



**Definitive Interconnection  
System Impact Study for  
Generation Interconnection  
Requests**

**(DISIS-2011-002-1)**

**June 2012**

**Generation Interconnection**

---

## Revision History

---

Date	Author	Change Description
01/31/2012	SPP	Report Issued (DISIS-2011-002)
06/14/2012	SPP	Account for Withdrawn Projects, Report Re-Posted (DISIS-2011-002-1)

---

## 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, 2011. The customers will be referred to in this study as the DISIS-2011-002 Interconnection Customers. This System Impact Study analyzes the interconnecting of multiple generation interconnection requests associated with new generation totaling approximately 2,093.1 MW of new generation which would be located within the transmission systems of American Electric Power-West (AEPW), Midwest Energy Inc. (MIDW), Mid-Kansas Electric Power LLC (MKEC), Nebraska Public Power District (NPPD), Oklahoma Gas and Electric (OKGE), Omaha Public Power District (OPPD), Sunflower Electric Power Corporation (SUNC), Southwestern Public Service (SPS), Westar Energy (WERE), and Western Farmers Electric Cooperative (WFEC). The various generation interconnection requests have differing proposed in-service dates<sup>1</sup>. 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. This restudy was performed to account for withdrawals within the DISIS-2011-002 study and/or higher queued projects withdrawing.

Power flow analysis has indicated that for the power flow cases studied, 2,093.1 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 Order No. 661-A 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.

The total estimated minimum cost for interconnecting the DISIS-2011-002 interconnection customers is \$104,890,606. These costs are shown in Appendix E and F. Interconnection Service to DISIS-2011-002 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.

---

<sup>1</sup> 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 Customer's 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.

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 the Energy Resource (ERIS) Interconnection Request. 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.

---

# Table of Contents

---

<b>Introduction.....</b>	<b>1</b>
<b>Model Development .....</b>	<b>2</b>
<b>Identification of Network Constraints.....</b>	<b>7</b>
<b>Determination of Cost Allocated Network Upgrades.....</b>	<b>7</b>
<b>Required Interconnection Facilities .....</b>	<b>9</b>
<b>Power Flow Analysis .....</b>	<b>9</b>
<b>Stability Analysis.....</b>	<b>12</b>
<b>Conclusion .....</b>	<b>15</b>
<b>Appendix .....</b>	<b>16</b>
A: Generation Interconnection Requests Considered for Impact Study.....	A1
B: Prior Queued Interconnection Requests.....	B1
C: Study Groupings .....	C1
D: Proposed Point of Interconnection One line Diagrams .....	D1
E: Cost Allocation per Interconnection Request (Including Prior Queued Upgrades) .....	E1
F: Cost Allocation per Proposed Study Network Upgrade .....	F1
G: Power Flow Analysis (Constraints For Mitigation).....	G1
H: Power Flow Analysis (Other Constraints Not Requiring Mitigation) .....	H1
I: Group 1 Dynamic Stability Analysis Report .....	I1
J: Group 6 Dynamic Stability Analysis Report.....	J2

---

## 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, 2011. The customers will be referred to in this study as the DISIS-2011-002 Interconnection Customers. This System Impact Study analyzes the interconnecting of multiple generation interconnection requests associated with new generation totaling 2,093.1 MW of new generation which would be located within the transmission systems of American Electric Power-West (AEPW), Midwest Energy Inc. (MIDW), Mid-Kansas Electric Power LLC (MKEC), Nebraska Public Power District (NPPD), Oklahoma Gas and Electric (OKGE), Omaha Public Power District (OPPD), Sunflower Electric Power Corporation (SUNC), Southwestern Public Service (SPS), Westar Energy (WERE), and Western Farmers Electric Cooperative (WFEC). . The various generation interconnection requests have differing proposed in-service dates<sup>2</sup>. 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. This restudy was performed to account for withdrawals within the DISIS-2011-002 study and/or higher queued projects withdrawing.

The primary objective of this Definitive Interconnection System Impact Study 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 attachment facilities, Network Upgrades and other Direct Assignment Facilities needed to accept power into the grid at each specific interconnection receipt point.

---

<sup>2</sup> 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 Customer's that proceed to the Facility Study will be provided a new in-service date based on the competition 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, 2011 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 Requests

Also included in this Definitive Impact Study is a single Affected System Study, located on the Golden Spread Electric Cooperative, Inc. (GSEC) system, which shreas connections to the SPS system. The Affected System Study Requests has been given the designations: ASGI-2011-004 (20 MW, POI is Pleasant Hill 69kV).

### 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 2011 series Transmission Service Request (TSR) Models 2012 spring, 2012 summer and winter peak, and the 2017 summer and winter 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 2011 series SPP Model Development Working Group (MDWG) Models 2012 winter and 2012 summer were used as starting points for this study.

### Base Case Upgrades

The following facilities are part of the SPP Transmission Expansion Plan or 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-2011-002 Customers have not been assigned acceleration costs for the below listed projects. The DISIS-2011-002 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 customers.

- Hitchland 230/115kV area projects<sup>3</sup>:
  - Hitchland – Moore County 230kV, scheduled for 6/1/2012 in-service
  - Hitchland – Ochiltree 230kV Project, scheduled for 12/31/2012 in-service
- Valliant – Hugo – Sunnyside 345kV, scheduled for 4/1/2012 in-service<sup>4</sup>
- Rose Hill – Sooner 345kV, scheduled for 6/15/2012 in-service<sup>5</sup>
- Balanced Portfolio Projects<sup>6</sup>:
  - 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 12/31/2012 in-service
  - Spearville – Post Rock 345kV, scheduled for 6/12/2012 in-service
    - Post Rock 345/230kV autotransformer
  - Post Rock – Axtell 345kV, scheduled for 6/1/2013 in-service
  - Cleveland – Sooner 345kV, scheduled for 12/31/2012 in-service
  - Tap Stillwell – Swissvale 345kV line at West Gardner, scheduled for 6/1/2012 in-service
- Priority Projects<sup>7</sup>:
  - Hitchland – Woodward double circuit 345kV, scheduled for 6/30/2014 in-service
    - Hitchland 345/230kV 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 Upgrades<sup>8</sup>
  - Harper – Flat Ridge 138kV rebuild, scheduled for 12/31/2013 in-service
  - Flat Ridge – Medicine Lodge 138kV rebuild, scheduled for 12/31/2013 in-service
  - Pratt – Medicine Lodge 115kV rebuild, scheduled for 6/1/2013 in-service

---

<sup>3</sup> 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.

<sup>4</sup> SPP Transmission Service Projects identified in SPP-2006-AG3-AFS-11.

<sup>5</sup> SPP Regional Reliability Project. Approved based on an order of the Kansas Corporation Commission issued in Docket no. 07-WSEE-715-MIS.

<sup>6</sup> Notice to Construct (NTC) issued June 2009.

<sup>7</sup> Notice to Construct (NTC) issued June 2010.

<sup>8</sup> SPP Transmission Service Projects identified in SPP-2007-AG3-AFS-9.



- Medicine Lodge 138/115kV autotransformer replacement, scheduled for 6/1/2013 in-service
- Northwest 345/138/13.8kV circuit #3 autotransformer, scheduled for 6/1/2017 in-service<sup>9</sup>
- Woodward (OKGE) – Woodward (WFEC) 69kV rebuild, scheduled for 12/1/2013 in-service<sup>10</sup>
- Sheldon – SW7th and Pleasant Hill 115kV circuit #2 rebuild, scheduled for 5/15/2013 in-service<sup>11</sup>
- Moundridge 138/115/13.8kV autotransformer circuit #2, scheduled for 12/1/2014 in-service<sup>12</sup>

## 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-2011-002 study and are assumed to be in service. This list may not be all inclusive. The DISIS-2011-002 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 GIA or withdraw from the interconnection queue. The DISIS-2011-002 Customer Generation Facilities in service dates may need to be delayed until the completion of the following upgrades.

- Finney – Holcomb 345kV circuit #2, assigned to GEN-2006-049 interconnection customer<sup>13</sup>
- Central Plains – Setab 115kV transmission line, assigned to GEN-2007-013 interconnection customer
- Upgrades assigned to 1<sup>st</sup> Cluster (ICS-2008-001) Interconnection Customers:
  - Grassland – Wolfforth 230kV
- Upgrades assigned to DISIS-2009-001 Interconnection Customers:
  - Fort Dodge – North Fort Dodge – Spearville 115kV circuit #2
  - Albion – Petersburg – Neligh 115kV rerate
  - Fort Randall – Madison County – Kelly 230kV rerate (320MVA)
  - Spearville 345/115kV autotransformer
- Upgrades assigned to DISIS-2010-001 Interconnection Customers:
  - Post Rock 345/230kV circuit #2 autotransformer
  - South Hays – Hays Plant – Vine Street 115kV rebuild
  - Switch 2749 – Wildorado 69kV rebuild
  - Madison County – Kelly 230kV rerate (478MVA)
  - Washita – Gracemont 138kV circuit #2
- Upgrades assigned to DISIS-2010-002 Interconnection Customers:
  - Beaver County 345kV Expansion (Tap & Tie Hitchland – Woodward CKT 2 into Beaver County 345kV)
  - Twin Church – Dixon County 230kV rerate (320MVA)

<sup>9</sup> SPP Transmission Service Project identified in SPP-2009-AG2-AFS6. Per SPP-NTC-20137.

<sup>10</sup> SPP Regional Reliability Project. Per SPP-NTC-20003.

<sup>11</sup> SPP Regional Reliability 2012 ITPNT Project. Per SPP-NTC-200171.

<sup>12</sup> SPP Regional Reliability 2012 ITP10 Project. Per SPP-NTC-200181.

<sup>13</sup> Impact Study posted February 2012.

- (NRIS only) Spearville – Mullergren 230kV circuit #1 rebuild
- Upgrades assigned to DISIS-2011-001 interconnection Customers:
  - Beaver County – Gray County 345kV
  - Spearville – Mullergren – Reno double circuit 345kV
  - Tatonga – Matthewson - Cimarron 345kV circuit #2
    - Tatonga terminal equipment upgrade (1792 MVA)
  - Rice County – Circle 230kV conversion
  - Rice County – Lyons 115kV rebuild
  - Rice County 230/115kV autotransformer
  - Lyons – Wheatland 115kV rerate (199 MVA)
  - Hoskins – Dixon County – Twin Church 230kV rerate
  - (NRIS only) Benton – Wichita 345kV rerate (1195MVA)
  - (NRIS only) Chisolm – Maize – Evans Energy Center 138kV rerate
  - (NRIS only) Deaf Smith County – South Randle County 230kV rerate
  - (NRIS only) EL Reno – Roman Nose 138kV rebuild
  - (NRIS only) FPL Switch – Woodward = Mooreland 138kV rebuild
  - (NRIS only) Hitchland 230/115/13.2kV transformer circuit #2
  - (NRIS only) Knoll – North Hays – Vine 115kV 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 80% nameplate of maximum generation. The wind generating plants in the other areas were modeled at 20% nameplate of maximum generation. This process created fifteen different scenarios with each group being studied at 80% nameplate rating. 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 each interconnection request modeled at 100% nameplate.

Peaking units were not dispatched in the 2012 spring model. To study peaking units' impacts, the 2012 summer and winter and 2017 summer and winter 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 PTI 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 2012 spring model. Cost Allocated Network Upgrades of peaking units was determined using the 2017 summer peak model. A 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 2,093.1 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 \$104,890,606. 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.

---

## Power Flow Analysis

---

### Power Flow Analysis Methodology

The Southwest Power Pool (SPP) Criteria states that:

“The transmission system of the SPP region shall be planned and constructed so that the contingencies as set forth in the Criteria will meet the applicable *NERC Reliability Standards* for transmission planning. All MDWG power flow models shall be tested to verify compliance with the System Performance Standards from NERC Table 1 – Category A.”

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. This satisfies the “more probable” contingency testing criteria mandated by NERC and the SPP criteria.

### Power Flow Analysis

A power flow analysis was conducted for each Interconnection Customer’s facility using modified versions of the 2012 spring peak, 2012 summer and winter peak, and the 2017 summer and winter 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 (ER) Interconnection Request. Certain requests that requested 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 NPPD, OKGE, SPS, SUNC, WFEC, and WERE transmission systems under system intact and contingency conditions in the peak seasons.

### **Cluster Group 1 (Woodward Area)**

In addition to the 4,907.4 MW of previously queued generation in the area, 404.4 MW of new interconnection service was studied. No new ERIS constraints were found in this area. For interconnection customers that requested NRIS, a number of additional upgrades may have been identified and listed in Appendices E and F.

### **Cluster Group 2 (Hitchland Area)**

In addition to the 3,529.4 MW of previously queued generation in the area, 0 MW of new interconnection service was studied. No new constraints were found in this area.

### **Cluster Group 3 (Spearville Area)**

In addition to the 4,942.9 MW of previously queued generation in the area, 480.0 MW of new interconnection service was studied. No new ERIS constraints were found in this area.

### **Cluster Group 4 (Mingo/NW Kansas Group)**

In addition to the 825.0 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

### **Cluster Group 5 (Amarillo Area)**

In addition to the 1,972.6 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

### **Cluster Group 6 (South Texas Panhandle/New Mexico)**

In addition to the 2,289.1 MW of previously queued generation in the area, 417.0 MW of new interconnection service was studied. For interconnection customers that requested NRIS, a number of additional upgrades may have been identified and listed in Appendices E and F.

### **Cluster Group 7 (Southwestern Oklahoma)**

In addition to the 1,734.0 MW of previously queued generation in the area, 257.0 MW of new interconnection service was studied. No new ERIS constraints were found in this area. For interconnection customers that requested NRIS, Glass Mountain – Mooreland 138kV rebuild has been identified and listed in Appendices E and F.

### **Cluster Group 8 (South Central Kansas/North Oklahoma)**

In addition to the 2,035.9 MW of previously queued generation in the area, 150.4 MW of new interconnection service was studied. No new constraints were found in this area.

### **Cluster Group 9/10 (Nebraska)**

In addition to the 1,767.6 MW of previously queued generation in the area, 163.5 MW of new interconnection service was studied. Outlet issues require mitigation for both of the two larger

requests in this group. To interconnect GEN-2010-044, new 115kV transmission line is needed from Harbine – Crete. The requirements to interconnect GEN-2011-055 include rebuilding and reconfiguration of the POI substation, as well as, replacement of some additional terminal equipment at other substations. Additionally, for interconnection customers that requested NRIS, a number of additional upgrades were identified.

### **Cluster Group 11 (North Central Kansas)**

In addition to the 1,495.1 MW of previously queued generation in the area, 0 MW of new interconnection service was studied. No new constraints were found in this area.

### **Cluster Group 12 (Northwest Arkansas)**

In addition to the 0 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

### **Cluster Group 13 (Northwest Missouri)**

In addition to the 1,796.1 MW of previously queued generation in the area, 0 MW of new interconnection service was studied. No new constraints were found in this area.

### **Cluster Group 14 (South Central Oklahoma)**

In addition to the 200 MW of previously queued generation in the area, 220.8 MW of new interconnection service was studied. No new ERIS constraints were found in this area. For interconnection customer GEN-2011-050 that requested NRIS, terminal equipment upgrade on Cimarron – Draper 345kV has been identified and listed in Appendices E and F.

### **Cluster Group 15 (reserved)**

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



## Stability Analysis

A stability analysis was conducted for each Interconnection Customer’s facility using modified versions of the 2012 summer and 2012 winter peak models. 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.

### Cluster Group 1 (Woodward Area)

The Group 1 stability analysis for this restudy was performed by SPP Staff. Stability analysis confirms that the addition of the Matthewson 345kV substation that taps and ties the Woodring – Cimarron and Tatonga – Northwest 345kV transmission lines is required for stability purposes. In addition, a second 345kV circuit between Tatonga – Matthewson is required to maintain stability for the studied contingencies. Once these upgrades are in-service the stability analysis indicates that requests in Group 1 will be stable for each contingency specified by SPP and the nearby areas will retain angular, frequency and voltage stability.

Primarily due to higher queued interconnection requests withdrawing from the interconnection queue, the previously assigned Woodward-Tatonga 345kV circuit #2 is no longer a requirement for interconnection for the Group 1 interconnection requests.

