FLT25-3PH	3 phase fault on Thistle (539801) to Wichita (532796) 345kV line, ckt1&2, near Thistle. a. Apply fault at the Thistle 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.
26	FLT26-3PH	3 phase fault on Thistle (539801) to Clark County (539800) 345kV line, ckt 1&2, near Thistle. a. Apply fault at the Thistle 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.
27	FLT27-3PH	3 phase fault on Beaver County (580500) to Hitchland (523097) 345kV line, ckt 1&2, near Beaver County. a. Apply fault at the Beaver County 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.
28	FLT28-3PH	3 phase fault on Spearville (531469) to Clark County (539800) 345kV line, ckt 1&2, near Spearville. a. Apply fault at the Spearville 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.
29	FLT29-3PH	3 phase fault on the Thistle (539801) 345kV to Thistle (539804) 138kV/(539802) 13.8kV transformer near the 138kV bus. a. Apply fault at the Thistle 138kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
30	FLT30-3PH	3 phase fault on the Postrock (530583) 345kV to Postrock (530584) 138kV/(530673) 13.8kV transformer near the 138kV bus. a. Apply fault at the Postrock 138kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.

Table 2-3 (Continued)
Case List with Contingency Description

Ref. No.	Case Name	Description
31	FLT31-3PH	3 phase fault on the Spearville (531469) 345kV to Spearville (539695) 230kV/(531468) 13.8 transformer near the 230kV bus. a. Apply fault at the Spearville 230kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
32	FLT32-3PH	3 phase fault on Holcomb (531448) to Jones (531379) 115kV line, ckt1, near Holcomb. a. Apply fault at the Holcomb 115kV 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.
33	FLT33-1PH	<i>Single phase fault and sequence like previous</i>
34	FLT34-3PH	3 phase fault on Holcomb (531448) to Garden City (531445) 115kV line, ckt1, near Holcomb. a. Apply fault at the Holcomb 115kV 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.
35	FLT35-1PH	<i>Single phase fault and sequence like previous</i>
36	FLT36-3PH	3 phase fault on N. Ft. Dodge (539771) to Ft. Dodge (539671) 115kV line, ckt1, near N. Ft. Dodge. a. Apply fault at the N. Ft. Dodge 115kV 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.
37	FLT37-1PH	<i>Single phase fault and sequence like previous</i>
38	FLT38-3PH	3 phase fault on the Holcomb (531449) 345kV to Holcomb (531448) 115kV/(531450) 13.8kV transformer near the 115kV bus. a. Apply fault at the Holcomb 115kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
39	FLT39-3PH	3 phase fault on the N. Ft. Dodge (539771) to Spearville (539694) 115kV line, ckt1, near N. Ft. Dodge. a. Apply fault at the N. Ft. Dodge 115kV 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.
40	FLT40-1PH	<i>Single phase fault and sequence like previous</i>
41	FLT41-3PH	3 phase fault on Ft. Dodge (539671) to G08-079-Tap (560229) 115kV line, ckt1, near Ft. Dodge. a. Apply fault at the Ft. Dodge 115kV 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.
42	FLT42-1PH	<i>Single phase fault and sequence like previous</i>
43	FLT43-3PH	3 phase fault on the N. Ft. Dodge (539771) to SStarTP (539763) 115kV line, ckt1, near N. Ft. Dodge. a. Apply fault at the N. Ft. Dodge 115kV 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.
44	FLT44-1PH	<i>Single phase fault and sequence like previous</i>
45	FLT45-3PH	3 phase fault on the Kismet (539646) to Cudahy (539659) 115kV line, ckt1, near Kismet. a. Apply fault at the Kismet 115kV 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.
46	FLT46-1PH	<i>Single phase fault and sequence like previous</i>
47	FLT47-3PH	DELETED

Table 2-3 (Continued)
Case List with Contingency Description

Ref. No.	Case Name	Description
48	FLT48-1PH	<i>DELETED</i>
49	FLT49-3PH	<i>DELETED</i>
50	FLT50-1PH	<i>DELETED</i>
51	FLT51-3PH	3 phase fault on the Woodward (515375) to Border (523775) 345kV line, ckt 1, near Woodward. a. Apply fault at the Woodward 115kV 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.
52	FLT52-1PH	<i>Single phase fault and sequence like previous</i>
53	FLT53-3PH	3 phase fault on the Woodward (515375) to G11-051-TAP (562075) 345kV line, ckt 1, near Woodward. a. Apply fault at the Woodward 115kV 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.
54	FLT54-1PH	<i>Single phase fault and sequence like previous</i>
55	FLT55-3PH	3 phase fault on the Woodward (515375) to G12-016-TAP (562286) 345kV line, ckt 1, near Woodward. a. Apply fault at the Woodward 115kV 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.
56	FLT56-1PH	<i>Single phase fault and sequence like previous</i>
57	FLT57-3PH	3 phase fault on the Woodward (515375) to Beaver County (580500) 345kV line, ckt1, near Woodward. a. Apply fault at the Woodward 115kV 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.
58	FLT58-1PH	<i>Single phase fault and sequence like previous</i>
59	FLT59-3PH	3 phase fault on the Pioneer Tap (531392) to Sublette (531398) 115kV line, ckt 1, near Pioneer Tap. a. Apply fault at the Pioneer Tap 115kV 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.
60	FLT60-1PH	<i>Single phase fault and sequence like previous</i>
61	FLT61-3PH	3 phase fault on the Pioneer Tap (531392) to Plymell (531393) 115kV line, ckt1, near Pioneer Tap. a. Apply fault at the Pioneer Tap 115kV 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.
62	FLT62-1PH	<i>Single phase fault and sequence like previous</i>
63	FLT63-3PH	3 phase fault on the Plymell (531393) to Holcomb (531448) 115kV line, ckt 1, near Plymell. a. Apply fault at the Plymell 115kV 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.
64	FLT64-1PH	<i>Single phase fault and sequence like previous</i>
65	FLT65-3PH	3 phase fault on the Plymell (531393) to Pierceville (531408) 115kV line, ckt1, near Plymell. a. Apply fault at the Plymell 115kV 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 2-3 (Continued)
Case List with Contingency Description

Ref. No.	Case Name	Description
66	FLT66-1PH	<i>Single phase fault and sequence like previous</i>
67	FLT67-3PH	3 phase fault on the Pioneer Tap (531392) to Satanta Tap (531396) 115kV line, ckt1, near Pioneer Tap. a. Apply fault at the Pioneer Tap 115kV 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.
68	FLT68-1PH	<i>Single phase fault and sequence like previous</i>
69	FLT69-3PH	3 phase fault on the Pioneer Tap (531392) to SAT-TAP (531396) 115kV line, ckt1, near Pioneer Tap. a. Apply fault at the Pioneer Tap 115kV 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.
70	FLT70-1PH	<i>Single phase fault and sequence like previous</i>
71	FLT71-3PH	3 phase fault on the Fletcher (531420) to Holcomb (531448) 115kV line, ckt 1, near Fletcher. a. Apply fault at the Fletcher 115kV 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	FLT72-1PH	<i>Single phase fault and sequence like previous</i>
73	FLT73-3PH	3 phase fault on Holcomb (531449) to Setab (531465) 345kV line, near Holcomb. a. Apply fault at the Holcomb 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	FLT74-1PH	<i>Single phase fault and sequence like previous</i>
75	FLT75-3PH	3 phase fault on Setab (531465) to Mingo (531451) 345kV line, near Setab. a. Apply fault at the Setab 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.
76	FLT76-1PH	<i>Single phase fault and sequence like previous</i>
77	FLT77-3PH	3 phase fault on Mingo (531451) to Red Willow (640325) 345kV line, ckt 1, near Mingo. a. Apply fault at the Mingo 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.
78	FLT78-1PH	<i>Single phase fault and sequence like previous</i>
79	FLT79-3PH	3 phase fault on Postrock (530583) to G12-011-TAP (562334) 345kV line ckt1, near Postrock. a. Apply fault at the Postrock 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.
80	FLT80-1PH	<i>Single phase fault and sequence like previous</i>

SECTION 3: STABILITY ANALYSIS

The objective of the stability analysis was to determine the impacts of the new wind farm on the stability and voltage recovery on the SPP transmission system. If problems with stability or voltage recovery were identified, the need for reactive compensation or system upgrades were investigated.

Approach

Both winter peak and summer peak power flows provided by SPP were examined prior to the Stability Analysis to ensure they contained the proposed study project (GEN-2012-024) modeled at 100% of the nameplate rating and any previously queued projects listed in Table 2-2. There was no suspect power flow data in the study area. The dynamic datasets were also verified and stable initial system conditions (i.e., “flat lines”) were achieved. Three-phase and single line-to-ground faults listed in Table 2-3 were examined. Single-phase fault impedances were calculated to result in a voltage of approximately 60% of the pre-fault voltage. Refer to Table 3-1 for a list of the calculated single-phase fault impedances used for this analysis.

**Table 3-1
Calculated Single-Phase Fault Impedances**

Ref. No.	Casename	Single-Phase Fault Impedance (MVA)	
		Summer Peak	Winter Peak
2	FLT02-1PH	4437.5	4234.4
4	FLT04-1PH	4437.5	4234.4
6	FLT06-1PH	2812.5	2812.5
8	FLT08-1PH	6875.0	6468.8
10	FLT10-1PH	4843.8	4843.8
12	FLT12-1PH	6875.0	6468.8
14	FLT14-1PH	5250.0	5250.0
16	FLT16-1PH	5250.0	5250.0
18	FLT18-1PH	5656.3	5250.0
20	FLT20-1PH	5656.3	5250.0
22	FLT22-1PH	5656.3	5250.0
24	FLT24-1PH	5656.3	5250.0
33	FLT33-1PH	3828.1	3218.8
35	FLT35-1PH	3828.1	3218.8
37	FLT37-1PH	2000.0	1875.0
40	FLT40-1PH	2000.0	1875.0
42	FLT42-1PH	2000.0	1875.0
44	FLT44-1PH	2000.0	1875.0
46	FLT46-1PH	656.3	562.5
52	FLT52-1PH	8093.8	8093.8
54	FLT54-1PH	8093.8	8093.8
56	FLT56-1PH	8093.8	8093.8
58	FLT58-1PH	8093.8	8093.8
60	FLT60-1PH	937.5	875.0
62	FLT62-1PH	937.5	875.0
64	FLT64-1PH	1250.0	1062.5
66	FLT66-1PH	1250.0	1062.5
68	FLT68-1PH	937.5	875.0
70	FLT70-1PH	937.5	875.0
72	FLT72-1PH	1000.0	1000.0
74	FLT74-1PH	4843.8	4843.8
76	FLT76-1PH	3218.8	3218.8
78	FLT78-1PH	2406.3	2406.3
80	FLT80-1PH	2812.5	2812.5

Bus voltages and previously queued generation in the study area were monitored in addition to the bus voltages in the following areas:

- 520 AEPW
- 524 OKGE
- 525 WFEC
- 526 SPS
- 531 MIDW
- 534 SUNC
- 536 WERE
- 640 NPPD
- 645 OPPD
- 650 LES
- 652 WAPA

The results of the analysis determined if reactive compensation or system upgrades were required to obtain acceptable system performance. If additional reactive compensation was required, the size, type, and location were determined. The proposed reactive reinforcements would ensure the wind farm meets FERC Order 661A low voltage requirements and return the wind farm to its pre-disturbance operating voltage. If the results indicated the need for fast responding reactive support, dynamic support such as an SVC or STATCOM was investigated. If tripping of the prior queued projects was observed during the stability analysis (for under/over voltage or under/over frequency) the simulations were re-ran with the prior queued project's voltage and frequency tripping disabled.

Results

Refer to Table 3-2 for a summary of the Stability Analysis results for the cases listed in Table 2-3.

**Table 3-2
Stability Analysis Summary of Results**

Ref. No.	Casename	Summer		Winter	
		Stable?	Acceptable Voltages?	Stable?	Acceptable Voltages?
1	FLT01-3PH	Yes	Yes	Yes	Yes
2	FLT02-1PH	Yes	Yes	Yes	Yes
3	FLT03-3PH	Yes	Yes	Yes	Yes
4	FLT04-1PH	Yes	Yes	Yes	Yes
5	FLT05-3PH	Yes	Yes	Yes	Yes
6	FLT06-1PH	Yes	Yes	Yes	Yes
7	FLT07-3PH	Yes	Yes	Yes	Yes
8	FLT08-1PH	Yes	Yes	Yes	Yes
9	FLT09-3PH	Yes	Yes	Yes	Yes
10	FLT10-1PH	Yes	Yes	Yes	Yes
11	FLT11-3PH	Yes	Yes	Yes	Yes
12	FLT12-1PH	Yes	Yes	Yes	Yes
13	FLT13-3PH	Yes	Yes	Yes	Yes
14	FLT14-1PH	Yes	Yes	Yes	Yes
15	FLT15-3PH	Yes	Yes	Yes	Yes
16	FLT16-1PH	Yes	Yes	Yes	Yes
17	FLT17-3PH	Yes	Yes	Yes	Yes
18	FLT18-1PH	Yes	Yes	Yes	Yes
19	FLT19-3PH	Yes	Yes	Yes	Yes
20	FLT20-1PH	Yes	Yes	Yes	Yes
21	FLT21-3PH	Yes	Yes	Yes	Yes
22	FLT22-1PH	Yes	Yes	Yes	Yes
23	FLT23-3PH	Yes	Yes	Yes	Yes
24	FLT24-1PH	Yes	Yes	Yes	Yes
25	FLT25-3PH	Yes	Yes	Yes	No ¹
26	FLT26-3PH	Yes	Yes	Yes	No ¹

¹Note: Double circuit fault at Thistle 345 kV, no mitigation required. Bus voltages below 0.9 p.u.