Power Factor analysis was not performed again for this restudy but the analysis from the prior study has been reported below. With the power factor requirements and all network upgrades in service, all interconnection request in Group 1 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-2011-019	299	Siemens 2.3MW	Woodward 345kV	0.95	0.95
GEN-2011-020	299	Siemens 2.3MW	Woodward 345kV	0.97	0.95
GEN-2011-024	299	Siemens 2.3MW	Tatonga 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 2 (Hitchland Area)

The Group 2 stability analysis was not performed again for this restudy.

### Cluster Group 3 (Spearville Area)

The Group 3 stability analysis was not performed again for this restudy.

**Cluster Group 4 (Mingo Area)**

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

**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 restudy was performed by SPP Staff. Stability analysis has determined that with the addition of Power System Stabilizers (PSS) on certain units within the Southwestern Public Service (SPS) Balancing Authority that the 417 MW of new generation interconnection requests can be accommodated with the addition of previously assigned network upgrades. This result is a change from the result of the original DISIS-2011-002 study that indicated a new 345kV line from Tuco to Potter was required to interconnect the Group 6 interconnection requests. Once the previously assigned upgrades are placed in service (these upgrades include the Tuco-Woodward 345kV line and the Hitchland-Woodward double circuit 345kV line as well as the Grassland-Wolfforth 230kV line) the transmission system will remain stable and low voltage ride through requirements are satisfied for the contingencies studied.

Power Factor analysis was not performed again for this restudy but the analysis from the prior study has been reported below. With the power factor requirements and all network upgrades in service, all interconnection request in Group 1 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-2011-045	205 Winter 180 Summer	GENROU	Jones_bus2 230kV (526338)	0.95	0.95
GEN-2011-046	27 Winter 23 Summer	GENROU	Tucumcari 115kV (524477)	0.95	0.95
GEN-2011-048	175 Winter 165 Summer	GENROU	Mustang 230kV (527151)	0.95	0.95
ASGI-2011-004	19.2	GE 1.6MW	Jones_bus2 230kV (526338)	0.989	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 was no stability analysis conducted in the Southwest Oklahoma area due to no requests in the area.

**Cluster Group 8 (South Central Kansas/North Oklahoma)**

The Group 8 stability analysis was not performed again for this restudy.

**Cluster Group 9/10 (Nebraska)**

The Group 9/10 stability analysis was not performed again for this restudy.

**Cluster Group 11 (North Central Kansas Area)**

The Group 11 stability analysis was not performed again for this restudy.

**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)**

The Group 13 stability analysis was not performed again for this restudy.

**Cluster Group 14 (South Central Oklahoma)**

There was no stability analysis conducted in the Northwest Arkansas 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 2,093.1 MW of new interconnection requests included in this Definitive Interconnection System Impact Study is estimated at \$104,890,606 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-2011-004	20.0	ER	SPS	Pleasant Hill 69kV	Pleasant Hill 69kV		TBD
GEN-2010-044	99.0	ER/NR	NPPD	Tap Harbine - Beatrice 115kV	Harbine 115kV	11/1/2012	TBD
GEN-2010-061	180.0	ER/NR	MIDW	Tap Post Rock - Spearville 345kV	Tap Post Rock - Spearville 345kV	12/31/2012	12/31/2014
GEN-2011-037	7.0	ER	WFEC	Blue Canyon 5 138kV	Blue Canyon 5 138kV	1/1/2012	
GEN-2011-040	111.0	ER/NR	OKGE	Pooleville 138kV	Tap Ratliff - Pooleville 138kV	12/31/2012	
GEN-2011-043	150.0	ER	SUNCMKEC	Thistle 345kV	Thistle 345kV	12/31/2013	12/31/2014
GEN-2011-044	150.0	ER/NR	SUNCMKEC	Thistle 345kV	Thistle 345kV	12/31/2014	12/31/2014
GEN-2011-045	205.0	ER/NR	SPS	Jones 230kV	Jones 230kV	6/1/2013	TBD
GEN-2011-046	27.0	ER/NR	SPS	Tucumcari 115kV	Lopez 115kV	6/1/2013	TBD
GEN-2011-048	165.0	ER/NR	SPS	Mustang 230kV	Mustang 230kV	3/1/2013	TBD
GEN-2011-049	250.0	ER/NR	OKGE	Border 345kV	Border 345kV	12/31/2013	TBD
GEN-2011-050	109.8	ER/NR	AEPW	Tap Rush Springs - Marlow 138kV	Tap Rush Springs - Marlow 138kV	12/31/2013	
GEN-2011-051	104.4	ER/NR	OKGE	Tap Woodward - Tatonga 345kV	Tap Woodward - Tatonga 345kV	12/31/2013	12/31/2014
GEN-2011-054	300.0	ER/NR	OKGE	Cimarron 345kV	Cimarron 345kV	11/30/2013	12/31/2014
GEN-2011-055	52.8	ER/NR	OPPD	South Sterling 69kV	South Sterling 69kV	12/31/2012	TBD
GEN-2011-056	3.6	ER	NPPD	Jeffrey 115kV	Jeffrey 115kV	6/30/2012	
GEN-2011-056A	3.6	ER	NPPD	John Lake 1 115kV	John 1 115kV	6/30/2012	
GEN-2011-056B	4.5	ER	NPPD	John Lake 2 115kV	John 2 115kV	6/30/2012	
GEN-2011-057	150.4	ER	WERE	Creswell 138kV	Creswell 138kV	12/31/2013	
<b>TOTAL</b>		<b>2,093.1</b>					

\*request dependent upon Priority Projects or Balanced Portfolio may be delayed until 12/31/2014.  
Other projects 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-2010-001	400	AECI	Tap Cooper - Fairport (AECI) 345kV	AECI queue Affected Study
ASGI-2010-005	99	AECI	Lathrop (AECI) 161kV	AECI queue Affected Study
ASGI-2010-006	150	AECI	Tap Fairfax Tap - Fairfax (AECI) 138kV	AECI queue Affected Study
ASGI-2010-009	201	AECI	Osborn (AECI) 161kV	AECI queue Affected Study
ASGI-2010-010	42	SPS	Lovington 115kV	Affected Study
ASGI-2010-011	48	SPS	TC-Texas County 69kV	Affected Study
ASGI-2010-020	30	SPS	Tap LE-Tatum - LE-Crossroads 69kV	Under Study (DISIS-2010-002)
ASGI-2010-021	15	SPS	Tap LE-Saunders Tap - LE-Anderson 69kV	Under Study (DISIS-2010-002)
ASGI-2011-001	28.8	SPS	LE-Lovington 115kV	Under Study (DISIS-2010-002)
ASGI-2011-002	10	SPS	Herring 115kV	AECI queue Affected Study
ASGI-2011-003	10	SPS	Hendricks 115kV	AECI queue Affected Study
GEN-2001-014	96	WFEC	Ft Supply 138kV	On-Line
GEN-2001-026	74	WFEC	Washita 138kV	On-Line
GEN-2001-033	180	SPS	San Juan Tap 230kV	On-Line
GEN-2001-036	80	SPS	Norton 115kV	On-Line
GEN-2001-037	100	OKGE	FPL Moreland Tap 138kV	On-Line
GEN-2001-039A	105	SUNCMKEC	Tap Greensburg - Ft Dodge 115kV	On Schedule for 2012
GEN-2001-039M	100	SUNCMKEC	Central Plains Tap 115kV	On-Line
GEN-2002-004	200	WERE	Latham 345kV	On-Line at 150MW
GEN-2002-005	120	WFEC	Red Hills Tap 138kV	On-Line
GEN-2002-008	240	SPS	Hitchland 345kV	On-Line at 120MW
GEN-2002-009	80	SPS	Hansford 115kV	On-Line
GEN-2002-022	240	SPS	Bushland 230kV	On-Line
GEN-2002-023N	0.8	NPPD	Harmony 115kV	On-Line
GEN-2002-025A	150	SUNCMKEC	Spearville 230kV	On-Line
GEN-2003-004 GEN-2004-023 GEN-2005-003	151.2	WFEC	Washita 138kV	On-Line
GEN-2003-005	100	WFEC	Anadarko - Paradise (Blue Canyon) 138kV	On-Line
GEN-2003-006A	200	SUNCMKEC	Elm Creek 230kV	On-Line
GEN-2003-019	250	MIDW	Smoky Hills Tap 230kV	On-Line
GEN-2003-020	160	SPS	Martin 115kV	On-Line at 80MW
GEN-2003-021N	75	NPPD	Ainsworth Wind Tap 115kV	On-Line
GEN-2003-022	120	AEPW	Washita 34.5kV	On-Line
GEN-2004-005N	30	NPPD	St Francis 115kV	IA Pending
GEN-2004-014	154.5	SUNCMKEC	Spearville 230kV	On Schedule for 2012
GEN-2004-020	27	AEPW	Washita 34.5kV	On-Line
GEN-2004-023N	75	NPPD	Columbus County 115kV	On Schedule
GEN-2005-005	18	OKGE	FPL Moreland Tap 138kV	IA Pending
GEN-2005-008	120	OKGE	Woodward 138kV	On-Line
GEN-2005-012	250	SUNCMKEC	Spearville 345kV	On Schedule for 2012
GEN-2005-013	201	WERE	Tap Latham - Neosho (Caney River) 345kV	On-Line
GEN-2006-002	101	AEPW	Sweetwater 230kV	On-Line
GEN-2006-006	205.5	SUNCMKEC	Spearville 345kV	IA Pending
GEN-2006-014	300	MIPU	Tap Maryville - Midway 161kV	On Suspension
GEN-2006-017	300	MIPU	Tap Maryville - Midway 161kV (GEN-2006-014 TAP)	On Suspension

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2006-018	170	SPS	Antelope 230kV	On-Line
GEN-2006-020N	42	NPPD	Bloomfield 115kV	On-Line
GEN-2006-020S	18.9	SPS	DWS Frisco 115kV	On Schedule for 3/2012
GEN-2006-021	101	SUNCMKEC	Flat Ridge Tap 138kV	On-Line
GEN-2006-022	150	SUNCMKEC	Pratt 115kV	On Suspension
GEN-2006-024S	19.8	WFEC	Buffalo Bear Tap 69kV	On-Line
GEN-2006-026	502	SPS	Hobbs 230kV	On-Line
GEN-2006-031	75	MIDW	Knoll 115kV	On-Line
GEN-2006-032	200	MIDW	South Hays 230kV	On Suspension
GEN-2006-034	81	SUNCMKEC	Kanarado 115kV	On Suspension
GEN-2006-035	225	AEPW	Sweetwater 230kV	On Schedule for 2011
GEN-2006-037N1	75	NPPD	Broken Bow 115kV	On Suspension
GEN-2006-038N005	80	NPPD	Broken Bow 115kV	On Schedule for 2012
GEN-2006-038N019	80	NPPD	Petersburg 115kV	On-Line
GEN-2006-039	400	SPS	Tap and Tie both Potter - Plant X 230kV and Bushland - Deaf Smith (South Randle County) 230kV	On Suspension
GEN-2006-040	108	SUNCMKEC	Mingo 115kV	On Schedule for 2012
GEN-2006-043	99	AEPW	Sweetwater 230kV	On-Line
GEN-2006-044	370	SPS	Hitchland 345kV	On Schedule for 2012
GEN-2006-044N	40.5	NPPD	Petersburg 115kV	On-Line
GEN-2006-044N02	100.5	NPPD	Tap Ft Randle - Columbus (Madison County) 230kV	IA Pending
GEN-2006-045	240	SPS	Tap and Tie both Potter - Plant X 230kV and Bushland - Deaf Smith (South Randle County) 230kV	On Schedule for 2012
GEN-2006-046	131	OKGE	Dewey 138kV	On-Line
GEN-2006-047	240	SPS	Tap and Tie both Potter - Plant X 230kV and Bushland - Deaf Smith (South Randle County) 230kV	On Suspension
GEN-2006-049	400	SPS	Tap Finney - Hitchland (Stevens County) 345kV	On Schedule for 2014
GEN-2007-006	160	OKGE	Roman Nose 138kV	On Suspension
GEN-2007-011	135	SUNCMKEC	Syracuse 115kV	On Schedule
GEN-2007-011N08	81	NPPD	Bloomfield 115kV	On-Line
GEN-2007-015	135	WERE	Tap Kelly(WERE) - S1399(OPPD) 161kV	On Suspension
GEN-2007-017	100.5	MIPU	Tap Maryville - Midway (GEN-2006-014 TAP) 161kV	On Suspension
GEN-2007-021	201	OKGE	Tatonga 345kV	On Schedule for 2014
GEN-2007-025	300	WERE	Tap Wichita - Woodring (Sumner County) 345kV	On Schedule for 2012
GEN-2007-032	150	WFEC	Tap Clinton Junction - Clinton 138kV	On Schedule for 2012
GEN-2007-038	200	SUNCMKEC	Spearville 345kV	On Schedule for 2015
GEN-2007-040	200	SUNCMKEC	Tap Holcomb - Spearville (Gray County) 345kV	On Schedule for 2012
GEN-2007-043	200	OKGE	Minco 345kV	On-Line
GEN-2007-044	300	OKGE	Tatonga 345kV	On Schedule for 2014
GEN-2007-046	199.5	SPS	Hitchland 115kV	On Schedule for 2014
GEN-2007-048	400	SPS	Tap Amarillo S - Swisher 230kV	On Schedule for 2014
GEN-2007-050	170	OKGE	Woodward EHV 138kV	On-Line at 150MW
GEN-2007-051	200	WFEC	Mooreland 138kV	On Schedule for 2014
GEN-2007-052	150	WFEC	Anadarko 138kV	On-Line
GEN-2007-053	110	MIPU	Tap Maryville - Midway (GEN-2006-014 TAP) 161kV	On Schedule for 2013
GEN-2007-057	34.5	SPS	Moore County East 115kV	On Schedule for 2014
GEN-2007-062	765	OKGE	Woodward EHV 345kV	On Schedule for 2014
GEN-2008-003	101	OKGE	Woodward EHV 138kV	On-Line

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2008-008	60	SPS	Graham 69kV	On Suspension
GEN-2008-009	60	SPS	San Juan Tap 230kV	On Schedule for 2014
GEN-2008-013	300	OKGE	Tap Wichita - Woodring (South of GEN-2007-025) 345kV	On Schedule for 2012
GEN-2008-014	150	SPS	Tap Tuco- Oklaunion 345kV	On Schedule for 2014
GEN-2008-016	248	SPS	Grassland 230kV	IA Pending
GEN-2008-017	300	SUNCMKEC	Setab 345kV	On Schedule for 2014
GEN-2008-018	405	SPS	Finney 345kV	On Schedule for 2012
GEN-2008-019	300	OKGE	Tatonga 345kV	On Schedule for 2015
GEN-2008-021	42.0	WERE	Wolf Creek 345kV	On-Line
GEN-2008-022	300	SPS	Tap Eddy Co - Tolk (Chaves County) 345kV	On Schedule for 2015
GEN-2008-023	150	AEPW	Hobart Junction 138kV	On Schedule for 2012
GEN-2008-025	101	SUNCMKEC	Ruleton 115kV	On Schedul for 2015
GEN-2008-029	250	OKGE	Woodward EHV 138kV	On Schedule for 2014
GEN-2008-037	101	WFEC	Tap Washita - Blue Canyon Wind 138kV	On-Line
GEN-2008-044	197.8	OKGE	Tatonga 345kV	On-Line
GEN-2008-046	200	OKGE	Sunnyside 345kV	On Suspension
GEN-2008-047	300	SPS	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV	IA Pending
GEN-2008-051	322	SPS	Potter County 345kV	On Schedule for 2012
GEN-2008-071	76.8	OKGE	Newkirk 138kV	On Schedule for 2013
GEN-2008-079	100.5	SUNCMKEC	Tap Cudahy - Ft Dodge 115kV	On Schedule for 2012
GEN-2008-086N02	200	NPPD	Tap Ft Randle - Columbus (Madison County) 230kV	On Schedule for 2014
GEN-2008-088	50.6	SPS	Vega 69kV	IA Pending
GEN-2008-092	201	MIDW	Postrock 230kV	IA Pending
GEN-2008-098	100.8	WERE	Tap Lacygne - Wolf Creek (Anderson County) 345kV	IA Pending
GEN-2008-1190	60	OPPD	S1399 161kV	On-Line
GEN-2008-123N	89.7	NPPD	Tap Guide Rock - Pauline 115kV	On Suspension
GEN-2008-124	200	SUNCMKEC	Spearville 345kV	On Schedule for 2014
GEN-2008-127	200	WERE	Tap Rosehill - Sooner 345kV	On Suspension
GEN-2008-129	80	MIPU	Pleasant Hill 161kV	On-Line
GEN-2009-008	199.5	MIDW	South Hays 230kV	On Suspension
GEN-2009-011	50	SUNCMKEC	Tap Plainsville - Phillipsburg 115kV	On Schedule for 2014
GEN-2009-016	100.8	AEPW	Falcon Road 138kV	On Suspension
GEN-2009-020	48.6	MIDW	Tap Nekoma - Bazine 69kV	On Suspension
GEN-2009-025	60	OKGE	Tap Deer Creek - Sinclair Blackwell 69kV	On Schedule for 2012
GEN-2009-040	73.8	WERE	Tap Smittyville - Knob Hill 115kV	On Suspension
GEN-2009-0675	20	SPS	Seven Rivers 69kV	IA Pending
GEN-2010-001	300	SPS	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV	IA Pending
GEN-2010-003	100.8	WERE	Tap Lacygne - Wolf Creek (Anderson County) 345kV	IA Pending
GEN-2010-005	300	WERE	Tap Wichita - Woodring (Sumner County) 345kV	On Schedule for 2012
GEN-2010-006	205	SPS	Jones 230kV	On-Line
GEN-2010-009	165.6	SUNCMKEC	Tap Holcomb - Spearville (Gray County) 345kV	On Schedule for 2012
GEN-2010-011	30	OKGE	Tatonga 345kV	On Line
GEN-2010-012	65	WFEC	Brantley 138kV	IA Pending
GEN-2010-014	360	SPS	Hitchland 345kV	IA Pending
GEN-2010-015	200.1	SUNCMKEC	Spearville 345kV	On Schedule for 2015
GEN-2010-020	20	SPS	Roswell 69kV	Facility Study
GEN-2010-029	450	SUNCMKEC	Spearville 345kV	Facility Study