Table 3-2 (Continued)
Stability Analysis Summary of Results

Ref. No.	Casename	Summer		Winter	
		Stable?	Acceptable Voltages?	Stable?	Acceptable Voltages?
27	FLT27-3PH	Yes	Yes	Yes	Yes
28	FLT28-3PH	Yes	Yes	Yes	Yes
29	FLT29-3PH	Yes	Yes	Yes	Yes
30	FLT30-3PH	Yes	Yes	Yes	Yes
31	FLT31-3PH	Yes	Yes	Yes	Yes
32	FLT32-3PH	Yes	Yes	Yes	Yes
33	FLT33-1PH	Yes	Yes	Yes	Yes
34	FLT34-3PH	Yes	Yes	Yes	Yes
35	FLT35-1PH	Yes	Yes	Yes	Yes
36	FLT36-3PH	Yes	Yes	Yes	Yes
37	FLT37-1PH	Yes	Yes	Yes	Yes
38	FLT38-3PH	Yes	Yes	Yes	Yes
39	FLT39-3PH	Yes	Yes	Yes	Yes
40	FLT40-1PH	Yes	Yes	Yes	Yes
41	FLT41-3PH	Yes	Yes	Yes	Yes
42	FLT42-1PH	Yes	Yes	Yes	Yes
43	FLT43-3PH	Yes	Yes	Yes	Yes
44	FLT44-1PH	Yes	Yes	Yes	Yes
45	FLT45-3PH	Yes	Yes	Yes	Yes
46	FLT46-1PH	Yes	Yes	Yes	Yes
51	FLT51-3PH	Yes	Yes	Yes	Yes
52	FLT52-1PH	Yes	Yes	Yes	Yes
53	FLT53-3PH	Yes	Yes	Yes	Yes
54	FLT54-1PH	Yes	Yes	Yes	Yes
55	FLT55-3PH	Yes	Yes	Yes	Yes

Table 3-2 (Continued)
Stability Analysis Summary of Results

Ref. No.	Casename	Summer		Winter	
		Stable?	Acceptable Voltages?	Stable?	Acceptable Voltages?
56	FLT56-1PH	Yes	Yes	Yes	Yes
57	FLT57-3PH	Yes	Yes	Yes	Yes
58	FLT58-1PH	Yes	Yes	Yes	Yes
59	FLT59-3PH	Yes	Yes	Yes	Yes
60	FLT60-1PH	Yes	Yes	Yes	Yes
61	FLT61-3PH	Yes	Yes	Yes	Yes
62	FLT62-1PH	Yes	Yes	Yes	Yes
63	FLT63-3PH	Yes	Yes	Yes	Yes
64	FLT64-1PH	Yes	Yes	Yes	Yes
65	FLT65-3PH	Yes	Yes	Yes	Yes
66	FLT66-1PH	Yes	Yes	Yes	Yes
67	FLT67-3PH	Yes	Yes	Yes	Yes
68	FLT68-1PH	Yes	Yes	Yes	Yes
69	FLT69-3PH	Yes	Yes	Yes	Yes
70	FLT70-1PH	Yes	Yes	Yes	Yes
71	FLT71-3PH	Yes	Yes	Yes	Yes
72	FLT72-1PH	Yes	Yes	Yes	Yes
72	FLT72-1PH	Yes	Yes	Yes	Yes
73	FLT73-3PH	Yes	Yes	Yes	Yes
74	FLT74-1PH	Yes	Yes	Yes	Yes
75	FLT75-3PH	Yes	Yes	Yes	Yes
76	FLT76-1PH	Yes	Yes	Yes	Yes
77	FLT77-3PH	Yes	Yes	Yes	Yes
78	FLT78-1PH	Yes	Yes	Yes	Yes
79	FLT79-3PH	Yes	Yes	Yes	Yes
80	FLT80-1PH	Yes	Yes	Yes	Yes

The Stability Analysis determined that there was no wind turbine tripping that occurs from interconnecting GEN-2012-024 at 100% output.

Summer Peak Summary

For the summer peak condition, the Stability Analysis determined that there was no wind turbine tripping that occurs from interconnecting GEN-2012-024 at 100% output. Low voltage recovery was observed for several contingencies during summer peak conditions. No voltages were observed to exceed 1.20 p.u. or fall below 0.70 p.u. at any time after the fault was cleared. Contingency #15 (FLT15-3PH), which is a 3 phase fault on the Buckner to Beaver County 345 kV line, is a representative worst case for summer peak conditions. Refer to Figure 3-1 for a response plot of select bus voltages during Contingency #15 (FLT15-3PH).

Winter Peak Summary

For the winter peak condition, the Stability Analysis determined that there was no wind turbine tripping that occurs from interconnecting GEN-2012-024 at 100% output. Low voltage recovery was observed for several contingencies during winter peak conditions. Bus voltages below 0.90 p.u. were observed for the following contingencies during winter peak conditions:

- Contingency #25: 3 phase fault on the Thistle to Wichita 345 kV line, ckt 1 and 2
- Contingency #26: 3 phase fault on the Thistle to Clark County 345 kV line, ckt 1 and 2

For Contingency #25, 3 phase double circuit fault on the Thistle to Wichita 345 kV line, and Contingency #26, 3 phase double circuit fault on the Thistle to Clark County 345 kV line, there are low voltages observed that do not recover to 0.90 p.u. post-fault. Contingency #26 observed bus voltages of below 0.70 p.u. after the fault was cleared. After discussion with SPP, no mitigation was required for these double circuit faults. Refer to Figure 3-2 for a response plot of select bus voltages during Contingency #25 (FLT25-3PH) for winter peak conditions.

Refer to Appendix B and Appendix C for a complete list of plots for all contingencies for summer peak and winter peak conditions, respectively.

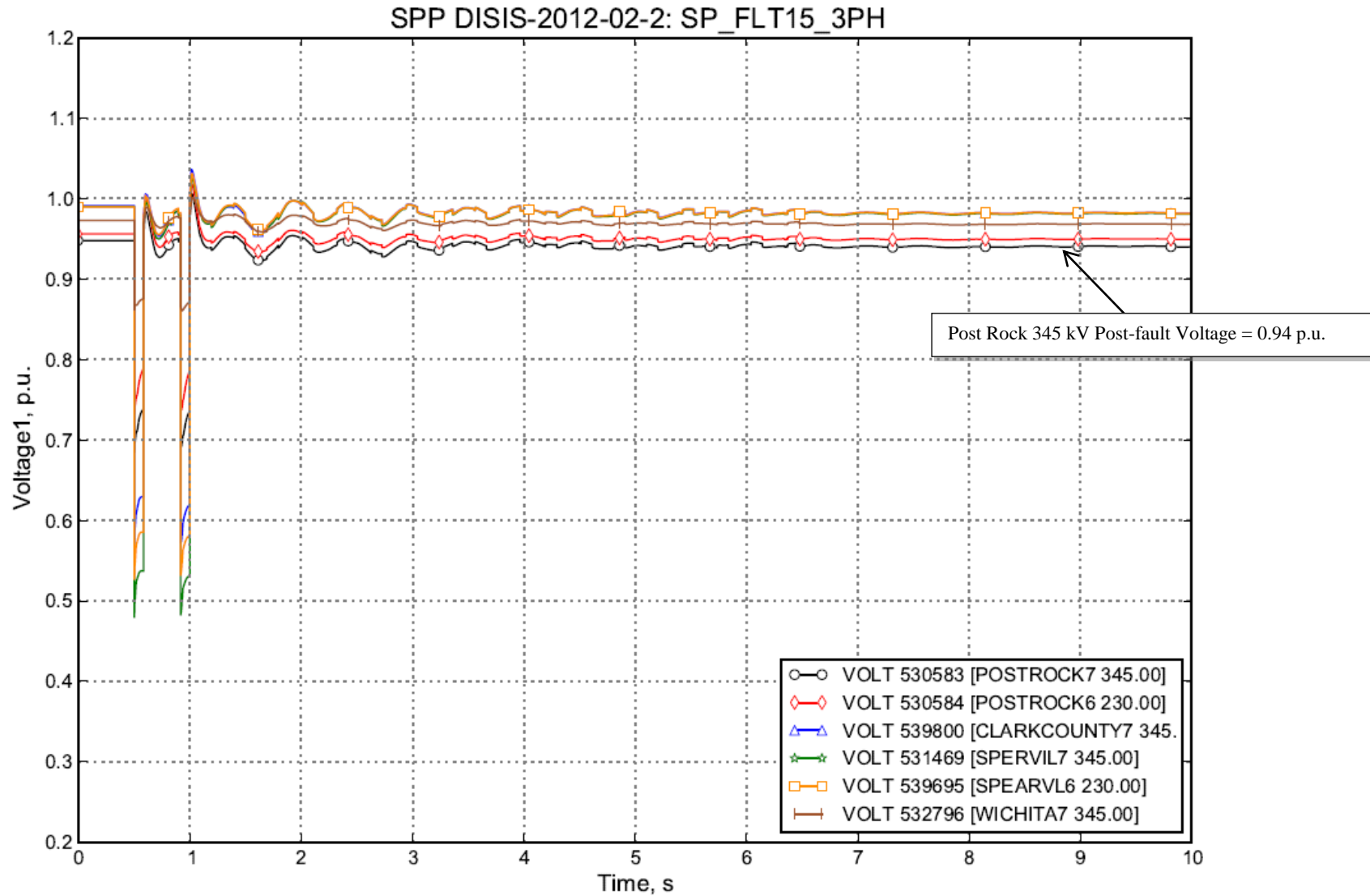


Figure 3-1. Response of select bus voltages during Contingency #15 (FLT15-3PH) for summer peak conditions.

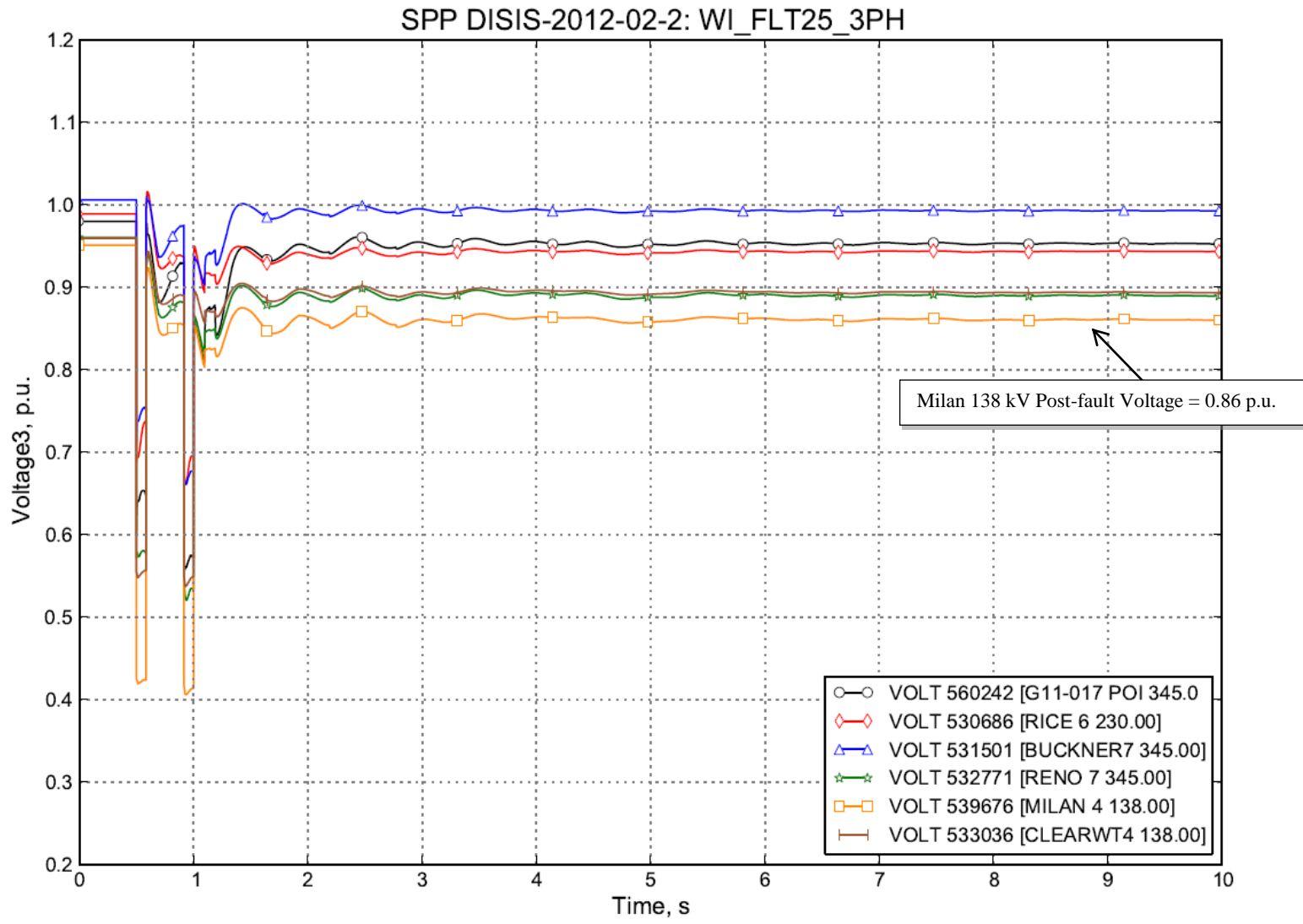


Figure 3-2. Response of select bus voltages during Contingency #25 (FLT25-3PH) for winter peak conditions.

SECTION 4: POWER FACTOR ANALYSIS

The objective of this task is to quantify the power factor at the point of interconnection for the wind farm during base case and system contingencies. SPP transmission planning practice requires interconnecting generation projects to maintain the power factor (pf) at the Point of Interconnection (POI) near unity for system intact conditions and within +/- 0.95 pf for post-contingency conditions. This is analyzed by having the wind farm maintain a prescribed voltage schedule at the point of interconnection of 1.0 p.u. voltage, or if the pre-project voltage is higher than 1.0 p.u., to maintain the pre-project voltage schedule.

Both winter peak and summer peak power flows provided by SPP were examined prior to the Power Factor Analysis to ensure they contained the proposed study project modeled at 100% of the nameplate rating and any previously queued projects listed in Table 2-2. There was no suspect power flow data in the study area. The proposed study project and any previously queued projects at the same point of interconnection were turned off during the power factor analysis. The wind farm(s) were then replaced by a generator modeled at the high side bus with the same real power (MW) capability as the wind farm(s) and open limits for the reactive power set points (Mvar). The generator was set to hold the POI scheduled bus voltage. Contingencies from the three-phase fault definitions provided in Table 2-3 were then applied and the reactive power required to maintain the bus voltage was recorded.

4.1 Study Project – GEN-2012-024

Approach

The study project (GEN-2012-024) was disabled and a generator was placed at the study project's point of interconnect bus. The generator was modeled with $P_{GEN} = 180$ MW, $Q_{Min} = -9999$ Mvar, and $Q_{Max} = 9999$ Mvar. All buses and transformers connected from the study project's POI bus to the GEN-2012-024 generator were disabled. The pre-project voltage at the POI (Clark County 345 kV - Bus 539800) for the summer peak condition is 0.991 p.u. and for the winter peak condition is 0.983 p.u. Therefore, the scheduled voltage for the POI was set to 1.0 p.u. for both summer peak and winter peak conditions.

Results

The power factor was calculated for summer and winter peak conditions. Table 4-1 shows the power factor results for GEN-2012-024. Note that a positive Q (Mvar) output illustrates that the generator is absorbing reactive power from the system, implying a leading power factor; a negative Q (Mvar) illustrates that the generator is supplying reactive power to the system, implying a lagging power factor.

Table 4-1
Power Factor Analysis: GEN-2012-024 (P_{GEN}=180 MW)*

Power Factor Analysis						
Power Factor Analysis: GEN-2012-024 (Pgen=180 MW)						
Case	Summer Peak			Winter Peak		
	Power Factor		Q** (MVAR)	Power Factor		Q** (MVAR)
Base	0.8186	Lagging	-126.27	0.6064	Lagging	-236.01
C1	0.5869	Lagging	-248.32	0.4401	Lagging	-367.27
C3	0.8259	Lagging	-122.90	0.6697	Lagging	-199.61
C5	0.6513	Lagging	-209.70	0.4627	Lagging	-344.90
C7	0.7840	Lagging	-142.54	0.5307	Lagging	-287.46
C9	0.8504	Lagging	-111.35	0.6151	Lagging	-230.72
C11	0.8328	Lagging	-119.66	0.6372	Lagging	-217.74
C13	0.8164	Lagging	-127.32	0.5816	Lagging	-251.79
C15	0.6101	Lagging	-233.79	0.4491	Lagging	-358.12
C17	0.7355	Lagging	-165.80	0.5288	Lagging	-288.93
C19	0.7753	Lagging	-146.62	0.5592	Lagging	-266.82
C21	0.6223	Lagging	-226.41	0.4800	Lagging	-328.99
C23	0.7288	Lagging	-169.12	0.5245	Lagging	-292.18
C29	0.8017	Lagging	-134.22	0.5879	Lagging	-247.66
C30	0.7453	Lagging	-161.00	0.5565	Lagging	-268.70
C31	0.8239	Lagging	-123.81	0.6117	Lagging	-232.80
C32	0.8176	Lagging	-126.76	0.6057	Lagging	-236.49
C34	0.8189	Lagging	-126.17	0.6053	Lagging	-236.69
C36	0.8184	Lagging	-126.39	0.6062	Lagging	-236.13
C38	0.8125	Lagging	-129.14	0.6219	Lagging	-226.64
C39	0.8184	Lagging	-126.40	0.6051	Lagging	-236.82
C41	0.8245	Lagging	-123.54	0.6141	Lagging	-231.33
C43	0.8166	Lagging	-127.25	0.6055	Lagging	-236.61
C45	0.7974	Lagging	-136.24	0.5835	Lagging	-250.50
C51	0.8186	Lagging	-126.27	0.6064	Lagging	-236.01
C53	0.5649	Lagging	-262.94	0.3855	Lagging	-430.78
C55	0.8098	Lagging	-130.40	0.5769	Lagging	-254.85
C57	0.7331	Lagging	-166.98	0.5391	Lagging	-281.18
C59	0.8186	Lagging	-126.27	0.6064	Lagging	-236.01
C61	0.8179	Lagging	-126.65	0.6073	Lagging	-235.46
C63	0.8222	Lagging	-124.59	0.6076	Lagging	-235.29
C65	0.8043	Lagging	-133.00	0.6064	Lagging	-236.01
C67	0.8177	Lagging	-126.70	0.6065	Lagging	-235.99
C69	0.8177	Lagging	-126.70	0.6065	Lagging	-235.99
C71	0.8194	Lagging	-125.91	0.6072	Lagging	-235.57
C73	0.7214	Lagging	-172.78	0.5577	Lagging	-267.88
C75	0.6603	Lagging	-204.74	0.5224	Lagging	-293.83
C77	0.6452	Lagging	-213.14	0.4913	Lagging	-319.12
C79	0.4929	Lagging	-317.75	0.3775	Lagging	-441.57

*The scheduled voltage for the POI (Clark County 345 kV) was 1.0 p.u. for summer peak and winter peak conditions.

**A positive Q (Mvar) output illustrates the generator is absorbing Mvars from the system, which implies a leading power factor; negative Q (Mvar) output shows the generator is supplying Mvars to the system implying a lagging power factor.

Summary

The Power Factor Analysis shows that for the 2014 Summer Peak case GEN-2012-024 has a power factor range of 0.4929 lagging (supplying) to 0.8504 lagging (supplying), and for the 2014 Winter Peak case GEN-2012-024 has a power factor range of 0.3775 lagging (supplying) to 0.6697 lagging (supplying).

4.2 Overall Summary

The Power Factor Analysis shows that GEN-2012-024 has a power factor range of 0.3775 lagging (supplying) to 0.8504 lagging (supplying).

SECTION 5: CONCLUSIONS

Stability Analysis

For the 2014 Summer and Winter Peak conditions, the Stability Analysis determined that there were no voltage violations or wind turbine tripping that occurs from interconnecting GEN-2012-024 at 100% output. Low voltage recovery was observed for several contingencies during the summer peak condition, but no voltages were observed to exceed 1.20 p.u. or fall below 0.70 p.u. at any time after the fault was cleared.

For the winter peak condition, low voltages were observed for several contingencies. For Contingency #25, 3 phase double circuit fault on the Thistle to Wichita 345 kV line, and Contingency #26, 3 phase double circuit fault on the Thistle to Clark County 345 kV line, there are low voltages observed that do not recover to 0.90 p.u. post-fault. After discussion with SPP, no mitigation was required for these double circuit faults.

Power Factor Analysis

The Power Factor Analysis shows that GEN-2012-024 has a power factor range of 0.3775 lagging (supplying) to 0.8504 lagging (supplying).

K: Group 6 Dynamic Stability Analysis Report

See Excel Engineering report on next page.

SPP DISIS-2012-002 Group 6 Definitive Impact Restudy

Final Report for
Southwest Power Pool

Prepared by:
Excel Engineering, Inc.
Project # 130216

July 15, 2013

Principal Contributors:

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0. Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the Laws of the States of **New Mexico and Texas**.

William Quaintance
New Mexico License Number 19505
Texas License Number 104268

Minnesota Excel Engineering, Inc.
Texas Firm License Number 7970

1. Background and Scope

The DISIS-2012-002 Group 6 Definitive Impact Restudy is a generation interconnection study performed by Excel Engineering Inc. for its non-affiliated client, Southwest Power Pool (SPP). Its purpose is to study the impacts of interconnecting the projects shown in Table 1-1. The in-service date assumed for the generation addition was 2014.

Table 1-1. Interconnection Requests Evaluated in this Study

Request	Size (MW)	Generator Type	Point of Interconnection	Gen Buses
ASGI-2012-002	18.1	Vestas V82	Clovis 115kV (524808)	583280
GEN-2012-020	477.1	GE 1.68MW	Tuco 230kV (525830)	583343 583346
GEN-2012-034	7 MW increase	GENROU	Mustang 230kV (527151)	527164
GEN-2012-035	7 MW increase	GENROU	Mustang 230kV (527151)	527165
GEN-2012-036	7 MW increase	GENROU	Mustang 230kV (527151)	583080
GEN-2012-037	196 Summer 203 Winter	GENROU	Tuco 345kV (525832)	583453

The prior-queued requests shown in Table 1-2 were included in this study and dispatched at 100% of rated capacity (except as noted *).

Table 1-2. Nearby Interconnection Requests Already in the Queue

Request	Size (MW)	Generator Type	Point of Interconnection	Gen Buses
GEN-2001-033	180	Mitsubishi 1000	San Juan Mesa 230kV (524885)	527407 to 527421
GEN-2001-036	80	CIMTR	Norton 115kV (524502)	524485
GEN-2006-018	170	GENSAL	Tuco 230kV (525830)	525841 525842 525843
GEN-2008-008	60	GE 1.5MW	Graham 69kV (526693)	579388
GEN-2008-009	60	GE 1.5MW	San Juan Mesa 230kV (524885)	579392 579393

SPP DISIS-2012-002 Group 6 Definitive Impact Restudy

Request	Size (MW)	Generator Type	Point of Interconnection	Gen Buses
GEN-2008-022	300	GE 2.5MW	Tap on Eddy County – Tolk 345kV line (G08-022-POI, 560007)	577100 577110 577120
GEN-2009-067S	20	Emerson 0.5MW	Seven Rivers 69kV (528093)	575153
GEN-2010-006	180 Summer * 205 Winter	GENROU	Jones_bus2 230kV (526337)	526333
ASGI-2010-010	42	GENSAL	Lovington 115kV (528334)	528331
ASGI-2010-020	30	Nordex 2.5MW	Tap LE-Tatum to LE-Crossroads 69kV (AS10-020-POI, 560360)	580088
GEN-2010-020	20	Emerson 0.5MW	Roswell 69kV (527563)	580101
ASGI-2010-021	15	Mitsubishi 1000A	Tap LE-Saundrtp to LE-Anderson 69kV (ASGI-021-POI, 560364)	580083
GEN-2010-046	56	GENSAL	Tuco 230kV (525830)	580043
GEN-2010-058	20	Emerson 0.5MW	Chaves County 115kV (527482)	581158
ASGI-2011-001	27.3	Suzlon 2.1MW	Lovington 115kV (528334)	575161
ASGI-2011-003	10	Sany 2.0MW	Hendricks 69kV (525943)	525942
GEN-2011-025	80	GE 1.6MW	Tap on Floyd County - Crosby County 115kV line (G11-025-POI, 562004)	581140
GEN-2011-045	180 Summer * 205 Winter	GENROU	Jones_bus2 230kV (526337)	526334
GEN-2011-046	23 Summer * 27 Winter	GENROU	Quay County 115kV (524472)	524471
GEN-2011-048	165 Summer 175 Winter	GENROU	Mustang 230kV (527151)	583080
ASGI-2011-004	19.2	Vestas V82	Crosby 69kV (525915)	583190
GEN-2012-001	61.2	CCWE 3.6MW	Tap Grassland to Borden 230kV (562089)	583200
GEN-2012-008	40 MW increase	GENROU	Mustang 115kV (527146)	527161 527162
GEN-2012-009	15 MW increase	GENROU	Mustang 230kV (527151)	527164
GEN-2012-010	15 MW increase	GENROU	Mustang 230kV (527151)	527165

* Actual Winter Rating is shown, but the units were dispatched at 0 MW for this study.

The study included stability analysis of each proposed interconnection request. Contingencies that resulted in a prior-queued project tripping off-line, if any, were re-run with the prior-queued

project's voltage and frequency tripping relays disabled. A power factor analysis was performed for the wind and solar farms in Table 1-1.

A transient voltage data scan was completed to verify any bus voltages outside the bandwidth of 0.70 per unit to 1.20 per unit after the disturbance was cleared.

ATC (Available Transfer Capability) studies were not performed as part of this study. These studies will be required at the time transmission service is actually requested. Additional transmission upgrades may be required based on that analysis.

Study assumptions in general have been based on Excel's knowledge of the electric power system and on the specific information and data provided by SPP. The accuracy of the conclusions contained within this study is sensitive to the assumptions made with respect to generation additions and transmission improvements being contemplated. Changes in the assumptions of the timing of other generation additions or transmission improvements will affect this study's conclusions.