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2010-036	4.6	WERE	6th Street 115kV	On Schedule for 2012
GEN-2010-040	300	OKGE	Cimarron 345kV	On Schedule for 2012
GEN-2010-041	10.5	OPPD	S 1399 161kV	Under Study (DISIS-2010-002)
GEN-2010-045	197.8	SUNCMKEC	Tap Holcomb - Spearville (Gray County) 345kV	IA Pending
GEN-2010-046	56	SPS	Tuco 230kV	IA Pending
GEN-2010-048	70	MIDW	Tap Beach Station - Redline 115kV	IA Pending
GEN-2010-051	200	NPPD	Tap Twin Church - Hoskins 230kV	IA Pending
GEN-2010-053	199.8	SUNCMKEC	Clark County 345kV	IA Pending
GEN-2010-055	4.5	AEPW	Wekiwa 138kV	Under Study (DISIS-2011-001)
GEN-2010-056	151	MIPU	Tap Saint Joseph - Cooper 345kV	Under Study (DISIS-2011-001)
GEN-2010-057	201	WERE	Rice County 230kV	Under Study (DISIS-2011-001)
GEN-2010-058	20	SPS	Chaves County 115kV	Under Study (DISIS-2011-001)
GEN-2011-007	250	OKGE	Tap Cimarron - Woodring (Matthewson) 345kV	Under Study (DISIS-2011-001)
GEN-2011-008	600	SUNCMKEC	Clark County 345kV	Under Study (DISIS-2011-001)
GEN-2011-010	100.8	OKGE	Minco 345kV	Under Study (DISIS-2011-001)
GEN-2011-011	50	KACP	Iatan 345kV	Under Study (DISIS-2011-001)
GEN-2011-012	104.5	SPS	Tap Moore County - Hitchland 345kV	Under Study (DISIS-2011-001)
GEN-2011-014	201	SPS	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV	Under Study (DISIS-2011-001)
GEN-2011-016	200.1	SUNCMKEC	Spearville 345kV	Under Study (DISIS-2011-001)
GEN-2011-017	299	SUNCMKEC	Tap Spearville - PostRock 345kV	Under Study (DISIS-2011-001)
GEN-2011-018	73.6	NPPD	Steele City 115kV	Under Study (DISIS-2011-001)
GEN-2011-019	299	OKGE	Woodward 345kV	Under Study (DISIS-2011-001)
GEN-2011-020	299	OKGE	Woodward 345kV	Under Study (DISIS-2011-001)
GEN-2011-021	299	SPS	Tap Hitchland - Beaver 345kV	Under Study (DISIS-2011-001)
GEN-2011-022	299	SPS	Hitchland 345kV	Under Study (DISIS-2011-001)
GEN-2011-023	299	SUNCMKEC	Clark 345kV	Under Study (DISIS-2011-001)
GEN-2011-024	299	OKGE	Tatonga 345kV	Under Study (DISIS-2011-001)
GEN-2011-025	82.3	SPS	Tap Floyd County - Crosby County 115kV	Under Study (DISIS-2011-001)
GEN-2011-027	120	NPPD	Tap Twin Church - Hoskins 230kV (GEN-2010-51 Tap)	Under Study (DISIS-2011-001)
Gray County Wind (Montezuma)	110	SUNCMKEC	Haggard 115kV	On-Line
Llano Estacado (White Deer)	80	SPS	Llano Wind 115kV	On-Line
NPPD Distributed (Broken Bow)	8.3	NPPD	Broken Bow 115kV	On-Line
NPPD Distributed (Burwell)	3	NPPD	Ord 115kV	On-Line
NPPD Distributed (Columbus Hydro)	45	NPPD	Columbus 115kV	On-Line
NPPD Distributed (Jeffrey)	18.0	NPPD	Jeffrey 115kV	On-Line
NPPD Distributed (John Lake 1)	19.0	NPPD	John Lake 1 115kV	On-Line
NPPD Distributed (John Lake 2)	19.0	NPPD	John Lake 2 115kV	On-Line
NPPD Distributed (Ord)	10.8	NPPD	Ord 115kV	On-Line
NPPD Distributed (Stuart)	2.1	NPPD	Ainsworth 115kV	On-Line
SPS Distributed (Dumas 19th St)	20	SPS	Dumas 19th Street 115kV	On-Line
SPS Distributed (Etter)	20	SPS	Etter 115kV	On-Line
SPS Distributed (Moore E)	25	SPS	Moore East 115kV	On-Line
SPS Distributed (Sherman)	20	SPS	Sherman 115kV	On-Line
SPS Distributed (Spearman)	10	SPS	Spearman 69kV	On-Line
SPS Distributed (TC-Texas County)	20	SPS	Texas County 115kV	On-Line
<b>TOTAL</b>			<b>27,495.1</b>	

## **C: Study Groupings**

See next page

## C. Study Groups

<b>GROUP 1: WOODWARD AREA</b>			
<b>Request</b>	<b>Capacity</b>	<b>Area</b>	<b>Proposed Point of Interconnection</b>
GEN-2001-014	96.0	WFEC	Ft Supply 138kV
GEN-2001-037	100.0	OKGE	FPL Moreland Tap 138kV
GEN-2005-005	18.0	OKGE	FPL Moreland Tap 138kV
GEN-2005-008	120.0	OKGE	Woodward 138kV
GEN-2006-024S	19.8	WFEC	Buffalo Bear Tap 69kV
GEN-2006-046	131.0	OKGE	Dewey 138kV
GEN-2007-006	160.0	OKGE	Roman Nose 138kV
GEN-2007-021	201.0	OKGE	Tatonga 345kV
GEN-2007-043	200.0	OKGE	Minco 345kV
GEN-2007-044	300.0	OKGE	Tatonga 345kV
GEN-2007-050	170.0	OKGE	Woodward EHV 138kV
GEN-2007-051	200.0	WFEC	Mooreland 138kV
GEN-2007-062	765.0	OKGE	Woodward EHV 345kV
GEN-2008-003	101.0	OKGE	Woodward EHV 138kV
GEN-2008-019	300.0	OKGE	Tatonga 345kV
GEN-2008-029	250.0	OKGE	Woodward EHV 138kV
GEN-2008-044	197.8	OKGE	Tatonga 345kV
GEN-2010-011	30.0	OKGE	Tatonga 345kV
GEN-2010-040	300.0	OKGE	Cimarron 345kV
GEN-2011-007	250.0	OKGE	Tap Cimarron - Woodring (Matthewson) 345kV
GEN-2011-010	100.8	OKGE	Minco 345kV
GEN-2011-019	299.0	OKGE	Woodward 345kV
GEN-2011-020	299.0	OKGE	Woodward 345kV
GEN-2011-024	299.0	OKGE	Tatonga 345kV
<b>PRIOR QUEUED SUBTOTAL</b>	<b>4,907.4</b>		
GEN-2011-051	104.4	OKGE	Tap Woodward - Tatonga 345kV
GEN-2011-054	300.0	OKGE	Cimarron 345kV
<b>CURRENT CLUSTER SUBTOTAL</b>	<b>404.4</b>		
<b>AREA TOTAL</b>	<b>5,311.8</b>		

<b>GROUP 2: HITCHLAND AREA</b>			
<b>Request</b>	<b>Capacity</b>	<b>Area</b>	<b>Proposed Point of Interconnection</b>
ASGI-2010-011	48.0	SPS	TC-Texas County 69kV
GEN-2002-008	240.0	SPS	Hitchland 345kV
GEN-2002-009	80.0	SPS	Hansford 115kV
GEN-2003-020	160.0	SPS	Martin 115kV
GEN-2006-020S	18.9	SPS	DWS Frisco 115kV
GEN-2006-044	370.0	SPS	Hitchland 345kV
GEN-2006-049	400.0	SPS	Tap Finney - Hitchland (Stevens County) 345kV
GEN-2007-046	199.5	SPS	Hitchland 115kV
GEN-2007-057	34.5	SPS	Moore County East 115kV
GEN-2008-047	300.0	SPS	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV
GEN-2010-001	300.0	SPS	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV
GEN-2010-014	360.0	SPS	Hitchland 345kV
GEN-2011-012	104.5	SPS	Tap Moore County - Hitchland 345kV
GEN-2011-014	201.0	SPS	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV
GEN-2011-021	299.0	SPS	Tap Hitchland - Beaver 345kV
GEN-2011-022	299.0	SPS	Hitchland 345kV
SPS Distributed (Dumas 19th St)	20.0	SPS	Dumas 19th Street 115kV
SPS Distributed (Etter)	20.0	SPS	Etter 115kV
SPS Distributed (Moore E)	25.0	SPS	Moore East 115kV
SPS Distributed (Sherman)	20.0	SPS	Sherman 115kV
SPS Distributed (Spearman)	10.0	SPS	Spearman 69kV
SPS Distributed (TC-Texas County)	20.0	SPS	Texas County 115kV
<b>PRIOR QUEUED SUBTOTAL</b>	<b>3,529.4</b>		
<b>AREA TOTAL</b>	<b>3,529.4</b>		

<b>GROUP 3: SPEARVILLE AREA</b>			
<b>Request</b>	<b>Capacity</b>	<b>Area</b>	<b>Proposed Point of Interconnection</b>
GEN-2001-039A	105.0	SUNCMKEC	Tap Greensburg - Ft Dodge 115kV
GEN-2002-025A	150.0	SUNCMKEC	Spearville 230kV
GEN-2004-014	154.5	SUNCMKEC	Spearville 230kV
GEN-2005-012	250.0	SUNCMKEC	Spearville 345kV
GEN-2006-006	205.5	SUNCMKEC	Spearville 345kV
GEN-2006-021	101.0	SUNCMKEC	Flat Ridge Tap 138kV
GEN-2006-022	150.0	SUNCMKEC	Pratt 115kV
GEN-2007-038	200.0	SUNCMKEC	Spearville 345kV
GEN-2007-040	200.0	SUNCMKEC	Tap Holcomb - Spearville (Gray County) 345kV
GEN-2008-018	405.0	SPS	Finney 345kV
GEN-2008-079	100.5	SUNCMKEC	Tap Cudahy - Ft Dodge 115kV
GEN-2008-124	200.0	SUNCMKEC	Spearville 345kV
GEN-2010-009	165.6	SUNCMKEC	Tap Holcomb - Spearville (Gray County) 345kV
GEN-2010-015	200.1	SUNCMKEC	Spearville 345kV
GEN-2010-029	450.0	SUNCMKEC	Spearville 345kV
GEN-2010-045	197.8	SUNCMKEC	Tap Holcomb - Spearville (Gray County) 345kV
GEN-2010-053	199.8	SUNCMKEC	Clark County 345kV
GEN-2011-008	600.0	SUNCMKEC	Clark County 345kV
GEN-2011-016	200.1	SUNCMKEC	Spearville 345kV
GEN-2011-017	299.0	SUNCMKEC	Tap Spearville - PostRock 345kV
GEN-2011-023	299.0	SUNCMKEC	Clark 345kV
Gray County Wind (Montezuma)	110.0	SUNCMKEC	Haggard 115kV
<b>PRIOR QUEUED SUBTOTAL</b>	<b>4,942.9</b>		
GEN-2010-061	180.0	MIDW	Tap Post Rock - Spearville 345kV
GEN-2011-043	150.0	SUNCMKEC	Thistle 345kV
GEN-2011-044	150.0	SUNCMKEC	Thistle 345kV
<b>CURRENT CLUSTER SUBTOTAL</b>	<b>480.0</b>		
<b>AREA TOTAL</b>	<b>5,422.9</b>		

<b>GROUP 4: MINGO/NW KANSAS AREA</b>			
<b>Request</b>	<b>Capacity</b>	<b>Area</b>	<b>Proposed Point of Interconnection</b>
GEN-2001-039M	100.0	SUNCMKEC	Central Plains Tap 115kV
GEN-2006-034	81.0	SUNCMKEC	Kanarado 115kV
GEN-2006-040	108.0	SUNCMKEC	Mingo 115kV
GEN-2007-011	135.0	SUNCMKEC	Syracuse 115kV
GEN-2008-017	300.0	SUNCMKEC	Setab 345kV
GEN-2008-025	101.0	SUNCMKEC	Ruleton 115kV
<b>PRIOR QUEUED SUBTOTAL</b>	<b>825.0</b>		
<b>AREA TOTAL</b>	<b>825.0</b>		



<b>GROUP 5: AMARILLO AREA</b>			
<b>Request</b>	<b>Capacity</b>	<b>Area</b>	<b>Proposed Point of Interconnection</b>
GEN-2002-022	240.0	SPS	Bushland 230kV
GEN-2006-039	400.0	SPS	Tap and Tie both Potter - Plant X 230kV and Bushland - Deaf Smith (South Randle County) 230kV
GEN-2006-045	240.0	SPS	Tap and Tie both Potter - Plant X 230kV and Bushland - Deaf Smith (South Randle County) 230kV
GEN-2006-047	240.0	SPS	Tap and Tie both Potter - Plant X 230kV and Bushland - Deaf Smith (South Randle County) 230kV
GEN-2007-048	400.0	SPS	Tap Amarillo S - Swisher 230kV
GEN-2008-051	322.0	SPS	Potter County 345kV
GEN-2008-088	50.6	SPS	Vega 69kV
Llano Estacado (White Deer)	80.0	SPS	Llano Wind 115kV
<b>PRIOR QUEUED SUBTOTAL</b>	<b>1,972.6</b>		
<b>AREA TOTAL</b>	<b>1,972.6</b>		