2. Executive Summary

The DISIS-2012-002 Group 6 Definitive Impact Restudy evaluated the impacts of interconnecting the Table 1-1 study projects to the SPP transmission system.

The stability results showed that ASGI-2012-002 (Vestas V82 wind turbines) needs to have the LVRT (Low Voltage Ride Through) Option on the wind generators. Without LVRT, the Vestas generators tripped due to low voltage for several faults in both summer and winter cases.

For the C3 fault with prior outage of the Tolk-Roosevelt #1 230 kV line and a fault on the Tolk-Roosevelt #2 line, ASGI-2012-002 tripped off line due to *high* voltage even with the LVRT option enabled. This fault results in high voltages throughout the Roosevelt area.

For the fault on the Tolk 345/230 kV transformer (FLT68), the computer simulation did not converge for several iterations in the winter case. The fault was revised so that the Tolk to GEN-2008-022 POI 345 kV line tripped out when the Tolk 345/230 kV transformer tripped (FLT68R). For the revised tripping scheme the performance was satisfactory. Currently the line and transformer trip together so the revised scheme represents the existing system.

Final power factor requirements for the Group 6 projects are listed in Table 4-2.

Any change in system or plant models or assumptions could change these results.

3. Study Development and Assumptions

3.1 Simulation Tools

The Siemens Power Technologies, Inc. PSS/E power system simulation program Version 32.1 was used in this study.

3.2 Models Used

SPP provided its latest stability database cases for both summer and winter peak seasons. These cases included the study and prior-queued projects. Power flow one-line diagrams of the study projects are shown in Figure 3-1 through Figure 3-4.

The study plant transmission lines and substation transformers are modeled explicitly in the power flow cases. The wind and solar collector systems and generators are modeled as a single equivalent for each substation transformer. Steady-state and dynamic model data for the study plants are given in Appendix D.

One-line diagrams of the SPP 345 and 230 kV systems in the Group 6 area are shown in Appendix F.

No special modeling is required of line relays in these cases, except for the special modeling related to the wind and solar generation tripping.

3.3 Monitored Facilities

All generators and transmission buses in Areas 520, 524, 525, 526, 531, 534, and 536 were monitored.

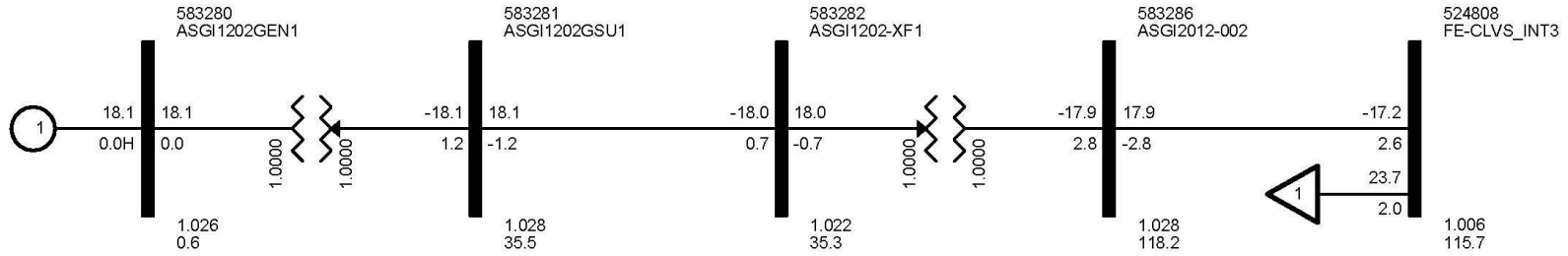


Figure 3-1. Power Flow One-line for ASGI-2012-002

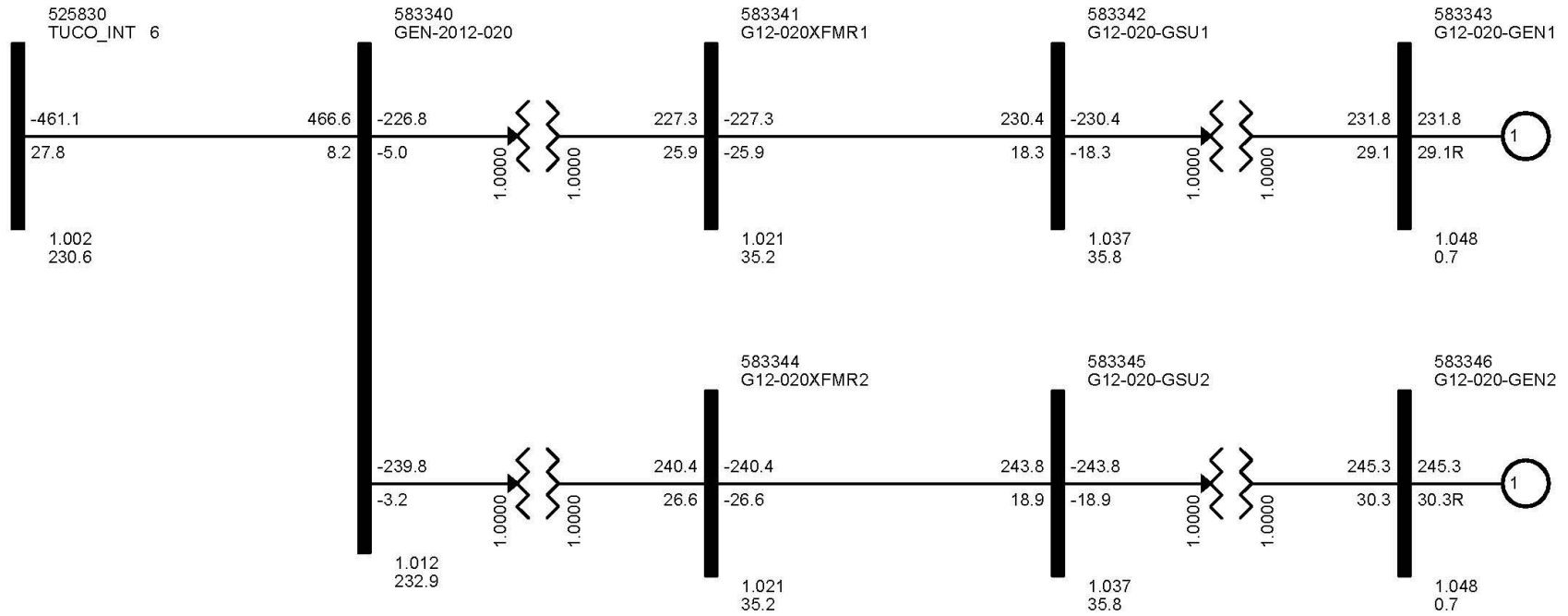


Figure 3-2. Power Flow One-line for GEN-2012-020

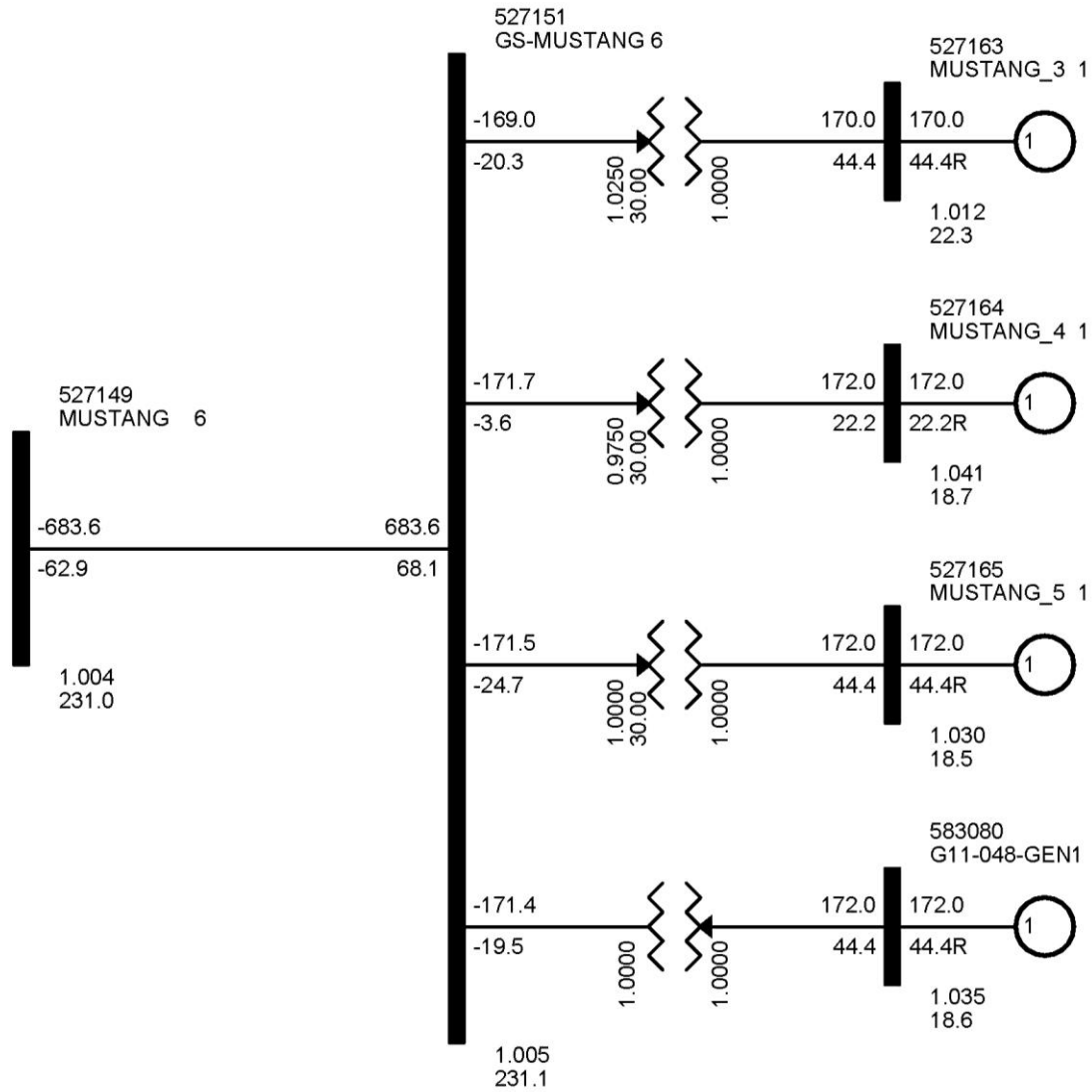


Figure 3-3. Power Flow One-line for GEN-2012-034, -035, and -036

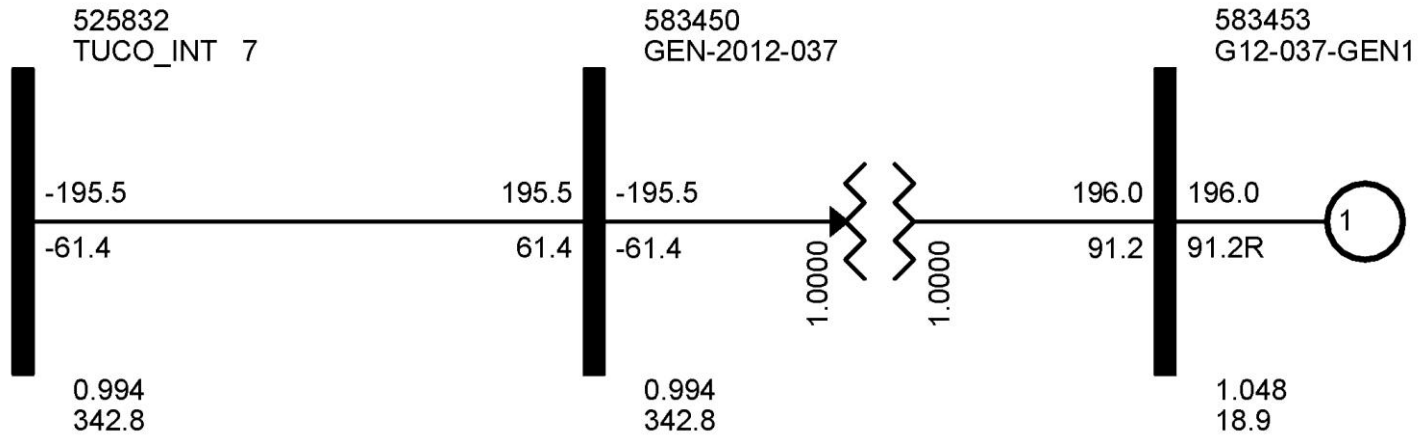


Figure 3-4. Power Flow One-line for GEN-2012-037

3.4 Performance Criteria

Wind generators must comply with FERC Order 661A on low voltage ride through for wind farms. Therefore, the wind generators should not trip off line for faults for under voltage relay actuation. If a wind generator trips off line, an appropriately sized SVC or STATCOM device may need to be specified to keep the wind generator on-line for the fault. SPP was consulted to determine if the addition of an SVC or STATCOM is warranted for the specific condition.

Contingencies that resulted in a prior-queued project tripping off-line, if any, were re-run with the prior-queued project's voltage and frequency tripping disabled to check for stability issues.

3.5 Performance Evaluation Methods

A power factor analysis was performed for all study projects that are wind farms. The power factor analysis consisted of modeling a var generator in each wind farm holding a voltage schedule at the POI. The voltage schedule was set to the higher of the voltage with the wind farm off-line or 1.0 per unit.