<b>GROUP 6: S-TX PANHANDLE/NW AREA</b>			
<b>Request</b>	<b>Capacity</b>	<b>Area</b>	<b>Proposed Point of Interconnection</b>
ASGI-2010-010	42.0	SPS	Lovington 115kV
ASGI-2010-020	30.0	SPS	Tap LE-Tatum - LE-Crossroads 69kV
ASGI-2010-021	15.0	SPS	Tap LE-Saunders Tap - LE-Anderson 69kV
ASGI-2011-001	28.8	SPS	LE-Lovington 115kV
ASGI-2011-002	10.0	SPS	Herring 115kV
ASGI-2011-003	10.0	SPS	Hendricks 115kV
GEN-2001-033	180.0	SPS	San Juan Tap 230kV
GEN-2001-036	80.0	SPS	Norton 115kV
GEN-2006-018	170.0	SPS	Antelope 230kV
GEN-2006-026	502.0	SPS	Hobbs 230kV
GEN-2008-008	60.0	SPS	Graham 69kV
GEN-2008-009	60.0	SPS	San Juan Tap 230kV
GEN-2008-014	150.0	SPS	Tap Tuco- Oklaunion 345kV
GEN-2008-016	248.0	SPS	Grassland 230kV
GEN-2008-022	300.0	SPS	Tap Eddy Co - Tolk (Chaves County) 345kV
GEN-2009-067S	20.0	SPS	Seven Rivers 69kV
GEN-2010-006	205.0	SPS	Jones 230kV
GEN-2010-020	20.0	SPS	Roswell 69kV
GEN-2010-046	56.0	SPS	Tuco 230kV
GEN-2010-058	20.0	SPS	Chaves County 115kV
GEN-2011-025	82.3	SPS	Tap Floyd County - Crosby County 115kV
<b>PRIOR QUEUED SUBTOTAL</b>	<b>2,289.1</b>		
ASGI-2011-004	20.0	SPS	Pleasant Hill 69kV
GEN-2011-045	205.0	SPS	Jones 230kV
GEN-2011-046	27.0	SPS	Lopez 115kV
GEN-2011-048	165.0	SPS	Mustang 230kV
<b>CURRENT CLUSTER SUBTOTAL</b>	<b>417.0</b>		
<b>AREA TOTAL</b>	<b>2,706.1</b>		

**GROUP 7: SW OKLAHOMA AREA**

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-026	74.0	WFEC	Washita 138kV
GEN-2002-005	120.0	WFEC	Red Hills Tap 138kV
GEN-2003-004 GEN-2004-023 GEN-2005-003	151.2	WFEC	Washita 138kV
GEN-2003-005	100.0	WFEC	Anadarko - Paradise (Blue Canyon) 138kV
GEN-2003-022	120.0	AEPW	Washita 34.5kV
GEN-2004-020	27.0	AEPW	Washita 34.5kV
GEN-2006-002	101.0	AEPW	Sweetwater 230kV
GEN-2006-035	225.0	AEPW	Sweetwater 230kV
GEN-2006-043	99.0	AEPW	Sweetwater 230kV
GEN-2007-032	150.0	WFEC	Tap Clinton Junction - Clinton 138kV
GEN-2007-052	150.0	WFEC	Anadarko 138kV
GEN-2008-023	150.0	AEPW	Hobart Junction 138kV
GEN-2008-037	101.0	WFEC	Tap Washita - Blue Canyon Wind 138kV
GEN-2009-016	100.8	AEPW	Falcon Road 138kV
GEN-2010-012	65.0	WFEC	Brantley 138kV
<b>PRIOR QUEUED SUBTOTAL</b>	<b>1,734.0</b>		
GEN-2011-037	7.0	WFEC	Blue Canyon 5 138kV
GEN-2011-049	250.0	OKGE	Border 345kV
<b>CURRENT CLUSTER SUBTOTAL</b>	<b>257.0</b>		
<b>AREA TOTAL</b>	<b>1,991.0</b>		

**GROUP 8: N-OK/S-KS AREA**

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2010-006	150.0	AECI	Tap Fairfax Tap - Fairfax (AECI) 138kV
GEN-2002-004	200.0	WERE	Latham 345kV
GEN-2005-013	201.0	WERE	Tap Latham - Neosho (Caney River) 345kV
GEN-2007-025	300.0	WERE	Tap Wichita - Woodring (Sumner County) 345kV
GEN-2008-013	300.0	OKGE	Tap Wichita - Woodring (South of GEN-2007-025) 345kV
GEN-2008-021	42.0	WERE	Wolf Creek 345kV
GEN-2008-071	76.8	OKGE	Newkirk 138kV
GEN-2008-098	100.8	WERE	Tap Lacygne - Wolf Creek (Anderson County) 345kV
GEN-2008-127	200.0	WERE	Tap Rosehill - Sooner 345kV
GEN-2009-025	60.0	OKGE	Tap Deer Creek - Sinclair Blackwell 69kV
GEN-2010-003	100.8	WERE	Tap Lacygne - Wolf Creek (Anderson County) 345kV
GEN-2010-005	300.0	WERE	Tap Wichita - Woodring (Sumner County) 345kV
GEN-2010-055	4.5	AEPW	Wekiwa 138kV
<b>PRIOR QUEUED SUBTOTAL</b>	<b>2,035.9</b>		
GEN-2011-057	150.4	WERE	Creswell 138kV
<b>CURRENT CLUSTER SUBTOTAL</b>	<b>150.4</b>		
<b>AREA TOTAL</b>	<b>2,186.3</b>		

<b>GROUP 9/10: NEBRASKA AREA</b>			
<b>Request</b>	<b>Capacity</b>	<b>Area</b>	<b>Proposed Point of Interconnection</b>
GEN-2002-023N	0.8	NPPD	Harmony 115kV
GEN-2003-021N	75.0	NPPD	Ainsworth Wind Tap 115kV
GEN-2004-005N	30.0	NPPD	St Francis 115kV
GEN-2004-023N	75.0	NPPD	Columbus County 115kV
GEN-2006-020N	42.0	NPPD	Bloomfield 115kV
GEN-2006-037N1	75.0	NPPD	Broken Bow 115kV
GEN-2006-038N005	80.0	NPPD	Broken Bow 115kV
GEN-2006-038N019	80.0	NPPD	Petersburg 115kV
GEN-2006-044N	40.5	NPPD	Petersburg 115kV
GEN-2006-044N02	100.5	NPPD	Tap Ft Randle - Columbus (Madison County) 230kV
GEN-2007-011N08	81.0	NPPD	Bloomfield 115kV
GEN-2007-015	135.0	WERE	Tap Kelly(WERE) - S1399(OPPD) 161kV
GEN-2008-086N02	200.0	NPPD	Tap Ft Randle - Columbus (Madison County) 230kV
GEN-2008-119O	60.0	OPPD	S1399 161kV
GEN-2008-123N	89.7	NPPD	Tap Guide Rock - Pauline 115kV
GEN-2009-040	73.8	WERE	Tap Smittyville - Knob Hill 115kV
GEN-2010-041	10.5	OPPD	S 1399 161kV
GEN-2010-051	200.0	NPPD	Tap Twin Church - Hoskins 230kV
GEN-2011-018	73.6	NPPD	Steele City 115kV
GEN-2011-027	120.0	NPPD	Tap Twin Church - Hoskins 230kV (GEN-2010-51 Tap)
NPPD Distributed (Broken Bow)	8.3	NPPD	Broken Bow 115kV
NPPD Distributed (Burwell)	3.0	NPPD	Ord 115kV
NPPD Distributed (Columbus Hydro)	45.0	NPPD	Columbus 115kV
NPPD Distributed (Jeffrey)	18.0	NPPD	Jeffrey 115kV
NPPD Distributed (John Lake 1)	19.0	NPPD	John Lake 1 115kV
NPPD Distributed (John Lake 2)	19.0	NPPD	John Lake 2 115kV
NPPD Distributed (Ord)	10.8	NPPD	Ord 115kV
NPPD Distributed (Stuart)	2.1	NPPD	Ainsworth 115kV
<b>PRIOR QUEUED SUBTOTAL</b>	<b>1,767.6</b>		
GEN-2010-044	99.0	NPPD	Harbine 115kV
GEN-2011-055	52.8	OPPD	South Sterling 69kV
GEN-2011-056	3.6	NPPD	Jeffrey 115kV
GEN-2011-056A	3.6	NPPD	John 1 115kV
GEN-2011-056B	4.5	NPPD	John 2 115kV
<b>CURRENT CLUSTER SUBTOTAL</b>	<b>163.5</b>		
<b>AREA TOTAL</b>	<b>1,931.1</b>		

**GROUP 11: N KANSAS AREA**

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2003-006A	200.0	SUNCMKEC	Elm Creek 230kV
GEN-2003-019	250.0	MIDW	Smoky Hills Tap 230kV
GEN-2006-031	75.0	MIDW	Knoll 115kV
GEN-2006-032	200.0	MIDW	South Hays 230kV
GEN-2008-092	201.0	MIDW	Postrock 230kV
GEN-2009-008	199.5	MIDW	South Hays 230kV
GEN-2009-011	50.0	SUNCMKEC	Tap Plainsville - Phillipsburg 115kV
GEN-2009-020	48.6	MIDW	Tap Nekoma - Bazine 69kV
GEN-2010-048	70.0	MIDW	Tap Beach Station - Redline 115kV
GEN-2010-057	201.0	WERE	Rice County 230kV
<b>PRIOR QUEUED SUBTOTAL</b>	<b>1,495.1</b>		
<b>AREA TOTAL</b>	<b>1,495.1</b>		

**GROUP 12: NW AR AREA**

Request	Capacity	Area	Proposed Point of Interconnection
<b>AREA TOTAL</b>	<b>0.0</b>		

**GROUP 13: NW MISSOURI AREA**

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2010-001	400.0	AECI	Tap Cooper - Fairport (AECI) 345kV
ASGI-2010-005	99.0	AECI	Lathrop (AECI) 161kV
ASGI-2010-009	201.0	AECI	Osborn (AECI) 161kV
GEN-2006-014	300.0	MIPU	Tap Maryville - Midway 161kV
GEN-2006-017	300.0	MIPU	Tap Maryville - Midway 161kV (GEN-2006-014 TAP)
GEN-2007-017	100.5	MIPU	Tap Maryville - Midway (GEN-2006-014 TAP) 161kV
GEN-2007-053	110.0	MIPU	Tap Maryville - Midway (GEN-2006-014 TAP) 161kV
GEN-2008-129	80.0	MIPU	Pleasant Hill 161kV
GEN-2010-036	4.6	WERE	6th Street 115kV
GEN-2010-056	151.0	MIPU	Tap Saint Joseph - Cooper 345kV
GEN-2011-011	50.0	KACP	Iatan 345kV
<b>PRIOR QUEUED SUBTOTAL</b>	<b>1,796.1</b>		
<b>AREA TOTAL</b>	<b>1,796.1</b>		

**GROUP 14: S OKLAHOMA AREA**

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2008-046	200.0	OKGE	Sunnyside 345kV
<b>PRIOR QUEUED SUBTOTAL</b>	<b>200.0</b>		
GEN-2011-040	111.0	OKGE	Tap Ratliff - Pooleville 138kV
GEN-2011-050	109.8	AEPW	Tap Rush Springs - Marlow 138kV
<b>CURRENT CLUSTER SUBTOTAL</b>	<b>220.8</b>		
<b>AREA TOTAL</b>	<b>420.8</b>		

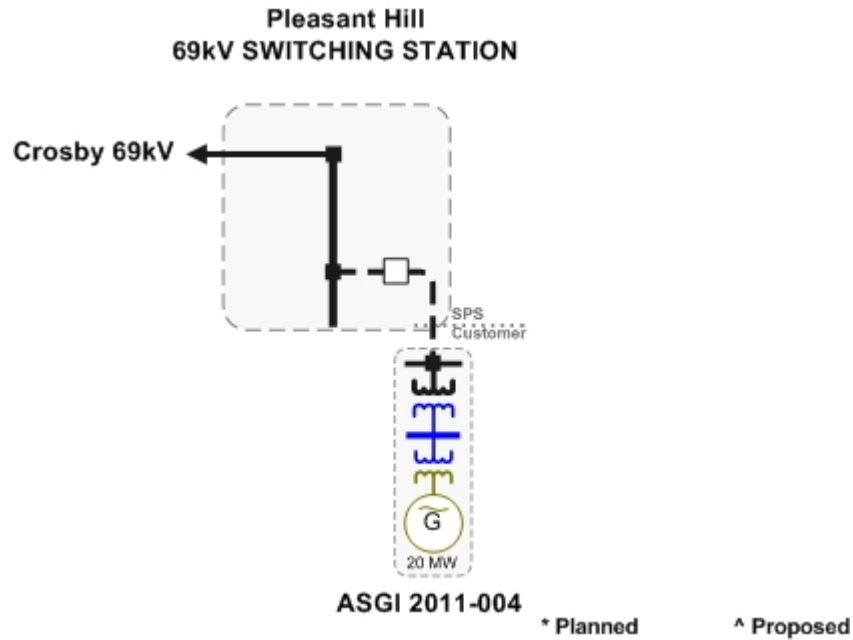
**GROUP 15: RESERVED**

Request	Capacity	Area	Proposed Point of Interconnection
<b>AREA TOTAL</b>	<b>0.0</b>		

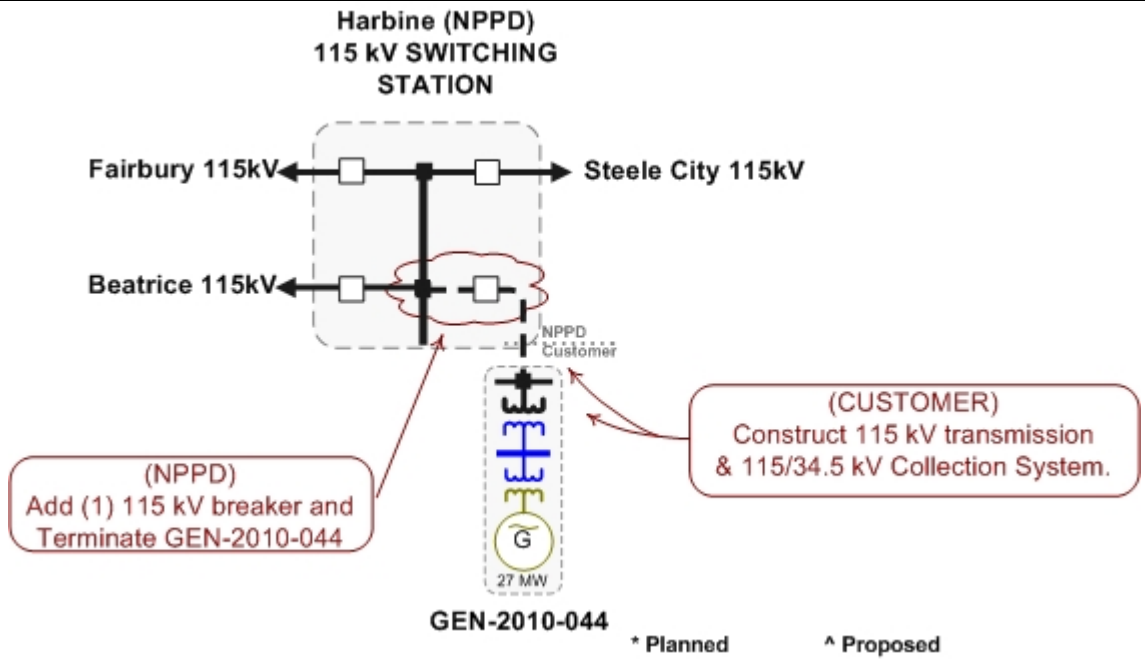
<b>CLUSTER TOTAL (CURRENT STUDY)</b>	<b>2,093.1</b>	<b>MW</b>
<b>PQ TOTAL (PRIOR QUEUED)</b>	<b>27,495.1</b>	<b>MW</b>
<b>CLUSTER TOTAL (INCLUDING PRIOR QUEUED)</b>	<b>29,588.2</b>	<b>MW</b>

### D: Proposed Point of Interconnection One line Diagrams

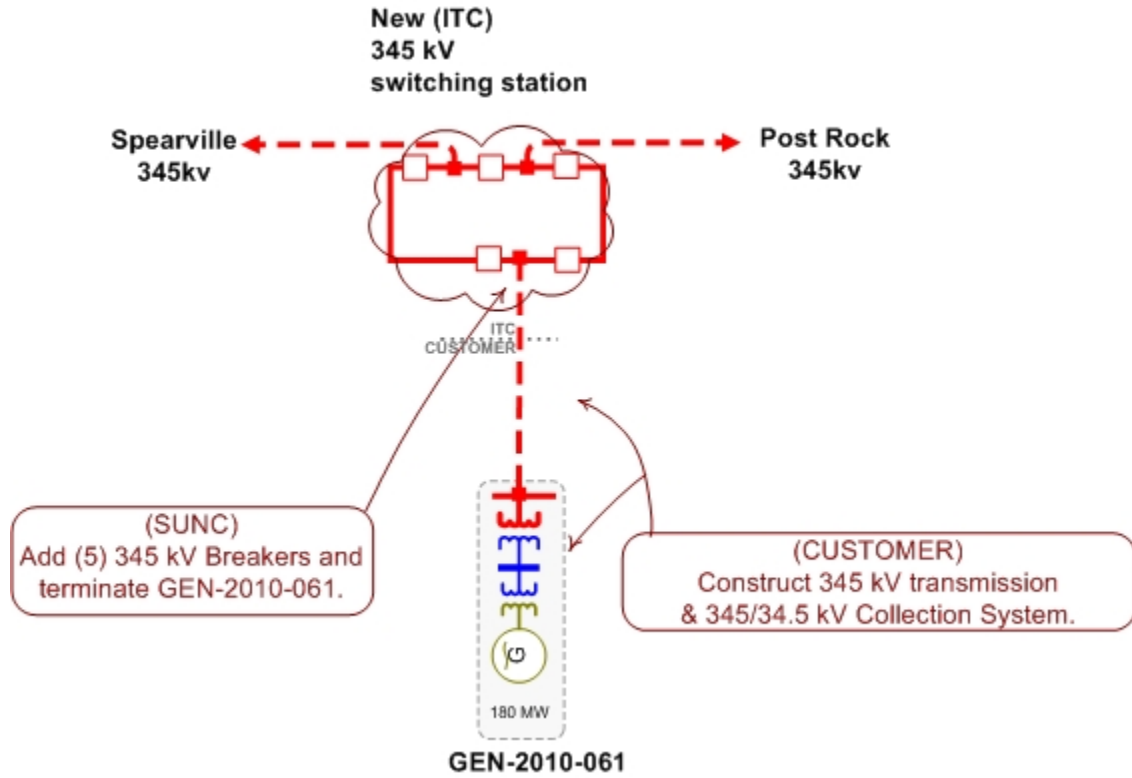
**ASGI-2011-004**



**GEN-2010-044**



**GEN-2010-061**



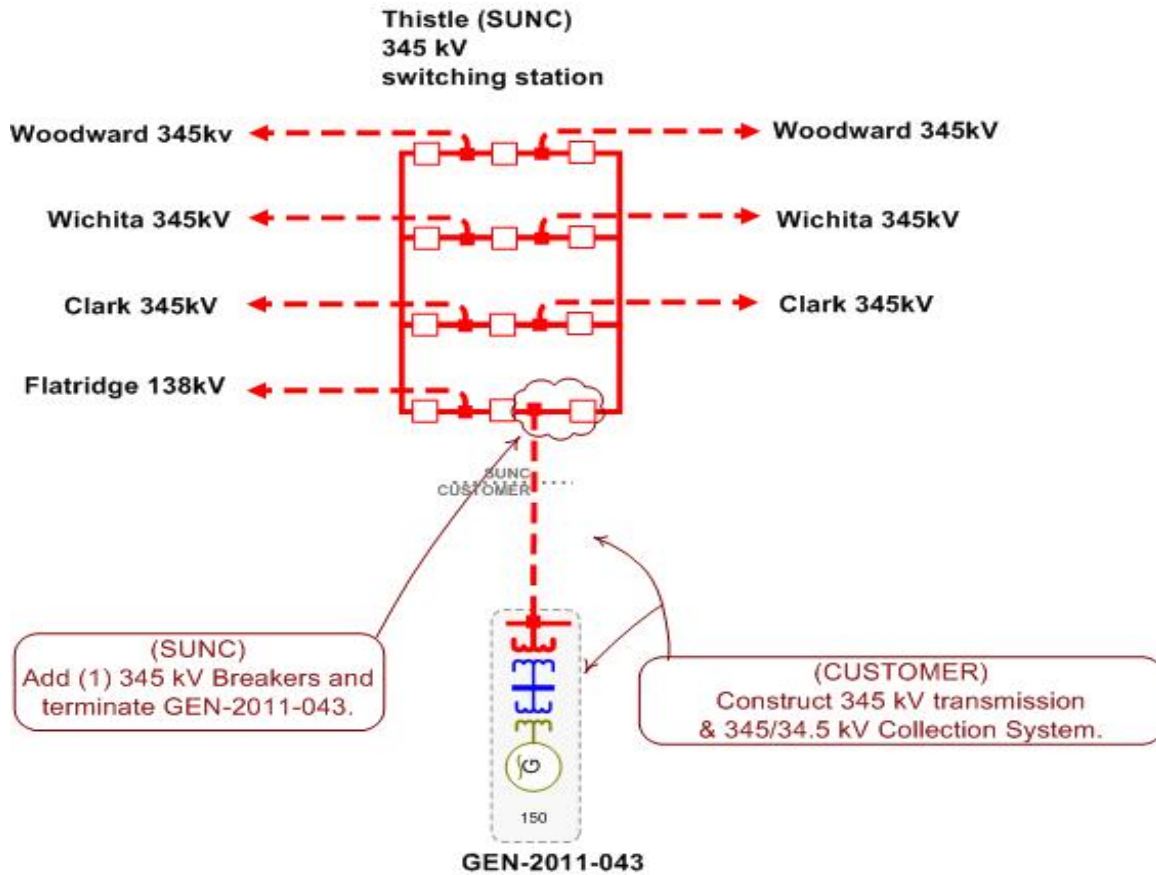
**GEN-2011-037**

**\*\*Refer to Facility Study for an updated one-line\*\***

**GEN-2011-040**

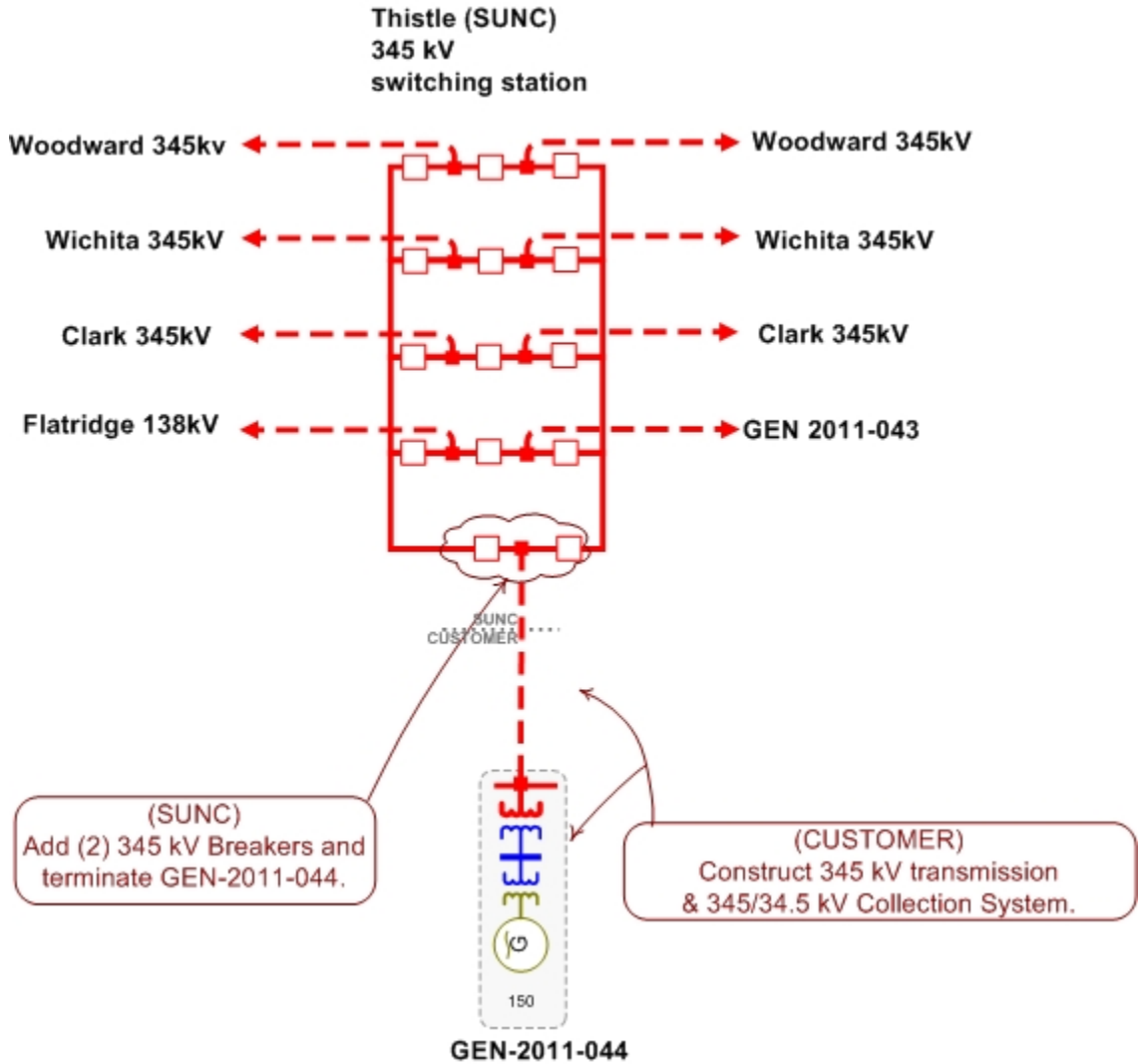
**\*\*Refer to Facility Study for an updated one-line\*\***