If the required power factor at the POI is beyond the capability of the studied wind turbines, then capacitor banks would be considered. Factors used in sizing capacitor banks would include two requirements of FERC Order 661A: the ability of the wind farm to ride through low voltage with and without capacitor banks and the ability of the wind farm to recover to pre-fault voltage. If a wind generator trips on high voltage, a leading power factor may be required.

ATC studies were not performed as part of this study. These studies will be required at the time transmission service is actually requested. Additional transmission facilities may be required based on subsequent ATC analysis.

Stability analysis was performed for each proposed interconnection request. Faults were simulated on transmission lines at the POIs and on other nearby transmission equipment. The faults in Table 3-1 were run for each case (three phase and single phase as noted).

Table 3-1. Fault Definitions for DISIS-2012-002 Group 6

Cont. No.	Contingency Name	Contingency Description
1	FLT01-3PH	3 phase fault on the Jones (526337) to Lubbock_STH (526269) 230kV line ckt1, near Jones. a. Apply fault at the Jones 230kV 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.
2	FLT02-1PH	<i>Single phase fault and sequence like previous</i>
3	FLT03-3PH	3 phase fault on the Jones (526337) to Lubbock_EST (526299) 230kV line, near Jones. a. Apply fault at the Jones 230kV 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	FLT04-1PH	<i>Single phase fault and sequence like previous</i>
5	FLT05-3PH	3 phase fault on the Jones (526338) to Grassland (526677) 230kV line, near Jones. a. Apply fault at the Jones 230kV 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	FLT06-1PH	<i>Single phase fault and sequence like previous</i>
7	FLT07-3PH	3 phase fault on the Lubbock_STH (526269) to Wolfforth (526525) 230kV line, near Lubbock_STH. a. Apply fault at the Lubbock_STH 230kV 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	FLT08-1PH	<i>Single phase fault and sequence like previous</i>
9	FLT09-3PH	3 phase fault on the Wolfforth (526525) to Sundown (526435) 230kV line, near Wolfforth. a. Apply fault at the Wolfforth 230kV 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.
10	FLT10-1PH	<i>Single phase fault and sequence like previous</i>
11	FLT11-3PH	3 phase fault on the Lubbock_EST (526299) to LP-Wadswrth (522888) 230kV line, near Lubbock_EST. a. Apply fault at the Lubbock_EST 230kV 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	FLT12-1PH	<i>Single phase fault and sequence like previous</i>
13	FLT13-3PH	3 phase fault on the Jones1 (526337) to Tuco_Int (525830) 230kV line, near Jones. a. Apply fault at the Jones 230kV 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.
14	FLT14-1PH	<i>Single phase fault and sequence like previous</i>

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Cont. No.	Contingency Name	Contingency Description
19	FLT19-3PH	3 phase fault on the Curry (524822) to Deaf Smith #20 (524669) 115kV line, near Curry. a. Apply fault at the Curry 115kV 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.
20	FLT20-1PH	<i>Single phase fault and sequence like previous</i>
21	FLT21-3PH	3 phase fault on the Curry (524822) to Norris Tap (524764) 115kV line, near Curry. a. Apply fault at the Curry 115kV 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	FLT22-1PH	<i>Single phase fault and sequence like previous</i>
23	FLT23-3PH	3 phase fault on the Curry (524822) to FE-Clovis (524838) 115kV line, near Curry. a. Apply fault at the Curry 115kV 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	FLT24-1PH	<i>Single phase fault and sequence like previous</i>
25	FLT25-3PH	3 phase fault on the Tolk (525549) to GEN-2008-022 (577104) 345kV line, near Tolk. a. Apply fault at the Tolk 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.
26	FLT26-1PH	<i>Single phase fault and sequence like previous</i>
27	FLT27-3PH	3 phase fault on the Curry (524822) to Roosevelt (524908) 115kV line, near Curry. a. Apply fault at the Curry 115kV 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.
28	FLT28-1PH	<i>Single phase fault and sequence like previous</i>
29	FLT29-3PH	3 phase fault on the Curry (524822) to Bailey County (525028) 115kV line, near Curry. a. Apply fault at the Curry 115kV 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.
30	FLT30-1PH	<i>Single phase fault and sequence like previous</i>
31	FLT31-3PH	3 phase fault on the Mustang (527149) to Amocowasson (526784) 230kV line, near Mustang. a. Apply fault at the Mustang 230kV 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	FLT32-1PH	<i>Single phase fault and sequence like previous</i>
33	FLT33-3PH	3 phase fault on the Mustang (527149) to Yoakum (526935) 230kV line, near Mustang. a. Apply fault at the Mustang 230kV 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	FLT34-1PH	<i>Single phase fault and sequence like previous</i>

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Cont. No.	Contingency Name	Contingency Description
35	FLT35-3PH	3 phase fault on the Mustang (527149) to Seminole (527276) 230kV line, near Mustang. a. Apply fault at the Mustang 230kV 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.
36	FLT36-1PH	<i>Single phase fault and sequence like previous</i>
37	FLT37-3PH	3 phase fault on the Amocowasson (526784) to Oxybru_TP (527010)) 230kV line, near Amocowasson. a. Apply fault at the Amocowasson 230kV 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.
38	FLT38-1PH	<i>Single phase fault and sequence like previous</i>
39	FLT39-3PH	3 phase fault on the Yoakum (526935) to Tolk_West (525531) 230kV line, near Yoakum. a. Apply fault at the Yoakum 230kV 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.
40	FLT40-1PH	<i>Single phase fault and sequence like previous</i>
41	FLT41-3PH	3 phase fault on the Yoakum (526935) to Amoco_SS (526460) 230kV line, near Yoakum. a. Apply fault at the Yoakum 230kV 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.
42	FLT42-1PH	<i>Single phase fault and sequence like previous</i>
43	FLT43-3PH	3 phase fault on the Yoakum (526935) to Hobbs Interchange (527894) 230kV line, near Yoakum. a. Apply fault at the Yoakum 230kV 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.
44	FLT44-1PH	<i>Single phase fault and sequence like previous</i>
45	FLT45-3PH	3 phase fault on the Mustang (527146) to Denver_N (527130) 115kV line, near Mustang. a. Apply fault at the Mustang 115kV 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.
46	FLT46-1PH	<i>Single phase fault and sequence like previous</i>
47	FLT47-3PH	3 phase fault on the Mustang (527146) to Denver_S (527136) 115kV line, ckt2, near Mustang. a. Apply fault at the Mustang 115kV 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.
48	FLT48-1PH	<i>Single phase fault and sequence like previous</i>

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Cont. No.	Contingency Name	Contingency Description
49	FLT49-3PH	3 phase fault on the Mustang (527146) to Seagraves (527202) 115kV line, near Mustang. a. Apply fault at the Mustang 115kV 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.
50	FLT50-1PH	<i>Single phase fault and sequence like previous</i>
51	FLT51-3PH	3 phase fault on the Grassland (526676) to Lynn County (526656) 115kV line, ckt1, near Grassland. a. Apply fault at the Grassland 115kV 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.
52	FLT52-1PH	<i>Single phase fault and sequence like previous</i>
53	FLT53-3PH	3 phase fault on the Tuco_Int (525832) Oklaunion (511456) 345kV line, near Tuco_Int. a. Apply fault at the GEN-2012-038 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.
54	FLT54-1PH	<i>Single phase fault and sequence like previous</i>
55	FLT55-3PH	3 phase fault on the Border (515458) to Woodward (515375) 345kV line, near Border. a. Apply fault at the Border 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.
56	FLT56-1PH	<i>Single phase fault and sequence like previous</i>
57	FLT57-3PH	3 phase fault on the Tuco_Int (525832) to Border (515458) 345kV line, near Tuco. a. Apply fault at the Tuco 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.
58	FLT58-1PH	<i>Single phase fault and sequence like previous</i>
59	FLT59-3PH	3 phase fault on the Grassland 230kV (526677) to Grassland 115kV (526676) transformer, near the 230kV bus. a. Apply fault at the Grassland 230kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
61	FLT61-3PH	3 phase fault on the Mustang 230kV (527149) to Mustang 115kV (527146)/ 13.2kV (527143) transformer, near the 230kV bus. a. Apply fault at the Mustang 230kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
62	FLT62-3PH	3 phase fault on the Yoakum 230kV (526935) to Yoakum 115kV (526934) transformer, ckt2, near the 230kV bus. a. Apply fault at the Yoakum 230kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
63	FLT63-3PH	3 phase fault on the Seminole 230kV (527276) to Seminole 115kV (527275) transformer, ckt2, near the 230kV bus. a. Apply fault at the Seminole 230kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.

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Cont. No.	Contingency Name	Contingency Description
64	FLT64-3PH	3 phase fault on the Tuco 345kV (525832) to Tuco 230kV (525830)/ 13.2kV (525824) transformer, near the 345kV bus. a. Apply fault at the Tuco 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
65	FLT65-3PH	3 phase fault on the Tuco 230kV (525830) to Tuco 115kV (525828)/ 13.2kV (525819) transformer, near the 230kV bus. a. Apply fault at the Tuco 230kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
66	FLT66-3PH	3 phase fault on the Swisher 230kV (525213) to Swisher 115kV (525212)/ 13.2kV (525211) transformer, near the 230kV bus. a. Apply fault at the Swisher 230kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
67	FLT67-3PH	3 phase fault on the Carlisle 230kV (526161) to Carlisle 115kV (526160)/ 13.2kV (526167) transformer, near the 230kV bus. a. Apply fault at the Carlisle 230kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
68	FLT68-3PH	3 phase fault on the Tolk 345kV (525549) to Tolk 230kV (525543)/ 13.2kV (525537) transformer, near the 230kV bus. a. Apply fault at the Tolk 230kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
68R	FLT68R-3PH	3 phase fault on the Tolk 345kV (525549) to Tolk 230kV (525543)/ 13.2kV (525537) transformer, near the 230kV bus. a. Apply fault at the Tolk 230kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer and Tolk-GEN-2008-022 POI 345 kV line.
69	FLT69-3PH	3 phase fault on the Tuco (525830) to Carlisle (526161) 230kV line, ckt1, near Tuco. a. Apply fault at the Tuco 230kV 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.
70	FLT70-1PH	<i>Single phase fault and sequence like previous</i>
71	FLT71-3PH	3 phase fault on the Tuco (525830) to Swisher (525213) 230kV line, ckt1, near Tuco. a. Apply fault at the Tuco 230kV 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	FLT72-1PH	<i>Single phase fault and sequence like previous</i>
73	FLT73-3PH	3 phase fault on the Tuco (525830) to Tolk East (525524) 230kV line, ckt1, near Tuco. a. Apply fault at the Tuco 230kV 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	FLT74-1PH	<i>Single phase fault and sequence like previous</i>
75	FLT75-3PH	3 phase fault on the Farmer Electric Cooperative (FEC) Clovis Interchange (524808) to North Clovis (524777) 115kV line, near FEC Clovis. a. Apply fault at FEC Clovis 115kV 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.

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Cont. No.	Contingency Name	Contingency Description
76	FLT76-1PH	<i>Single phase fault and sequence like previous</i>
77	FLT77-3PH	3 phase fault on the Farmer Electric Cooperative (FEC) Clovis Interchange (524808) to West Clovis (524784) 115kV line, near FEC Clovis. a. Apply fault at FEC Clovis 115kV 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.
78	FLT78-1PH	<i>Single phase fault and sequence like previous</i>
79	FLT79-3PH	3 phase fault on the Oasis (524875) to Portales (524924) 115kV line, near Oasis. a. Apply fault at Oasis 115kV 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.
80	FLT80-1PH	<i>Single phase fault and sequence like previous</i>
81	FLT81-3PH	3 phase fault on the Oasis (524875) 230kV to Oasis (524874) 115kV transformer, near Oasis 115kV. a. Apply fault at Oasis 115kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
82	FLT82-3PH (C3)	Prior outage of Tolk to Roosevelt #1 230 kV circuit with a 3-phase fault near Roosevelt on the Tolk to Roosevelt #2 230 kV circuit -- no reclosing. a. Prior outage of Roosevelt South (524911) to Tolk East (525524) 230kV line b. Apply 3-phase fault at Roosevelt North (524909) 230kV c. Run for 5 cycles d. Clear fault and trip line from Roosevelt North (524909) to Tolk West (525531) 230kV

4. Results and Observations

4.1 Stability Analysis Results

Table 4-1 summarizes the results of the stability analysis. Figure 4-1 through Figure 4-10 show representative summer peak season plots for faults at the POI's of the study projects. Complete sets of plots for both summer and winter peak seasons for each fault and each project are included in Appendices A and B.

The following faults had tripping of study generator ASGI-2012-002 due to low voltage: FLT19, FLT21, FLT22, FLT23, FLT24, FLT25, FLT27, FLT28, FLT29, FLT68, FLT68R, FLT75, FLT76, FLT77, FLT78, FLT79, FLT81, and FLT82. With the Vestas V82 AGO (advanced grid option, aka LVRT, low voltage ride-through) enabled, generator ASGI-2012-002 did not trip off line due to low voltage for any of the faults. See Figure 4-1 for the plot without LVRT enabled and Figure 4-3 with LVRT.

Even with the LVRT option, ASGI-2012-002 trips off-line due to high voltage following FLT82 (C3 outage of Tolk-Roosevelt 230 kV lines 1 and 2). There are significant high voltages throughout the Roosevelt area following this fault.