**GEN-2011-043**

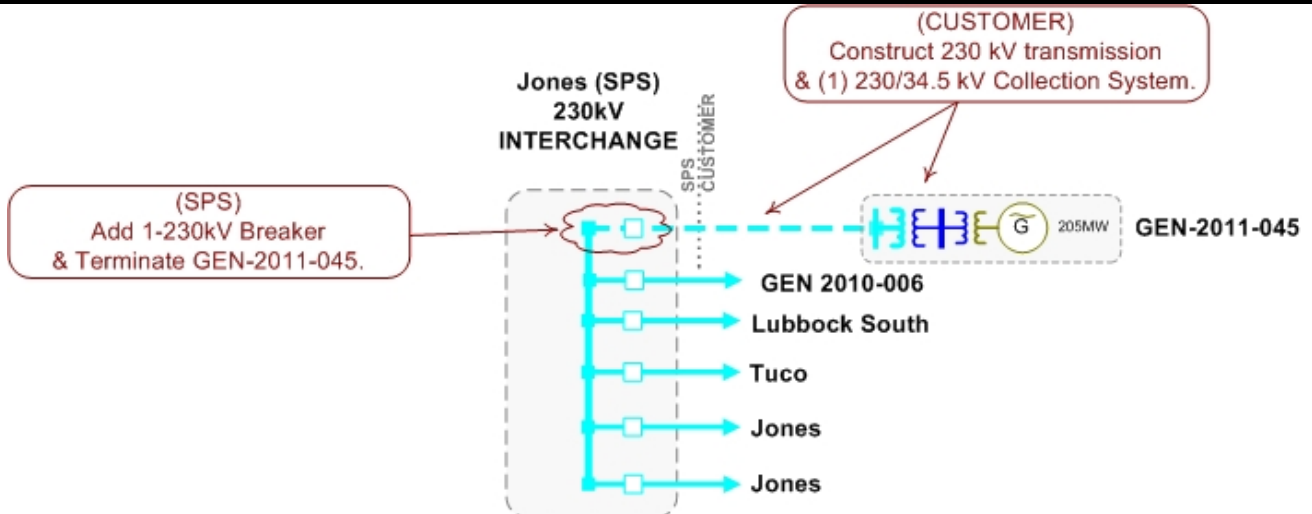




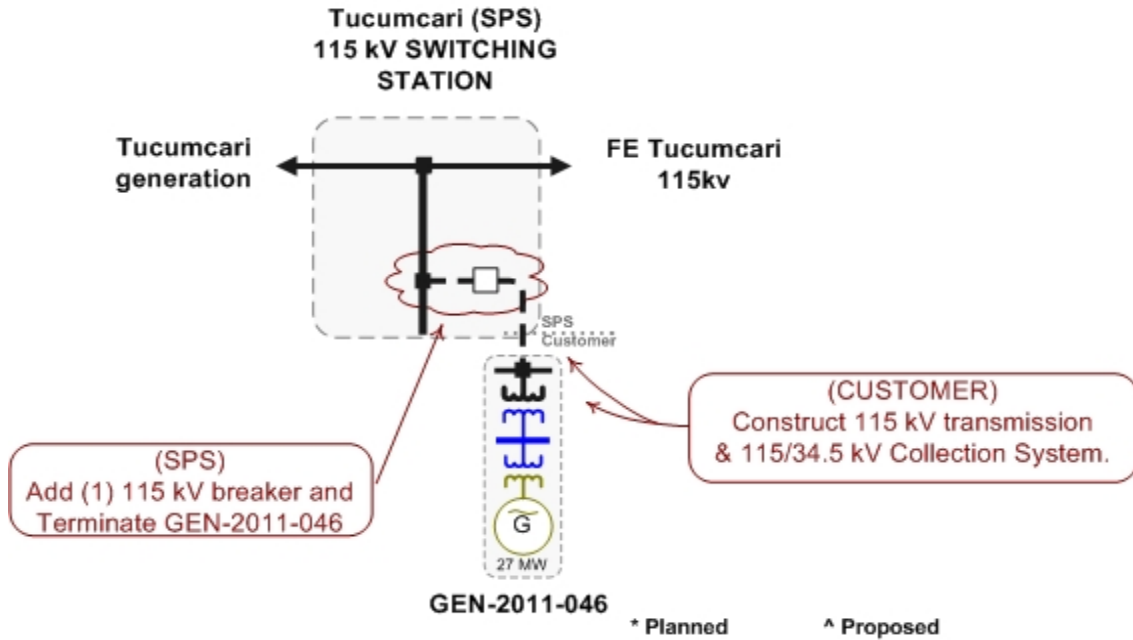
**GEN-2011-044**



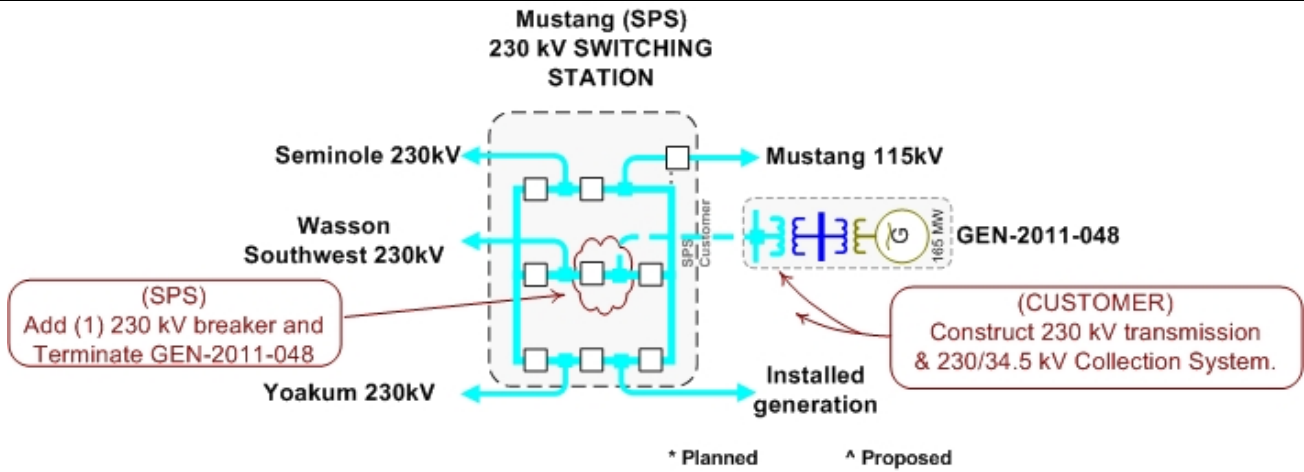
**GEN-2011-045**



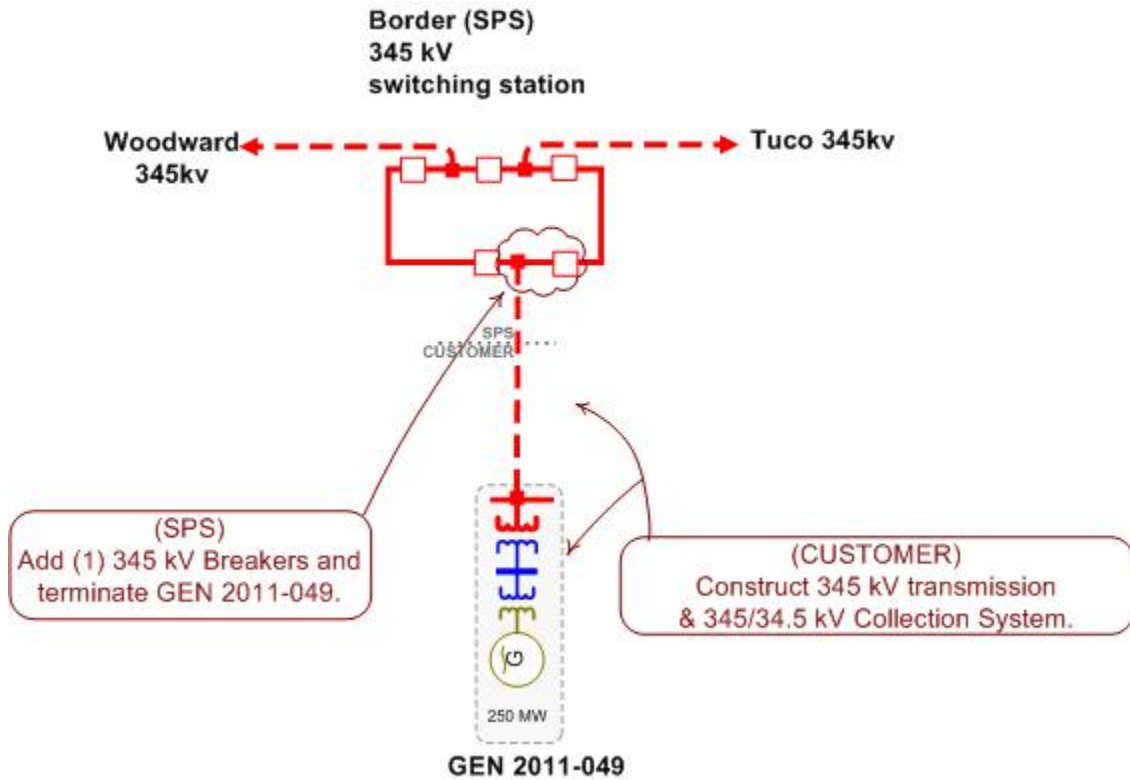
**GEN-2011-046**



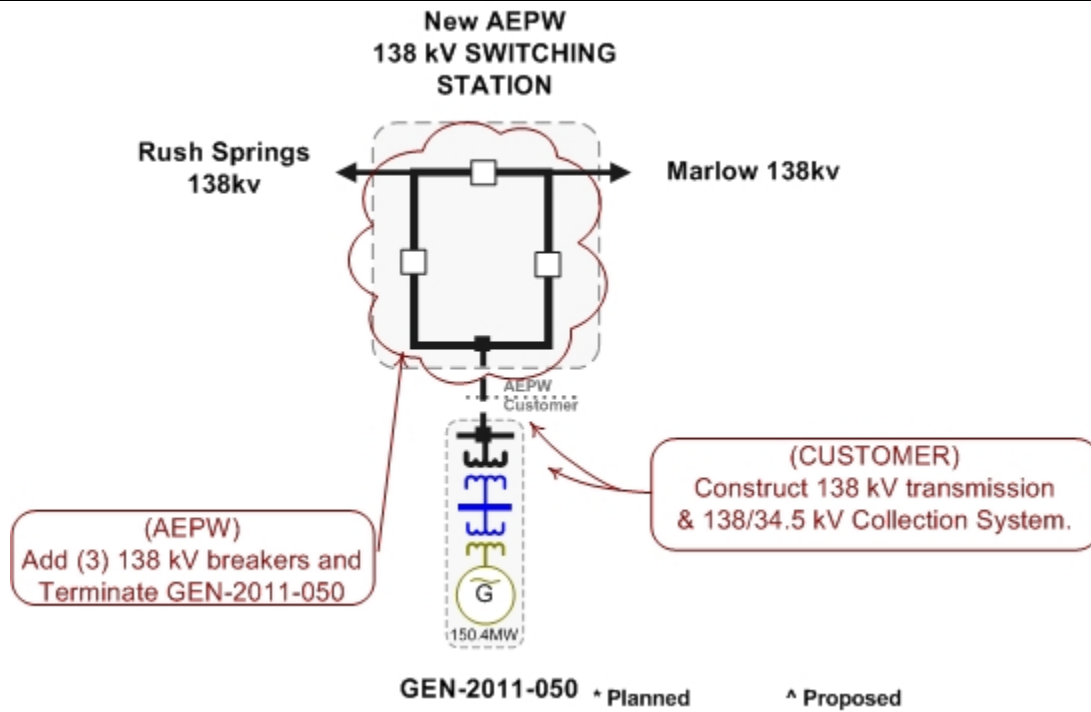
**GEN-2011-048**



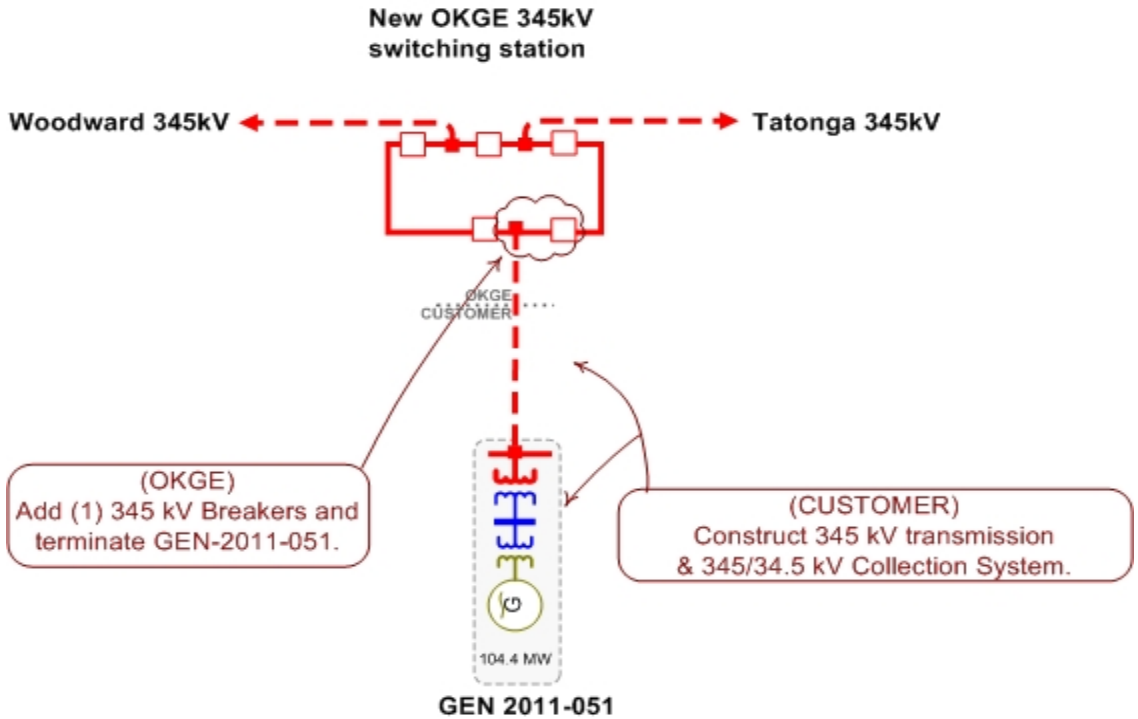
**GEN-2011-049**



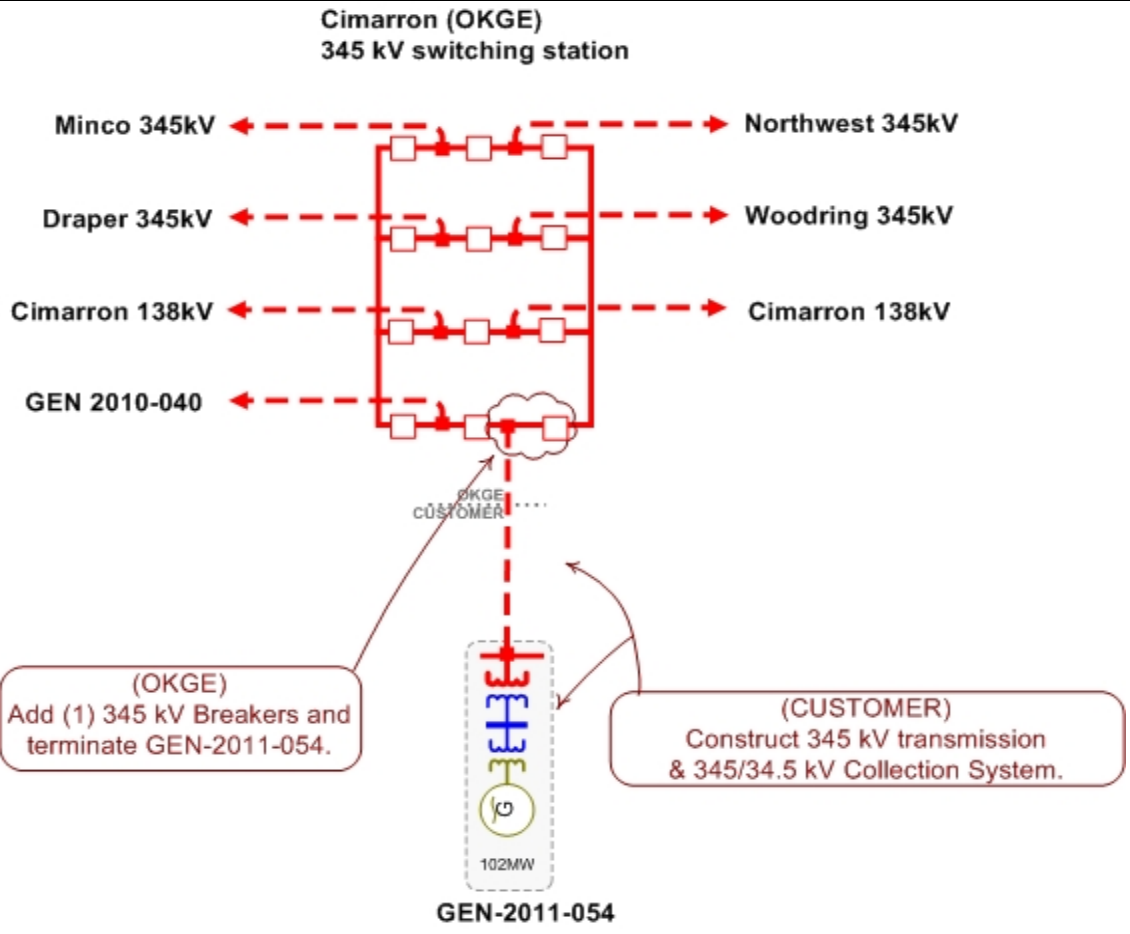
**GEN-2011-050**



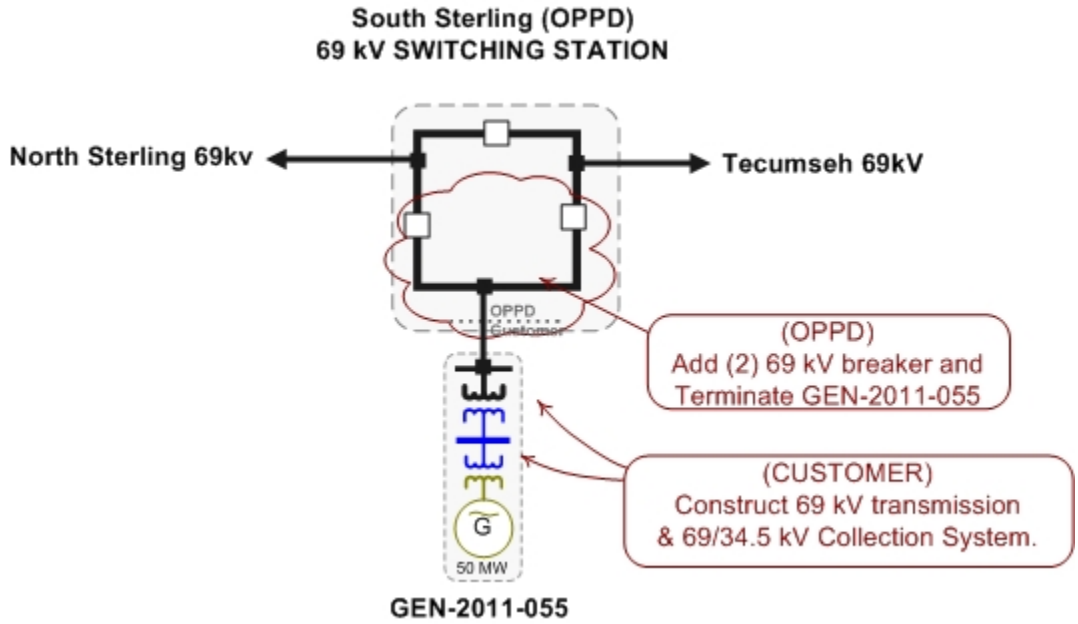
**GEN-2011-051**



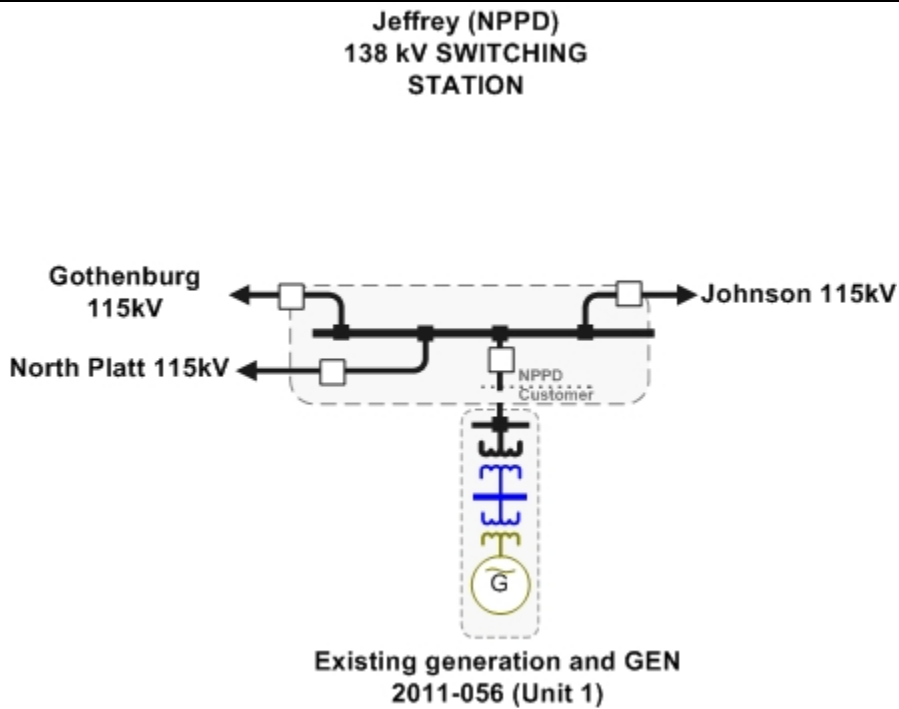
**GEN-2011-054**



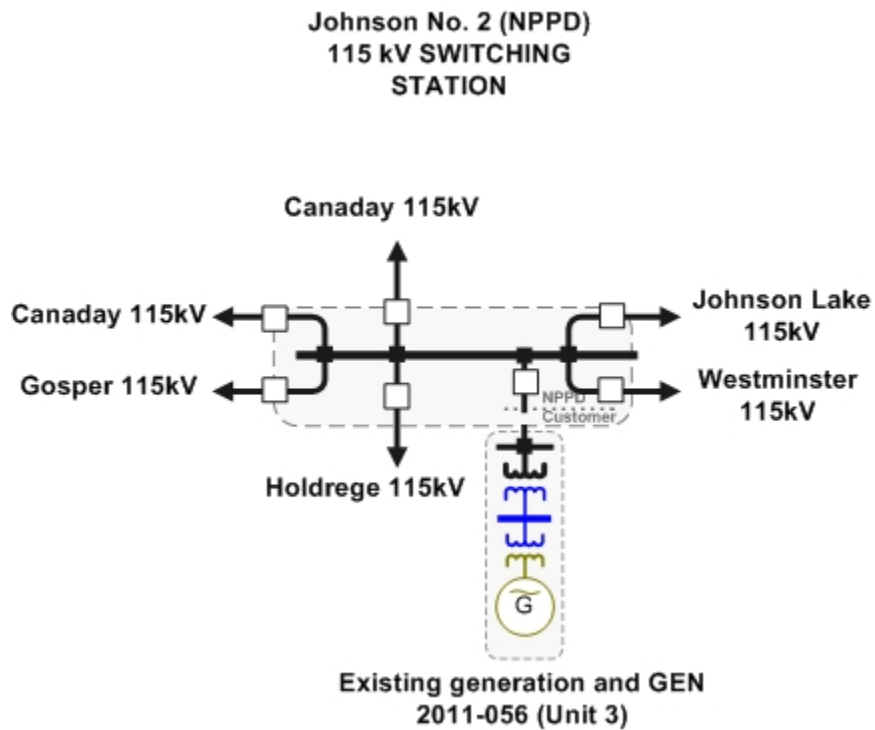
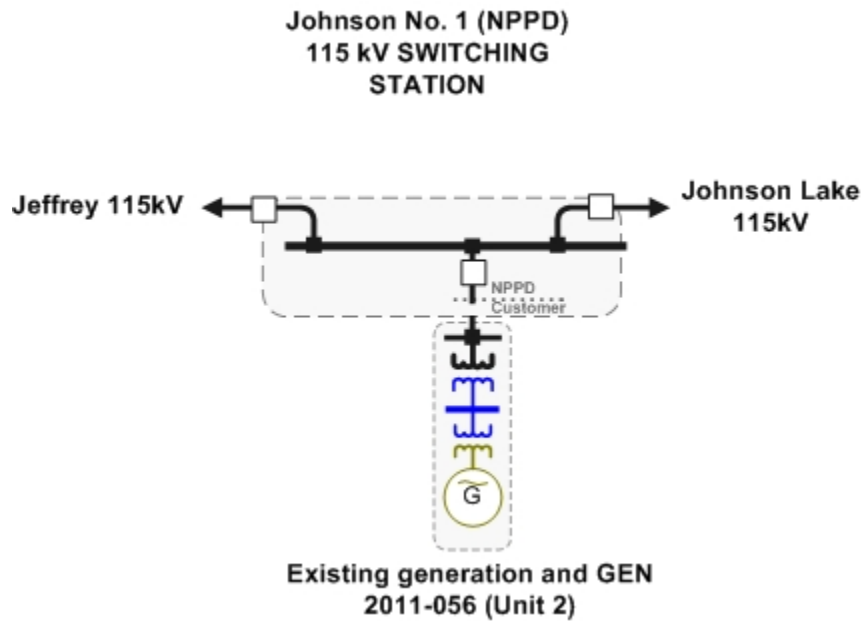
**GEN-2011-055**