For FLT68, ASGI-2012-002 tripped off line due to low voltage without LVRT. With LVRT enabled, there were many iterations where the network did not converge. The fault was revised so that when the Tolk 345/230/13.2 kV transformer tripped the Tolk to GEN-2008-022 POI 345 kV line also tripped, FLT68R. For FLT68R ASGI-2012-002 would trip off line due to low voltage without LVRT but with LVRT the results were satisfactory.

Table 4-1. Summary of Stability Results

Cont. No.	Contingency Name	Contingency Description	Summer Peak Results	Winter Peak Results
1	FLT01-3PH	3 phase fault on the Jones (526337) to Lubbock_STH (526269) 230kV line ckt1, near Jones.	OK	OK
2	FLT02-1PH	Single phase fault and sequence like previous	OK	OK
3	FLT03-3PH	3 phase fault on the Jones (526337) to Lubbock_EST (526299) 230kV line, near Jones.	OK	OK
4	FLT04-1PH	Single phase fault and sequence like previous	OK	OK
5	FLT05-3PH	3 phase fault on the Jones (526338) to Grassland (526677) 230kV line, near Jones.	OK	OK
6	FLT06-1PH	Single phase fault and sequence like previous	OK	OK
7	FLT07-3PH	3 phase fault on the Lubbock_STH (526269) to Wolfforth (526525) 230kV line, near Lubbock_STH.	OK	OK
8	FLT08-1PH	Single phase fault and sequence like previous	OK	OK
9	FLT09-3PH	3 phase fault on the Wolfforth (526525) to Sundown (526435) 230kV line, near Wolfforth.	OK	OK

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Cont. No.	Contingency Name	Contingency Description	Summer Peak Results	Winter Peak Results
10	FLT10-1PH	Single phase fault and sequence like previous	OK	OK
11	FLT11-3PH	3 phase fault on the Lubbock_EST (526299) to LP-Wadsworth (522888) 230kV line, near Lubbock_EST.	OK	OK
12	FLT12-1PH	Single phase fault and sequence like previous	OK	OK
13	FLT13-3PH	3 phase fault on the Jones1 (526337) to Tuco_Int (525830) 230kV line, near Jones.	OK	OK
14	FLT14-1PH	Single phase fault and sequence like previous	OK	OK
19	FLT19-3PH	3 phase fault on the Curry (524822) to Deaf Smith #20 (524669) 115kV line, near Curry.	OK*	OK*
20	FLT20-1PH	Single phase fault and sequence like previous	OK	OK
21	FLT21-3PH	3 phase fault on the Curry (524822) to Norris Tap (524764) 115kV line, near Curry.	OK*	OK*
22	FLT22-1PH	Single phase fault and sequence like previous	OK*	OK
23	FLT23-3PH	3 phase fault on the Curry (524822) to FE-Clovis (524838) 115kV line, near Curry.	OK*	OK*
24	FLT24-1PH	Single phase fault and sequence like previous	OK*	OK*
25	FLT25-3PH	3 phase fault on the Tolk (525549) to GEN-2008-022 (577104) 345kV line, near Tolk.	OK*	OK
26	FLT26-1PH	Single phase fault and sequence like previous	OK	OK
27	FLT27-3PH	3 phase fault on the Curry (524822) to Roosevelt (524908) 115kV line, near Curry.	OK*	OK*
28	FLT28-1PH	Single phase fault and sequence like previous	OK*	OK*
29	FLT29-3PH	3 phase fault on the Curry (524822) to Bailey County (525028) 115kV line, near Curry.	OK*	OK*
30	FLT30-1PH	Single phase fault and sequence like previous	OK	OK
31	FLT31-3PH	3 phase fault on the Mustang (527149) to Amocowasson (526784) 230kV line, near Mustang.	OK	OK
32	FLT32-1PH	Single phase fault and sequence like previous	OK	OK
33	FLT33-3PH	3 phase fault on the Mustang (527149) to Yoakum (526935) 230kV line, near Mustang.	OK	OK
34	FLT34-1PH	Single phase fault and sequence like previous	OK	OK
35	FLT35-3PH	3 phase fault on the Mustang (527149) to Seminole (527276) 230kV line, near Mustang.	OK	OK
36	FLT36-1PH	Single phase fault and sequence like previous	OK	OK
37	FLT37-3PH	3 phase fault on the Amocowasson (526784) to Yoakum (526935) 230kV line, near Amocowasson.	OK	OK
38	FLT38-1PH	Single phase fault and sequence like previous	OK	OK
39	FLT39-3PH	3 phase fault on the Yoakum (526935) to Tolk_West (525531) 230kV line, near Yoakum.	OK	OK
40	FLT40-1PH	Single phase fault and sequence like previous	OK	OK
41	FLT41-3PH	3 phase fault on the Yoakum (526935) to Amoco_SS (526460) 230kV line, near Yoakum.	OK	OK
42	FLT42-1PH	Single phase fault and sequence like previous	OK	OK

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Cont. No.	Contingency Name	Contingency Description	Summer Peak Results	Winter Peak Results
43	FLT43-3PH	3 phase fault on the Yoakum (526935) to Lea_Cnty (527849) 230kV line, near Yoakum.	OK	OK
44	FLT44-1PH	Single phase fault and sequence like previous	OK	OK
45	FLT45-3PH	3 phase fault on the Mustang (527146) to Denver_N (527130) 115kV line, near Mustang.	OK	OK
46	FLT46-1PH	Single phase fault and sequence like previous	OK	OK
47	FLT47-3PH	3 phase fault on the Mustang (527146) to Denver_S (527136) 115kV line, ckt2, near Mustang.	OK	OK
48	FLT48-1PH	Single phase fault and sequence like previous	OK	OK
49	FLT49-3PH	3 phase fault on the Mustang (527146) to Seagraves (527202) 115kV line, near Mustang.	OK	OK
50	FLT50-1PH	Single phase fault and sequence like previous	OK	OK
51	FLT51-3PH	3 phase fault on the Grassland (526676) to Lynn County (526656) 115kV line, ckt1, near Grassland.	OK	OK
52	FLT52-1PH	Single phase fault and sequence like previous	OK	OK
53	FLT53-3PH	3 phase fault on the Tuco_Int (525832) Oklaunion (511456) 345kV line, near Tuco_Int.	OK	OK
54	FLT54-1PH	Single phase fault and sequence like previous	OK	OK
55	FLT55-3PH	3 phase fault on the GEN-2012-038-POI (562309) to Border (515458) 345kV line, near GEN-2012-038.	OK	OK
56	FLT56-1PH	Single phase fault and sequence like previous	OK	OK
57	FLT57-3PH	3 phase fault on the Tuco_Int (525832) to GEN-2012-038-POI (562309) 345kV line, near Tuco.	OK	OK
58	FLT58-1PH	Single phase fault and sequence like previous	OK	OK
59	FLT59-3PH	3 phase fault on the Grassland 230kV (526677) to Grassland 115kV (526676) transformer, near the 230kV bus.	OK	OK
61	FLT61-3PH	3 phase fault on the Mustang 230kV (527149) to Mustang 115kV (527146)/ 13.2kV (527143) transformer, near the 230kV bus.	OK	OK
62	FLT62-3PH	3 phase fault on the Yoakum 230kV (526935) to Yoakum 115kV (526934) transformer, ckt2, near the 230kV bus.	OK	OK
63	FLT63-3PH	3 phase fault on the Seminole 230kV (527276) to Seminole 115kV (527275) transformer, ckt2, near the 230kV bus.	OK	OK
64	FLT64-3PH	3 phase fault on the Tuco 345kV (525832) to Tuco 230kV (525830)/ 13.2kV (525824) transformer, near the 345kV bus.	OK	OK
65	FLT65-3PH	3 phase fault on the Tuco 230kV (525830) to Tuco 115kV (525828)/ 13.2kV (525819) transformer, near the 230kV bus.	OK	OK
66	FLT66-3PH	3 phase fault on the Swisher 230kV (525213) to Swisher 115kV (525212)/ 13.2kV (525211) transformer, near the 230kV bus.	OK	OK
67	FLT67-3PH	3 phase fault on the Carlisle 230kV (526161) to Carlisle 115kV (526160)/ 13.2kV (526167) transformer, near the 230kV bus.	OK	OK

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Cont. No.	Contingency Name	Contingency Description	Summer Peak Results	Winter Peak Results
68	FLT68-3PH	3 phase fault on the Tolk 345kV (525549) to Tolk 230kV (525543)/ 13.2kV (525537) transformer, near the 230kV bus.	OK*	Convergence Problems
68R	FLT68R-3PH	3 phase fault on the Tolk 345kV (525549) to Tolk 230kV (525543)/ 13.2kV (525537) transformer, near the 230kV bus.	OK*	OK*
69	FLT69-3PH	3 phase fault on the Tuco (525830) to Carlisle (526161) 230kV line, ckt1, near Tuco.	OK	OK
70	FLT70-1PH	Single phase fault and sequence like previous	OK	OK
71	FLT71-3PH	3 phase fault on the Tuco (525830) to Swisher (525213) 230kV line, ckt1, near Tuco.	OK	OK
72	FLT72-1PH	Single phase fault and sequence like previous	OK	OK
73	FLT73-3PH	3 phase fault on the Tuco (525830) to Tolk East (525524) 230kV line, ckt1, near Tuco.	OK	OK
74	FLT74-1PH	Single phase fault and sequence like previous	OK	OK
75	FLT75-3PH	3 phase fault on the Farmer Electric Cooperative (FEC) Clovis Interchange (524808) to North Clovis (524777) 115kV line, near FEC Clovis.	OK*	OK*
76	FLT76-1PH	Single phase fault and sequence like previous	OK*	OK*
77	FLT77-3PH	3 phase fault on the Farmer Electric Cooperative (FEC) Clovis Interchange (524808) to West Clovis (524784) 115kV line, near FEC Clovis.	OK*	OK*
78	FLT78-1PH	Single phase fault and sequence like previous	OK*	OK*
79	FLT79-3PH	3 phase fault on the Oasis (524875) to Portales (524924) 115kV line, near Oasis.	OK*	OK*
80	FLT80-1PH	Single phase fault and sequence like previous	OK	OK
81	FLT81-3PH	3 phase fault on the Oasis (524875) 230kV to Oasis (524874) 115kV transformer, near Oasis 115kV.	OK*	OK*
82	FLT82-3PH	Prior outage of Tolk to Roosevelt #1 230 kV circuit with a 3-phase fault near Roosevelt on the Tolk to Roosevelt #2 230 kV circuit -- no reclosing.	A12-02 OV trip	A12-02 OV trip

* OK with LVRT enabled. Faults were OK when the Vestas AGO (LVRT) Option is enabled at ASGI-2012-002. Otherwise, this plants trip for these faults.

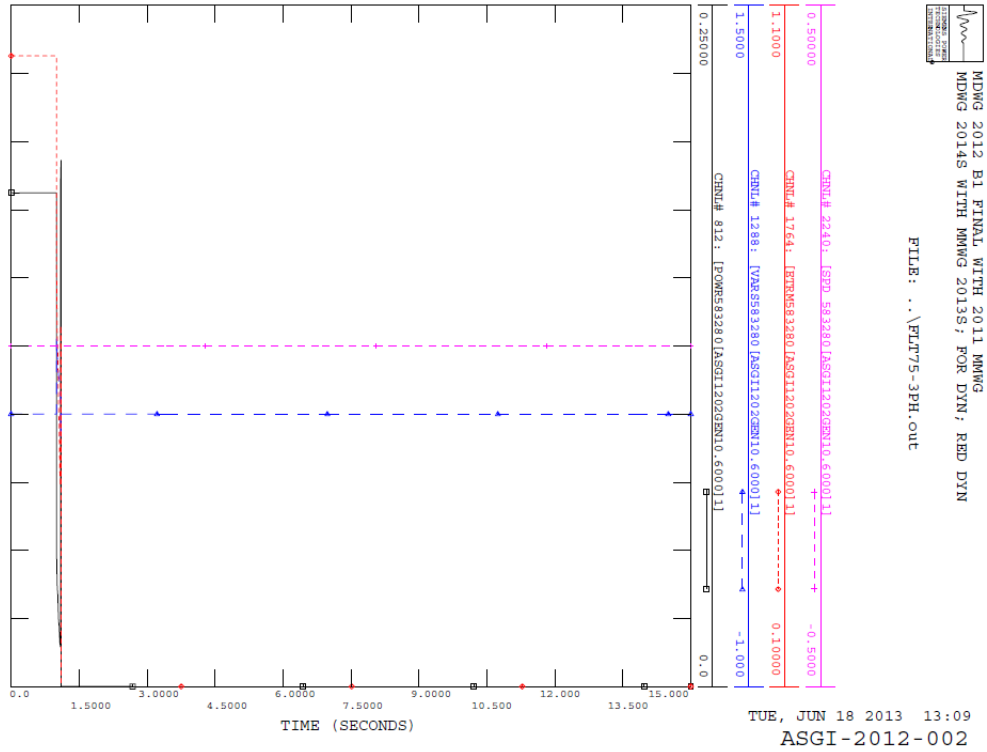


Figure 4-1. ASGI-2012-002 Plot for Fault 75 – 3-Phase Fault on the FEC Clovis (524808) to North Clovis (524777) 115 kV line, near FEC Clovis