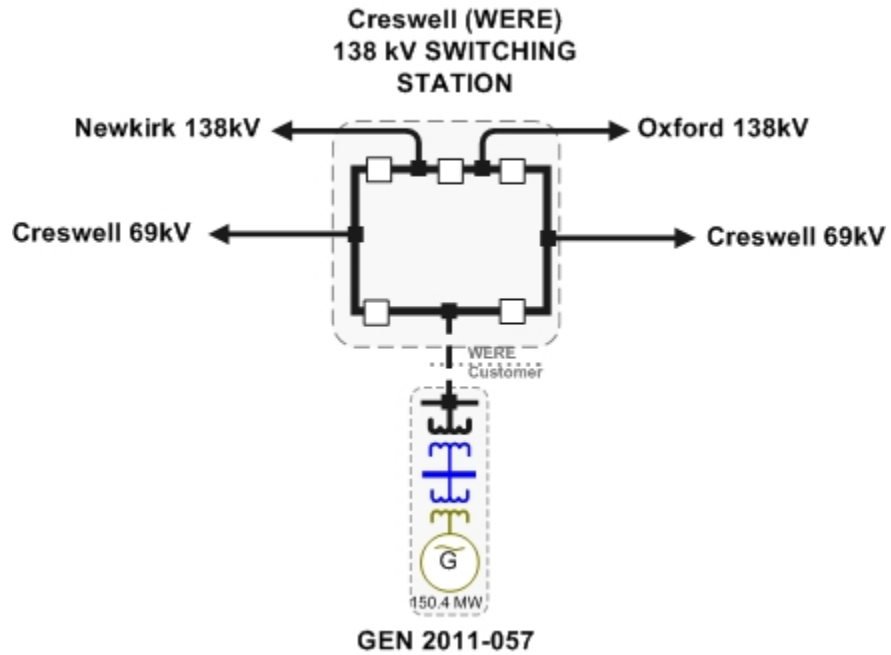
**GEN-2011-056**



**GEN-2011-056 (continued)**



**GEN-2011-057**



## **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.



# Appendix E. Cost Allocation Per Request

(Including Previously Allocated Network Upgrades\*)

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
<b>ASGI-2011-004</b>			
ASGI-2011-004 Interconnection Costs See Online Diagram.	Current Study	\$1.00	\$1.00
Power System Stabilizers Install Power System Stabilizers @ Tolk(Units: 1,2), Jones (Unites: 1,2,3,4), and Mustang (Units: 4,5,6)	Current Study	\$47,961.63	\$1,000,000.00
Beaver County - Woodward 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
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		\$143,377,063.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
GEN-2011-021 Tap - Beaver County 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
Grassland - Wolfforth 230kV CKT 1 Per GEN-2008-016 Impact Study	Previously Allocated		\$33,100,000.00
Hitchland - Beaver County 345kV Dbl CKT 2 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
Hitchland - GEN-2011-021 Tap 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
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
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$168,750,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Thistle 345/138KV Transformer CKT 1 Priority Project: Thistle 345/138kV Transformer CKT 1 & Thistle - Flat Ridge 138kV CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$9,106,306.00

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

<b>Interconnection Request and Upgrades</b>	<b>Upgrade Type</b>	<b>Allocated Cost</b>	<b>Upgrade Cost</b>
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	<b>Current Study Total</b>	\$47,962.63	
<b>GEN-2010-044</b>			
GEN-2010-044 Interconnection Costs See Online Diagram.	Current Study	\$800,000.00	\$800,000.00
Harbine - Crete 115kV CKT 1 Build approximately 35 miles of 115kV from Harbine - Crete	Current Study	\$17,200,000.00	\$17,200,000.00
Sheldon - Folsom & Pleasant Hill 115kV CKT 2 NRIS only required upgrade: Per ITP NT 2011	Previously Allocated		\$6,534,843.00
	<b>Current Study Total</b>	\$18,000,000.00	
<b>GEN-2010-061</b>			
GEN-2010-061 Interconnection Costs See Online Diagram.	Current Study	\$9,000,000.00	\$9,000,000.00
Axtell - PostRock 345KV CKT 1 Balanced Portfolio: PostRock - Axtell 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$93,302,649.00
Beaver County - Gray County 345kV Build approximately 90 miles of 345kV from Beaver County - Gray County	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		\$226,790,727.00
Beaver County 345kV Expansion Beaver County Expansion: Tap & Tie in Hitchland - Woodward 345kV CKT 2	Previously Allocated		\$3,500,000.00
Benton - Wichita 345kV CKT 1 NRIS only required upgrade: Replace terminal equipment at Benton and Wichita	Previously Allocated		\$1,183,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
Clark - Thistle 345KV Dbl CKT Priority Project: Spearville - Clark - Thistle Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$291,088,131.00
GEN-2011-017 Tap - Postrock 345kV CKT 1 Balanced Portfolio: Spearville - PostRock 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$77,703,351.00

\* 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
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
Knoll - North Hays - Vine Street 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 6 miles of 115kV line	Previously Allocated		\$4,500,000.00
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 86 miles of new Dbl 345kV circuit from Mullergren - Reno @ 2000 amps	Previously Allocated		\$147,269,300.00
Post Rock 345/230/13.8KV Autotransformer CKT 1 Balanced Portfolio: PostRock Autotransformer 345/230/13.8kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$3,994,000.00
Post Rock 345/230/13.8kV Autotransformer CKT 2 DISIS-2010-001 Restudy	Previously Allocated		\$13,749,527.00
Spearville - Mullergren 345kV Dbl CKT Build approximately 75 miles of new Dbl 345kV circuit from Spearville - Mullergren @ 2000 amps	Previously Allocated		\$124,000,000.00
Spearville -Clark 345KV Dbl CKT Priority Project: Spearville - Clark - Thistle Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$291,088,131.00
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		\$168,750,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	<b>Current Study Total</b>	<b>\$9,000,000.00</b>	

### GEN-2011-037

GEN-2011-037 Interconnection Costs See Online Diagram.	Current Study	\$1.00	\$1.00
Sunnyside - Hugo 345kV CKT 1 NTC 20017 & 20018 for In Service 4/1/2012.	Previously Allocated		\$202,000,000.00
	<b>Current Study Total</b>	<b>\$1.00</b>	

### GEN-2011-040

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

<b>Interconnection Request and Upgrades</b>	<b>Upgrade Type</b>	<b>Allocated Cost</b>	<b>Upgrade Cost</b>
GEN-2011-040 Interconnection Costs See Online Diagram.	Current Study	\$4,203,401.00	\$4,203,401.00
Sunnyside - Hugo 345kV CKT 1 NTC 20017 & 20018 for In Service 4/1/2012.	Previously Allocated		\$202,000,000.00
	<b>Current Study Total</b>	<b>\$4,203,401.00</b>	

### **GEN-2011-043**

GEN-2011-043 Interconnection Costs See Online Diagram.	Current Study	\$2,500,000.00	\$2,500,000.00
Axtell - PostRock 345KV CKT 1 Balanced Portfolio: PostRock - Axtell 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$93,302,649.00
Beaver County - Gray County 345kV Build approximately 90 miles of 345kV from Beaver County - Gray County	Previously Allocated		\$170,209,050.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
GEN-2011-017 Tap - Postrock 345kV CKT 1 Balanced Portfolio: Spearville - PostRock 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$77,703,351.00
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 86 miles of new Dbl 345kV circuit from Mullergren - Reno @ 2000 amps	Previously Allocated		\$147,269,300.00
Spearville - GEN-2011-017T 345kV CKT 1 Balanced Portfolio: Spearville - PostRock 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$77,703,351.00
Spearville - Mullergren 345kV Dbl CKT Build approximately 75 miles of new Dbl 345kV circuit from Spearville - Mullergren @ 2000 amps	Previously Allocated		\$124,000,000.00
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		\$168,750,000.00

\* 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
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	<b>Current Study Total</b>	<b>\$2,500,000.00</b>	

## GEN-2011-044

GEN-2011-044 Interconnection Costs See Online Diagram.	Current Study	\$4,000,000.00	\$4,000,000.00
Axtell - PostRock 345KV CKT 1 Balanced Portfolio: PostRock - Axtell 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$93,302,649.00
Beaver County - Gray County 345kV Build approximately 90 miles of 345kV from Beaver County - Gray County	Previously Allocated		\$170,209,050.00
Benton - Wichita 345kV CKT 1 NRIS only required upgrade: Replace terminal equipment at Benton and Wichita	Previously Allocated		\$1,183,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
GEN-2011-017 Tap - Postrock 345kV CKT 1 Balanced Portfolio: Spearville - PostRock 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$77,703,351.00
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
Medicine Lodge 138/115kV transformer NRIS only required upgrade: Per 2007-AG3-AFS-9	Previously Allocated		\$5,864,617.00
Mullergren - Reno 345kV Dbl CKT Build approximately 86 miles of new Dbl 345kV circuit from Mullergren - Reno @ 2000 amps	Previously Allocated		\$147,269,300.00
Spearville - GEN-2011-017T 345kV CKT 1 Balanced Portfolio: Spearville - PostRock 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$77,703,351.00
Spearville - Mullergren 345kV Dbl CKT Build approximately 75 miles of new Dbl 345kV circuit from Spearville - Mullergren @ 2000 amps	Previously Allocated		\$124,000,000.00

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

<b>Interconnection Request and Upgrades</b>	<b>Upgrade Type</b>	<b>Allocated Cost</b>	<b>Upgrade Cost</b>
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		\$168,750,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	<b>Current Study Total</b>	<b>\$4,000,000.00</b>	

### GEN-2011-045

Allen - Lubbock South 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 6 miles of 115kV from Allen - Lubbock South	Current Study	\$3,000,000.00	\$3,000,000.00
GEN-2011-045 Interconnection Costs See Online Diagram.	Current Study	\$2,187,010.00	\$2,187,010.00
Jones - Lubbock South 230kV CKT 2 Replace Line Traps	Current Study	\$200,000.00	\$200,000.00
Jones - TUCO 230kV CKT 1 NRIS only required upgrade: Replace line traps	Current Study	\$148,810.24	\$200,000.00
Lubbock South - Lubbock East 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 7 miles of 115kV from Lubbock South - Lubbock East	Current Study	\$2,222,173.91	\$3,500,000.00
Lubbock South 230/115kV Autotransformer CKT 2 NRIS only required upgrade: Install 2nd 230/115/13.2kV Autotransformer	Current Study	\$3,383,159.80	\$4,000,000.00
Power System Stabilizers Install Power System Stabilizers @ Tolk(Units: 1,2), Jones (Unites: 1,2,3,4), and Mustang (Units: 4,5,6)	Current Study	\$491,606.71	\$1,000,000.00
Beaver County - Woodward 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
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		\$143,377,063.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00

\* 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
GEN-2011-021 Tap - Beaver County 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
Grassland - Wolfforth 230kV CKT 1 Per GEN-2008-016 Impact Study	Previously Allocated		\$33,100,000.00
Hitchland - Beaver County 345kV Dbl CKT 2 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
Hitchland - GEN-2011-021 Tap 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
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
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$168,750,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Thistle 345/138KV Transformer CKT 1 Priority Project: Thistle 345/138kV Transformer CKT 1 & Thistle - Flat Ridge 138kV CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$9,106,306.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	<b>Current Study Total</b>	\$11,632,760.66	

### GEN-2011-046

GEN-2011-046 Interconnection Costs See Online Diagram.	Current Study	\$3,433,559.00	\$3,433,559.00
Jones - TUCO 230kV CKT 1 NRIS only required upgrade: Replace line traps	Current Study	\$3,493.05	\$200,000.00
Lubbock South - Lubbock East 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 7 miles of 115kV from Lubbock South - Lubbock East	Current Study	\$68,323.91	\$3,500,000.00
Power System Stabilizers Install Power System Stabilizers @ Tolk(Units: 1,2), Jones (Unites: 1,2,3,4), and Mustang (Units: 4,5,6)	Current Study	\$64,748.20	\$1,000,000.00
Beaver County - Woodward 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
Beaver County 345kV Expansion Beaver County Expansion: Tap & Tie in Hitchland - Woodward 345kV CKT 2	Previously Allocated		\$3,500,000.00

\* 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
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
GEN-2011-021 Tap - Beaver County 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
Hitchland - Beaver County 345kV Dbl CKT 2 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
Hitchland - GEN-2011-021 Tap 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
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
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$168,750,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Thistle 345/138KV Transformer CKT 1 Priority Project: Thistle 345/138kV Transformer CKT 1 & Thistle - Flat Ridge 138kV CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$9,106,306.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	<b>Current Study Total</b>	<b>\$3,570,124.16</b>	

### GEN-2011-048

GEN-2011-048 Interconnection Costs See Online Diagram.	Current Study	\$4,000,000.00	\$4,000,000.00
Jones - TUCO 230kV CKT 1 NRIS only required upgrade: Replace line traps	Current Study	\$47,696.71	\$200,000.00
Lubbock South - Lubbock East 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 7 miles of 115kV from Lubbock South - Lubbock East	Current Study	\$1,209,502.18	\$3,500,000.00
Lubbock South 230/115kV Autotransformer CKT 2 NRIS only required upgrade: Install 2nd 230/115/13.2kV Autotransformer	Current Study	\$616,840.20	\$4,000,000.00
Power System Stabilizers Install Power System Stabilizers @ Tolk(Units: 1,2), Jones (Unites: 1,2,3,4), and Mustang (Units: 4,5,6)	Current Study	\$395,683.45	\$1,000,000.00

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



<b>Interconnection Request and Upgrades</b>	<b>Upgrade Type</b>	<b>Allocated Cost</b>	<b>Upgrade Cost</b>
Beaver County - Woodward 345kV Dbl CKT Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
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		\$143,377,063.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
GEN-2011-021 Tap - Beaver County 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
Hitchland - Beaver County 345kV Dbl CKT 2 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
Hitchland - GEN-2011-021 Tap 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
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
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$168,750,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Thistle 345/138KV Transformer CKT 1 Priority Project: Thistle 345/138kV Transformer CKT 1 & Thistle - Flat Ridge 138kV CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$9,106,306.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	<b>Current Study Total</b>	<b>\$6,269,722.54</b>	