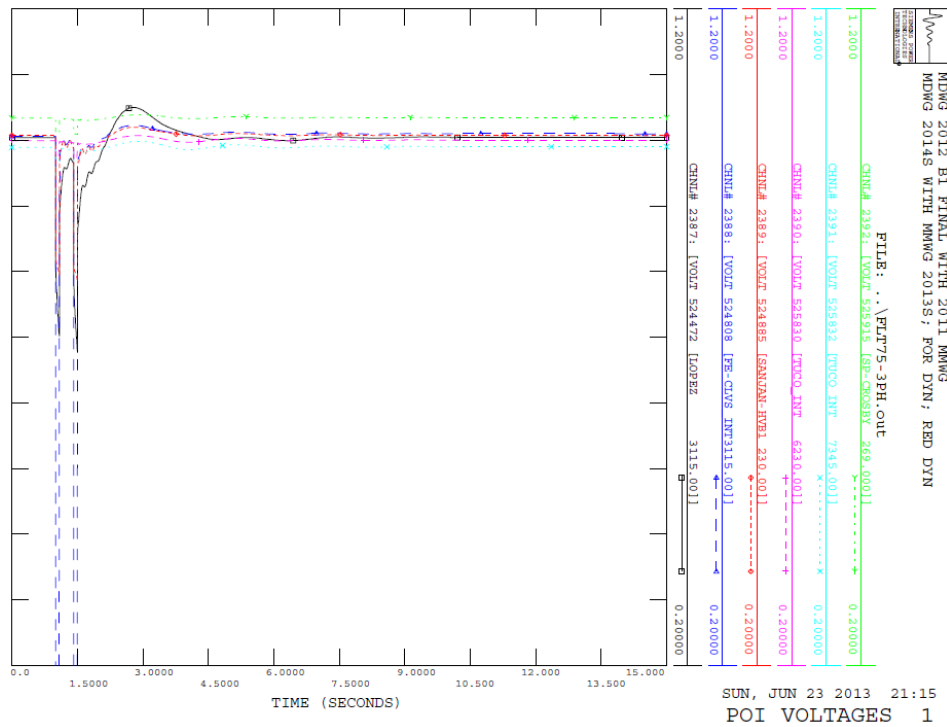


Figure 4-2. POI Voltages for Fault 75 – 3-Phase Fault on the FEC Clovis (524808) to North Clovis (524777) 115 kV line, near FEC Clovis

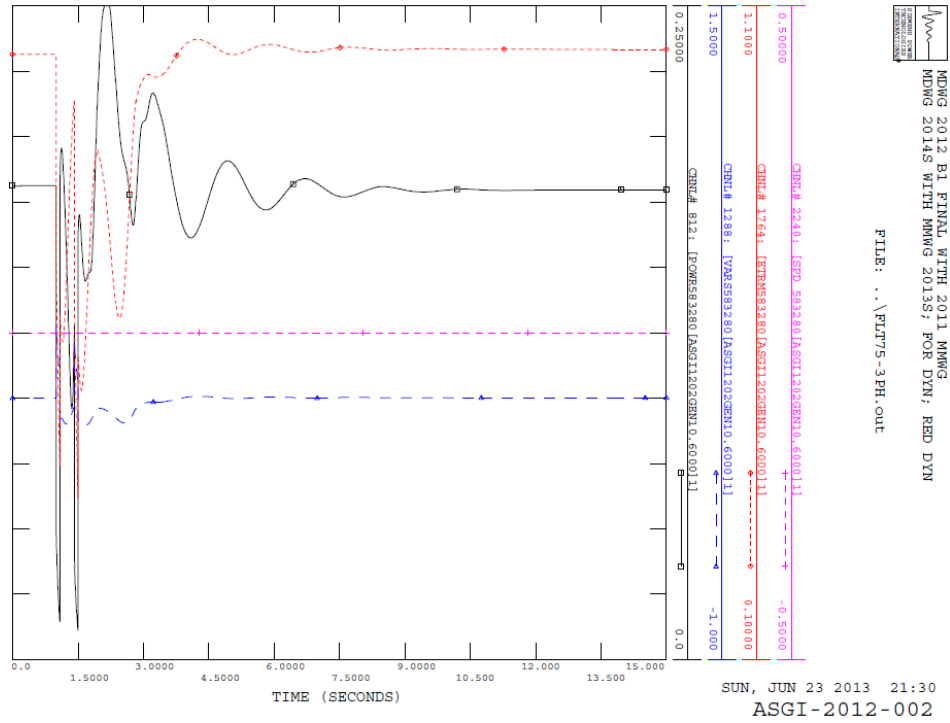


Figure 4-3. ASGI-2012-002 with LVTR enabled Plot for Fault 75 – 3-Phase Fault on the FEC Clovis (524808) to North Clovis (524777) 115 kV line, near FEC Clovis

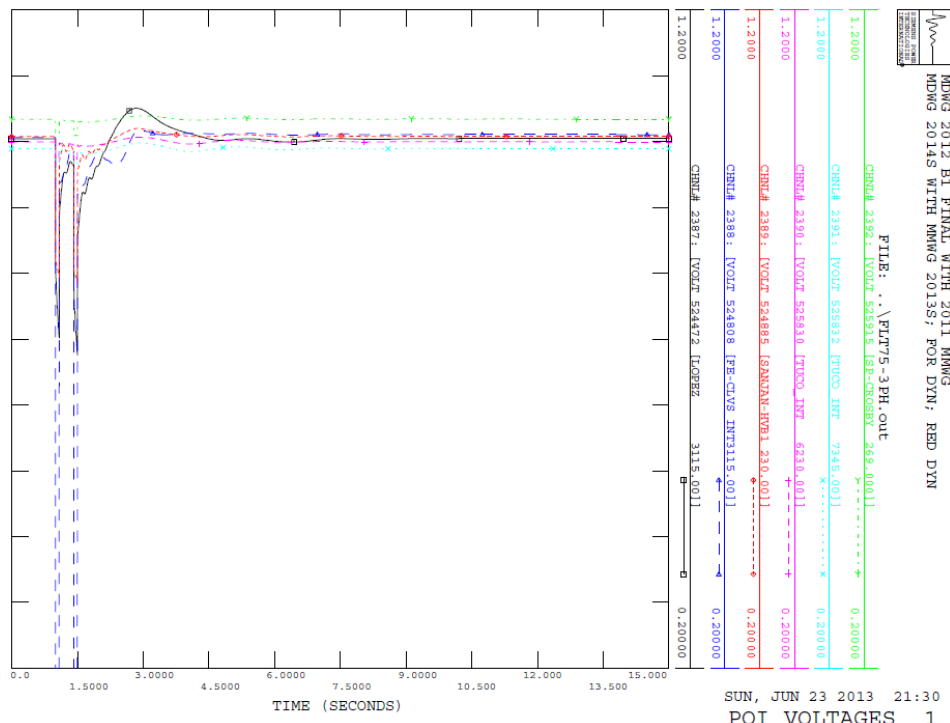


Figure 4-4. POI Voltages with ASGI-2012-002 with LVTR enabled for Fault 75 – 3-Phase Fault on the FEC Clovis (524808) to North Clovis (524777) 115 kV line, near FEC Clovis

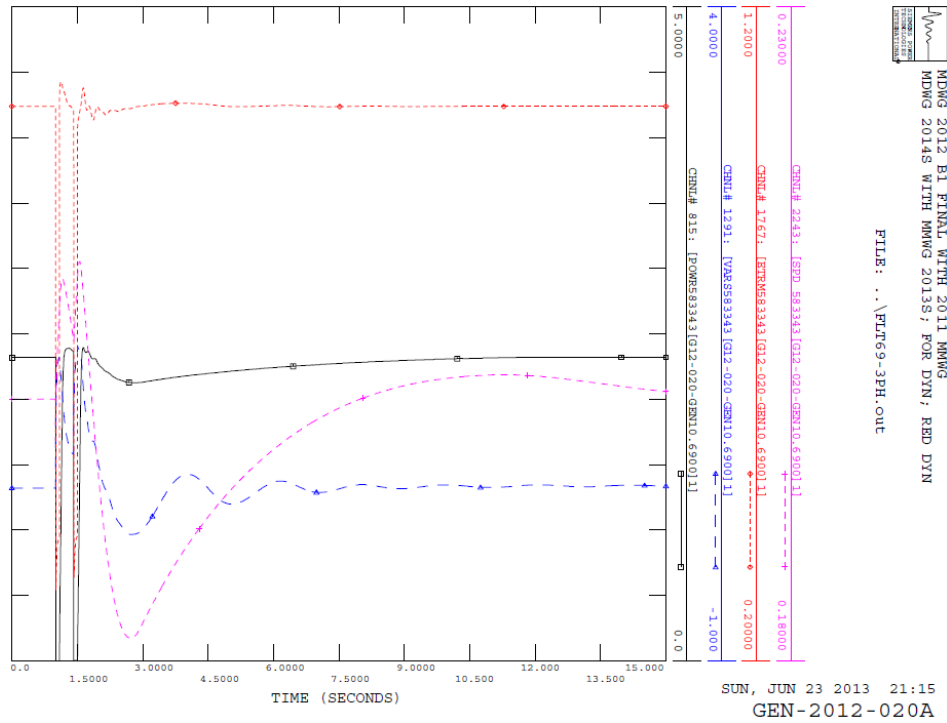


Figure 4-5. GEN-2012-002 Plot for Fault 69 – 3-Phase Fault on the Tuco (525830) to Carlisle 526161) 230 kV line, near Tuco

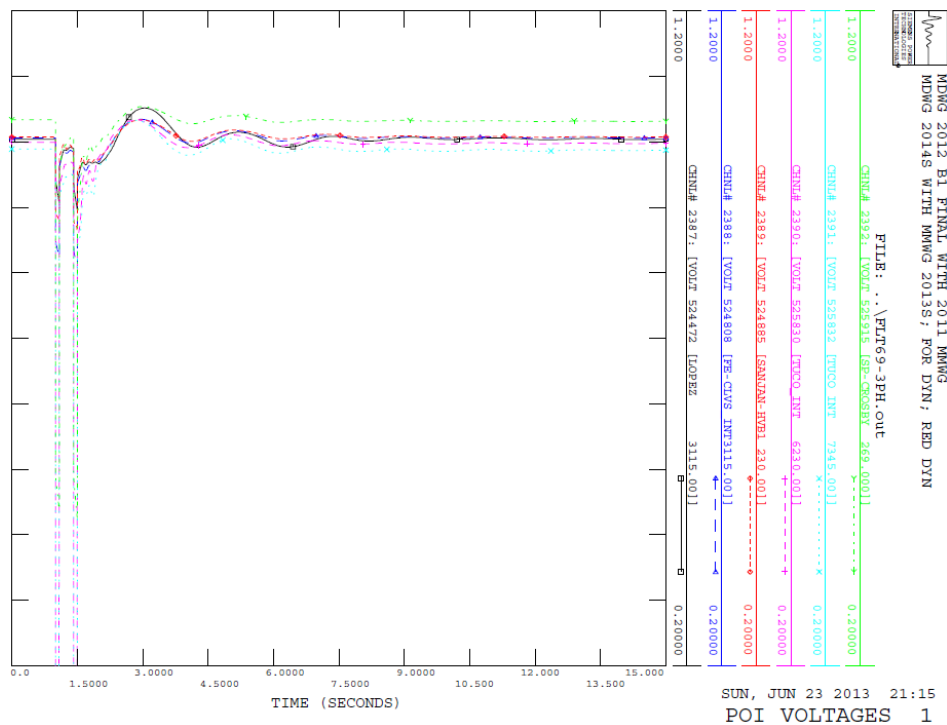


Figure 4-6. POI Voltages for Fault 69 – 3-Phase Fault on the Tuco (525830) to Carlisle 526161) 230 kV line, near Tuco

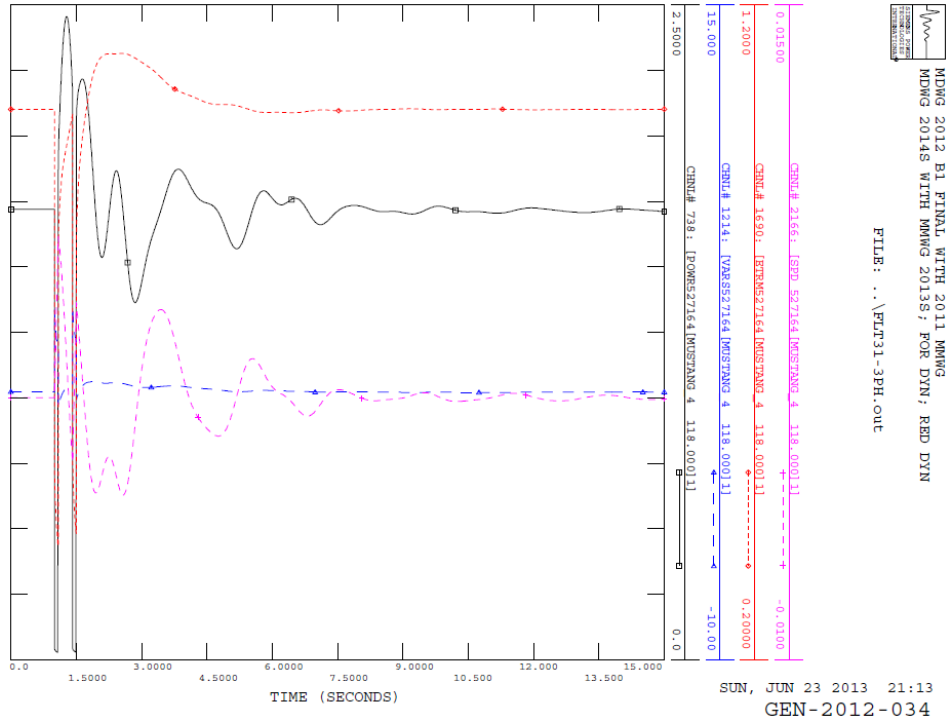


Figure 4-7. GEN-2012-0034 Plot for Fault 31 – 3-Phase Fault on the Mustang (527149) to Amocowasson (526784) 230 kV line, near Mustang

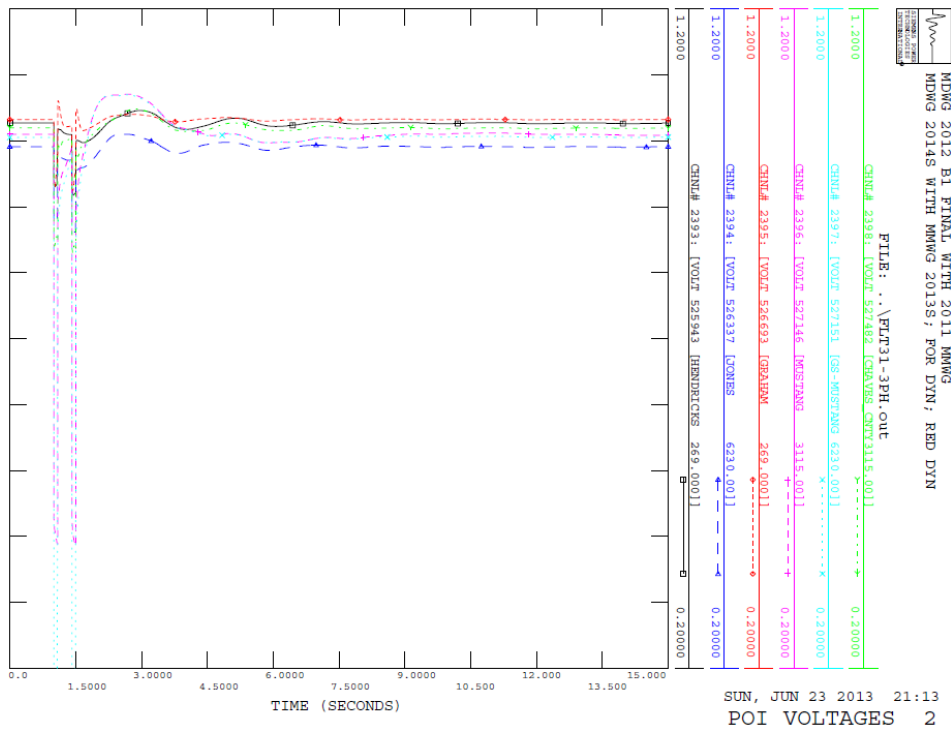


Figure 4-8. POI Voltages for Fault 31 – 3-Phase Fault on the Mustang (527149) to Amocowasson (526784) 230 kV line, near Mustang

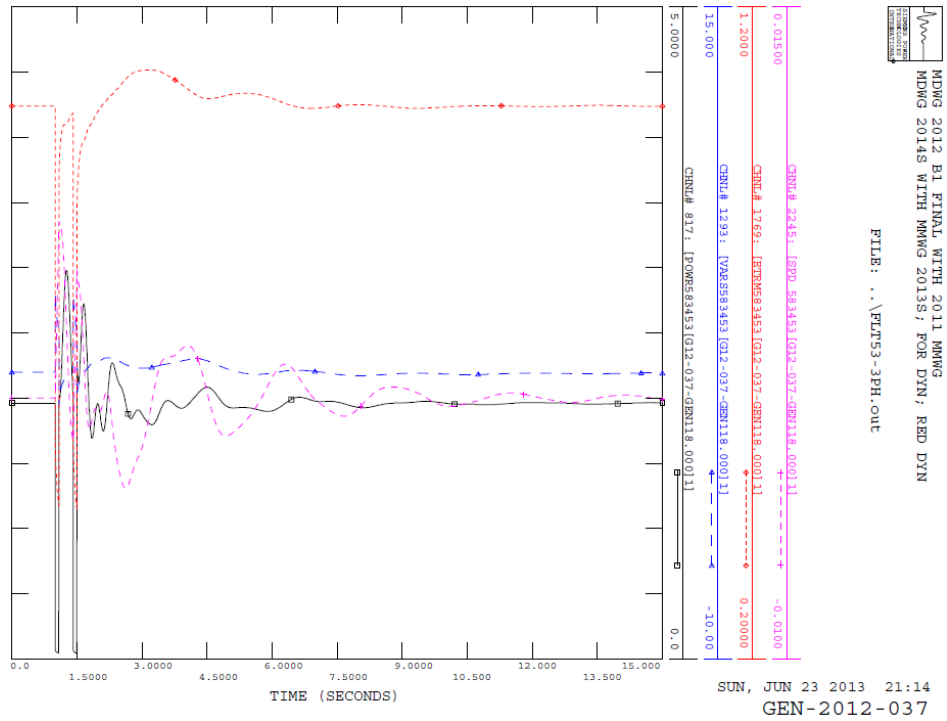


Figure 4-9. GEN-2012-037 Plot for Fault 53 – 3-Phase Fault on the Tuco (525832 to Oklaunion (511456) 345 kV line near Tuco

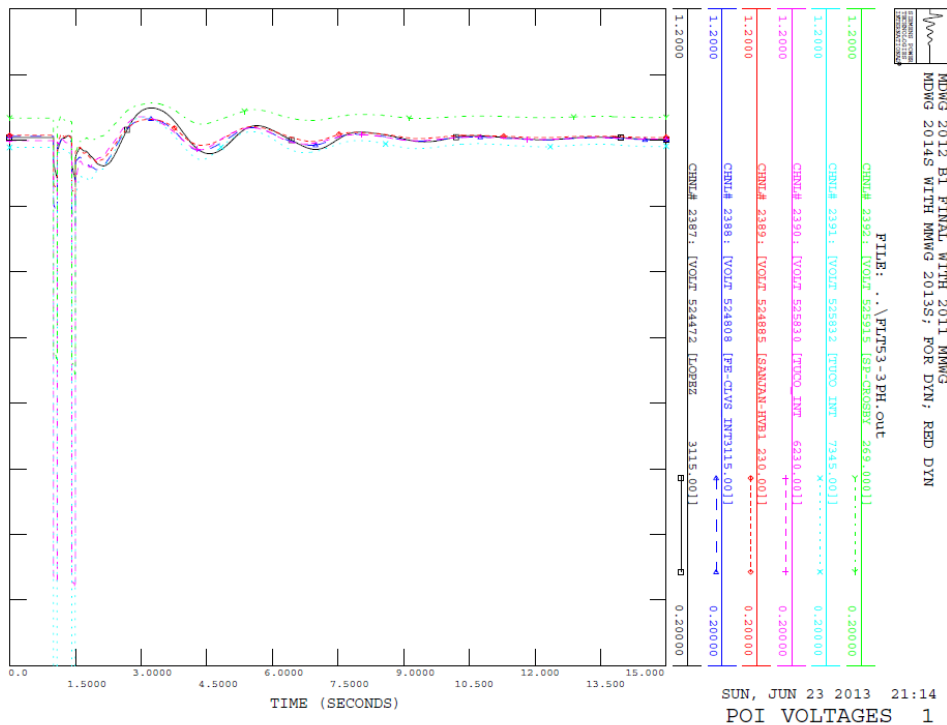


Figure 4-10. POI Voltages for Fault 53 – 3-Phase Fault on the Tuco (525832 to Oklaunion (511456) 345 kV line near Tuco

4.2 Power Factor Requirements

All stability faults were tested as power flow contingencies to determine the power factor requirements for the wind and solar farm study projects to maintain scheduled voltage at their respective points of interconnection (POI). The voltage schedules are set equal to the voltages at the POIs before the projects are added, with a minimum of 1.0 per unit. Fictitious reactive power sources were added to the study projects to maintain scheduled voltage during all studied contingencies. The MW and Mvar injections from the study projects at the POIs were recorded and the resulting power factors were calculated for all contingencies for summer peak and winter peak cases. The most leading and most lagging power factors determine the minimum power factor range capability that the study projects must install before commercial operation.

If more than one study project shared a single POI, the projects were grouped together and a common power factor requirement was determined for those study projects. This ensures that none of the study projects is required to provide more or less than its fair share of the reactive power requirements at a single POI. *Prior-queued* projects at the same POI, if any, were not grouped with the study projects because their interconnection requirements were determined in previous studies. The voltage schedules of prior-queued and study projects at the same POI were coordinated.

Per FERC and SPP Tariff requirements, if the power factor needed to maintain scheduled voltage is less than 0.95 lagging, then the requirement is limited to 0.95 lagging. The lower limit for leading power factor requirement is also 0.95. If a project never operated leading under any contingency, then the leading requirement is set to 1.0. The same applies on the lagging side.

The final power factor requirements are shown in Table 4-2 below. These are only the minimum power factor ranges based on steady-state analysis.

The full details for each contingency in summer and winter peak cases are given in Appendix C.

Table 4-2. Power Factor Requirements ^a

Request	Size (MW)	Generator Model	Point of Interconnection	Final PF Requirement	
				Lagging ^b	Leading ^c
ASGI-2012-002	18.1	Vestas V82	Clovis 115kV (524808)	0.95 ^d	0.95 ^d
GEN-2012-020	477.1	GE 1.68MW	Tuco 230kV (525830)	0.959	0.998

Notes:

- For each plant, the table shows the minimum required power factor capability at the point of interconnection that must be designed and installed with the plant. The power factor capability at the POI includes the net effect of the generators, transformers, line impedances, and any reactive compensation devices installed on the plant side of the meter. Installing more capability than the minimum requirement is acceptable.
- Lagging is when the generating plant is supplying reactive power to the transmission grid. In this situation, the alternating current sinusoid “lags” behind the alternating voltage sinusoid, meaning that the current peaks shortly after the voltage.
- Leading is when the generating plant is taking reactive power from the transmission grid. In this situation, the alternating current sinusoid “leads” the alternating voltage sinusoid, meaning that the current peaks shortly before the voltage.
- Electrical need is lower, but PF requirement limited to 0.95 by FERC order.

4.3 Transient Voltage Analysis

The transient voltage analysis was completed on buses in the monitored areas above 100kV. The voltages were taken starting at the time the fault was removed. The lowest bus voltages are shown in Table 4-3. Complete transient voltage results are shown in Appendix E.

Table 4-3. Transient Voltage Analysis

Fault	Vmin	Vmax	Bus#	BusName	BaseKV	Winter		Summer	
						Time	Voltage	Time	Voltage
FLT27-3PH	0.7	1.2	524477	CAMPBELL_ST3	115	1.504	0.64148	1.500	0.67957
FLT27-3PH	0.7	1.2	524486	CAPROCK 3	115	1.504	0.61994	1.504	0.65454
FLT27-3PH	0.7	1.2	524509	FE-TUCMCARI3	115	1.504	0.64312	1.500	0.67775
FLT27-3PH	0.7	1.2	524472	LOPEZ 3	115	1.504	0.64152	1.500	0.67961
FLT27-3PH	0.7	1.2	524502	NORTON 3	115	1.504	0.65359	1.500	0.67695

5. Conclusions

The DISIS-2012-002 Group 6 Definitive Impact Restudy evaluated the impacts of interconnecting the projects shown below.

Table 5-1. Interconnection Requests Evaluated in this Study

Request	Size	Generator Type	Point of Interconnection	Gen Buses
ASGI-2012-002	18.1	Vestas V82	Clovis 115kV (524808)	583280
GEN-2012-020	477.1	GE 1.68MW	Tuco 230kV (525830)	583343 583346
GEN-2012-034	7 MW increase	GENROU	Mustang 230kV (527151)	527164
GEN-2012-035	7 MW increase	GENROU	Mustang 230kV (527151)	527165
GEN-2012-036	7 MW increase	GENROU	Mustang 230kV (527151)	583080
GEN-2012-037	196 Summer 203 Winter	GENROU	Tuco 345kV (525832)	583453

The stability results showed that ASGI-2012-002 (Vestas V82 wind turbines) needs to have the LVRT (Low Voltage Ride Through) Option on the wind generators. Without LVRT, the Vestas generators tripped due to low voltage for several faults in both summer and winter cases.

For the C3 fault with prior outage of the Tolk-Roosevelt #1 230 kV line and a fault on the Tolk-Roosevelt #2 line, ASGI-2012-002 tripped off line due to **high** voltage even with the LVRT option enabled. This fault results in high voltages throughout the Roosevelt area.

For the fault on the Tolk 345/230 kV transformer (FLT68), the computer simulation did not converge for several iterations in the winter case. The fault was revised so that the Tolk to GEN-2008-022 POI 345 kV line tripped out when the Tolk 345/230 kV transformer tripped (FLT68R). For the revised tripping scheme the performance was satisfactory. Currently the line and transformer trip together so the revised scheme represents the existing system.

Final power factor requirements for the Group 6 projects are listed in Table 4-2.

Any change in system or plant models or assumptions could change these results.

Appendix A – Summer Peak Plots

Appendix B – Winter Peak Plots

Appendix C – Power Factor Details

Appendix D – Project Model Data

Appendix E – Transient Voltage Data

Appendix F – SPP Transmission One-line Diagrams