### GEN-2011-049

GEN-2011-049 Interconnection Costs See Online Diagram.	Current Study	\$3,654,353.00	\$3,654,353.00
Glass Mountain - Mooreland 138kV NRIS only required upgrade: Rebuild approximately 24 miles of 138kV line	Current Study	\$11,559,251.68	\$15,072,467.00
Beaver County - Gray County 345kV Build approximately 90 miles of 345kV from Beaver County - Gray County	Previously Allocated		\$170,209,050.00

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

<b>Interconnection Request and Upgrades</b>	<b>Upgrade Type</b>	<b>Allocated Cost</b>	<b>Upgrade Cost</b>
Benton - Wichita 345kV CKT 1 NRIS only required upgrade: Replace terminal equipment at Benton and Wichita	Previously Allocated		\$1,183,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
Chisholm - Maize 138kV CKT 1 NRIS only required upgrade: Replace terminal equipment at Chisholm	Previously Allocated		\$573,200.00
Evans Energy Center - Maize 138kV CKT 1 NRIS only required upgrade: Replace terminal equipment at Evans Energy Center	Previously Allocated		\$573,200.00
FPL Switch - Woodward 138kV CKT 1 NRIS only required upgrade: Rebuild approximately 12 miles of 138kV line	Previously Allocated		\$7,760,000.00
Matthewson - Cimarron 345kV CKT 2 Build second 345kV circuit from Matthewson - Cimarron @ 3000 amps	Previously Allocated		\$42,903,753.00
Mooreland - Woodward 138kV CKT 1 NRIS only required upgrade: Rebuild approximately 0.2 miles of 138kV line	Previously Allocated		\$820,000.00
Tatonga - Matthewson 345kV CKT 2 Build second 345kV circuit from Tatonga - Matthewson @ 3000 amps	Previously Allocated		\$104,260,473.00
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
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	<b>Current Study Total</b>	\$15,213,604.68	

### GEN-2011-050

Cimarron - Draper 345kV CKT 1 NRIS only required upgrade: Replace Line Traps	Current Study	\$40,552.41	\$1,000,000.00
GEN-2011-050 Interconnection Costs See Online Diagram.	Current Study	\$7,310,940.00	\$7,310,940.00
Sunnyside - Hugo 345kV CKT 1 NTC 20017 & 20018 for In Service 4/1/2012.	Previously Allocated		\$202,000,000.00
	<b>Current Study Total</b>	\$7,351,492.41	

### GEN-2011-051

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

<b>Interconnection Request and Upgrades</b>	<b>Upgrade Type</b>	<b>Allocated Cost</b>	<b>Upgrade Cost</b>
Cimarron - Draper 345kV CKT 1 NRIS only required upgrade: Replace Line Traps	Current Study	\$155,238.66	\$1,000,000.00
GEN-2011-051 Interconnection Costs See Online Diagram.	Current Study	\$9,276,873.00	\$9,276,873.00
Glass Mountain - Mooreland 138kV NRIS only required upgrade: Rebuild approximately 24 miles of 138kV line	Current Study	\$3,513,215.32	\$15,072,467.00
Beaver County - Gray County 345kV Build approximately 90 miles of 345kV from Beaver County - Gray County	Previously Allocated		\$170,209,050.00
Benton - Wichita 345kV CKT 1 NRIS only required upgrade: Replace terminal equipment at Benton and Wichita	Previously Allocated		\$1,183,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
EI Reno - Roman Nose 138kV CKT 1 NRIS only required upgrade: Rebuild approximately 31 miles of 138kV circuit @ 2000 amps	Previously Allocated		\$15,805,564.00
FPL Switch - Woodward 138kV CKT 1 NRIS only required upgrade: Rebuild approximately 12 miles of 138kV line	Previously Allocated		\$7,760,000.00
GEN-2011-021 Tap - Beaver County 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
Hitchland - GEN-2011-021 Tap 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
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
Matthewson - Cimarron 345kV CKT 2 Build second 345kV circuit from Matthewson - Cimarron @ 3000 amps	Previously Allocated		\$42,903,753.00
Mooreland - Woodward 138kV CKT 1 NRIS only required upgrade: Rebuild approximately 0.2 miles of 138kV line	Previously Allocated		\$820,000.00
Spearville - Mullergren 345kV Dbl CKT Build approximately 75 miles of new Dbl 345kV circuit from Spearville - Mullergren @ 2000 amps	Previously Allocated		\$124,000,000.00
Tatonga - Matthewson 345kV CKT 2 Build second 345kV circuit from Tatonga - Matthewson @ 3000 amps	Previously Allocated		\$104,260,473.00

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

<b>Interconnection Request and Upgrades</b>	<b>Upgrade Type</b>	<b>Allocated Cost</b>	<b>Upgrade Cost</b>
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$168,750,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Thistle 345/138KV Transformer CKT 1 Priority Project: Thistle 345/138kV Transformer CKT 1 & Thistle - Flat Ridge 138kV CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$9,106,306.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	<b>Current Study Total</b>	<b>\$12,945,326.98</b>	

### GEN-2011-054

Cimarron - Draper 345kV CKT 1 NRIS only required upgrade: Replace Line Traps	Current Study	\$804,208.92	\$1,000,000.00
GEN-2011-054 Interconnection Costs See Online Diagram.	Current Study	\$10,000.00	\$10,000.00
Beaver County - Gray County 345kV Build approximately 90 miles of 345kV from Beaver County - Gray County	Previously Allocated		\$170,209,050.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$143,377,063.00
GEN-2011-021 Tap - Beaver County 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
Hitchland - GEN-2011-021 Tap 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,790,727.00
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
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
	<b>Current Study Total</b>	<b>\$814,208.92</b>	

### GEN-2011-055

GEN-2011-055 Interconnection Costs See Online Diagram.	Current Study	\$4,300,000.00	\$4,300,000.00
---	---------------	----------------	----------------

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

<b>Interconnection Request and Upgrades</b>	<b>Upgrade Type</b>	<b>Allocated Cost</b>	<b>Upgrade Cost</b>
Hydro Carbon Tap - Sub974 69kV CKT 1 NRIS only required upgrade: Rewire CT on Sub 974	Current Study	\$10,000.00	\$10,000.00
Nebraska City U Syracuse - SUB 970 CKT 1 NRIS only required upgrade: Replace Terminal Equipment	Current Study	\$16,000.00	\$16,000.00
SUB 967 - SUB 968 69kV CKT 1 Replace terminal equipment	Current Study	\$16,000.00	\$16,000.00
SUB 968 - SUB 969 69kV CKT 1 Mitigated by replacing terminal equipment at Sub 969	Current Study	\$0.00	\$0.00
SUB 969 - SUB 974 69kV CKT 1 Mitigated by replacing terminal equipment at Sub 969	Current Study	\$0.00	\$0.00
West Brock - SUB967 69kV CKT 1 Mitigated by replacing terminal equipment at Sub 967	Current Study	\$0.00	\$0.00
Sheldon - Folsom & Pleasant Hill 115kV CKT 2 NRIS only required upgrade: Per ITP NT 2011	Previously Allocated		\$6,534,843.00
	<b>Current Study Total</b>	<b>\$4,342,000.00</b>	
<b>GEN-2011-056</b>			
GEN-2011-056 Interconnection Costs See Online Diagram.	Current Study	\$1.00	\$1.00
	<b>Current Study Total</b>	<b>\$1.00</b>	
<b>GEN-2011-057</b>			
GEN-2011-057 Interconnection Costs See Online Diagram.	Current Study	\$5,000,000.00	\$5,000,000.00
Cleveland - Sooner 345KV CKT 1 Balanced Portfolio: Cleveland - Sooner 345kV CKT 1 (Total Project E&C Cost Shown).	Previously Allocated		\$70,806,000.00
	<b>Current Study Total</b>	<b>\$5,000,000.00</b>	
	<b>TOTAL CURRENT STUDY COSTS:</b>	<b>\$104,890,605.98</b>	

\* 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

---

## Allen - Lubbock South 115kV CKT 1 \$3,000,000.00

NRIS only required upgrade: Rebuild approximately 6 miles of 115kV from Allen - Lubbock South

GEN-2011-045 \$3,000,000.00

---

**Total Allocated Costs \$3,000,000.00**

---

## ASGI-2011-004 Interconnection Costs \$1.00

See Oonline Diagram.

ASGI-2011-004 \$1.00

---

**Total Allocated Costs \$1.00**

---

## Cimarron - Draper 345kV CKT 1 \$1,000,000.00

NRIS only required upgrade: Replace Line Traps

GEN-2011-050 \$40,552.41

GEN-2011-051 \$155,238.66

GEN-2011-054 \$804,208.92

---

**Total Allocated Costs \$1,000,000.00**

---

## GEN-2010-044 Interconnection Costs \$800,000.00

See Oonline Diagram.

GEN-2010-044 \$800,000.00

---

**Total Allocated Costs \$800,000.00**

---

## GEN-2010-061 Interconnection Costs \$9,000,000.00

See Oonline Diagram.

GEN-2010-061 \$9,000,000.00

---

**Total Allocated Costs \$9,000,000.00**

---

## GEN-2011-037 Interconnection Costs \$1.00

See Oonline Diagram.

GEN-2011-037 \$1.00

---

**Total Allocated Costs \$1.00**

---

## GEN-2011-040 Interconnection Costs \$4,203,401.00

See Oonline Diagram.

GEN-2011-040 \$4,203,401.00

---

**Total Allocated Costs \$4,203,401.00**

---

## GEN-2011-043 Interconnection Costs \$2,500,000.00

See Oonline Diagram.

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

	GEN-2011-043	\$2,500,000.00
	<b>Total Allocated Costs</b>	<b>\$2,500,000.00</b>
<hr/>		
<b>GEN-2011-044 Interconnection Costs</b>		<b>\$4,000,000.00</b>
See Oonline Diagram.		
	GEN-2011-044	\$4,000,000.00
	<b>Total Allocated Costs</b>	<b>\$4,000,000.00</b>
<hr/>		
<b>GEN-2011-045 Interconnection Costs</b>		<b>\$2,187,010.00</b>
See Oonline Diagram.		
	GEN-2011-045	\$2,187,010.00
	<b>Total Allocated Costs</b>	<b>\$2,187,010.00</b>
<hr/>		
<b>GEN-2011-046 Interconnection Costs</b>		<b>\$3,433,559.00</b>
See Oonline Diagram.		
	GEN-2011-046	\$3,433,559.00
	<b>Total Allocated Costs</b>	<b>\$3,433,559.00</b>
<hr/>		
<b>GEN-2011-048 Interconnection Costs</b>		<b>\$4,000,000.00</b>
See Oonline Diagram.		
	GEN-2011-048	\$4,000,000.00
	<b>Total Allocated Costs</b>	<b>\$4,000,000.00</b>
<hr/>		
<b>GEN-2011-049 Interconnection Costs</b>		<b>\$3,654,353.00</b>
See Oonline Diagram.		
	GEN-2011-049	\$3,654,353.00
	<b>Total Allocated Costs</b>	<b>\$3,654,353.00</b>
<hr/>		
<b>GEN-2011-050 Interconnection Costs</b>		<b>\$7,310,940.00</b>
See Oonline Diagram.		
	GEN-2011-050	\$7,310,940.00
	<b>Total Allocated Costs</b>	<b>\$7,310,940.00</b>
<hr/>		
<b>GEN-2011-051 Interconnection Costs</b>		<b>\$9,276,873.00</b>
See Oonline Diagram.		
	GEN-2011-051	\$9,276,873.00
	<b>Total Allocated Costs</b>	<b>\$9,276,873.00</b>
<hr/>		
<b>GEN-2011-054 Interconnection Costs</b>		<b>\$10,000.00</b>
See Oonline Diagram.		
	GEN-2011-054	\$10,000.00

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



	<b>Total Allocated Costs</b>	<b>\$10,000.00</b>
<hr/>		
<b>GEN-2011-055 Interconnection Costs</b>		<b>\$4,300,000.00</b>
See Oonline Diagram.		
	GEN-2011-055	\$4,300,000.00
	<b>Total Allocated Costs</b>	<b>\$4,300,000.00</b>
<hr/>		
<b>GEN-2011-056 Interconnection Costs</b>		<b>\$1.00</b>
See Oonline Diagram.		
	GEN-2011-056	\$1.00
	<b>Total Allocated Costs</b>	<b>\$1.00</b>
<hr/>		
<b>GEN-2011-057 Interconnection Costs</b>		<b>\$5,000,000.00</b>
See Oonline Diagram.		
	GEN-2011-057	\$5,000,000.00
	<b>Total Allocated Costs</b>	<b>\$5,000,000.00</b>
<hr/>		
<b>Glass Mountain - Mooreland 138kV</b>		<b>\$15,072,467.00</b>
NRIS only required upgrade: Rebuild approximatley 24 miles of 138kV line		
	GEN-2011-049	\$11,559,251.68
	GEN-2011-051	\$3,513,215.32
	<b>Total Allocated Costs</b>	<b>\$15,072,467.00</b>
<hr/>		
<b>Harbine - Crete 115kV CKT 1</b>		<b>\$17,200,000.00</b>
Build approximately 35 miles of 115kV from Harbine - Crete		
	GEN-2010-044	\$17,200,000.00
	<b>Total Allocated Costs</b>	<b>\$17,200,000.00</b>
<hr/>		
<b>Hydro Carbon Tap - Sub974 69kV CKT 1</b>		<b>\$10,000.00</b>
NRIS only required upgrade: Rewire CT on Sub 974		
	GEN-2011-055	\$10,000.00
	<b>Total Allocated Costs</b>	<b>\$10,000.00</b>
<hr/>		
<b>Jones - Lubbock South 230kV CKT 2</b>		<b>\$200,000.00</b>
Replace Line Traps		
	GEN-2011-045	\$200,000.00
	<b>Total Allocated Costs</b>	<b>\$200,000.00</b>
<hr/>		
<b>Jones - TUCO 230kV CKT 1</b>		<b>\$200,000.00</b>
NRIS only required upgrade: Replace line traps		
	GEN-2011-045	\$148,810.24

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

GEN-2011-046	\$3,493.05
GEN-2011-048	\$47,696.71
<b>Total Allocated Costs</b>	<b>\$200,000.00</b>

---

**Lubbock South - Lubbock East 115kV CKT 1** **\$3,500,000.00**

NRIS only required upgrade: Rebuild approximately 7 miles of 115kV from Lubbock South - Lubbock East

GEN-2011-045	\$2,222,173.91
GEN-2011-046	\$68,323.91
GEN-2011-048	\$1,209,502.18
<b>Total Allocated Costs</b>	<b>\$3,500,000.00</b>

---

**Lubbock South 230/115kV Autotransformer CKT 2** **\$4,000,000.00**

NRIS only required upgrade: Install 2nd 230/115/13.2kV Autotransformer

GEN-2011-045	\$3,383,159.80
GEN-2011-048	\$616,840.20
<b>Total Allocated Costs</b>	<b>\$4,000,000.00</b>

---

**Nebraska City U Syracuse - SUB 970 CKT 1** **\$16,000.00**

NRIS only required upgrade: Replace Terminal Equipment

GEN-2011-055	\$16,000.00
<b>Total Allocated Costs</b>	<b>\$16,000.00</b>

---

**Power System Stabilizers** **\$1,000,000.00**

Install Power System Stabilizers @ Tolk(Units: 1,2), Jones (Unites: 1,2,3,4), and Mustang (Units: 4,5,6)

ASGI-2011-004	\$47,961.63
GEN-2011-045	\$491,606.71
GEN-2011-046	\$64,748.20
GEN-2011-048	\$395,683.45
<b>Total Allocated Costs</b>	<b>\$1,000,000.00</b>

---

**SUB 967 - SUB 968 69kV CKT 1** **\$16,000.00**

Replace terminal equipment

GEN-2011-055	\$16,000.00
<b>Total Allocated Costs</b>	<b>\$16,000.00</b>

---

**SUB 968 - SUB 969 69kV CKT 1** **\$0.00**

Mitigated by replacing terminal equipment at Sub 969

GEN-2011-055	\$0.00
<b>Total Allocated Costs</b>	<b>\$0.00</b>

---

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

**SUB 969 - SUB 974 69kV CKT 1**

**\$0.00**

Mitigated by replacing terminal equipment at Sub 969

GEN-2011-055 \$0.00

---

**Total Allocated Costs \$0.00**

---

**West Brock - SUB967 69kV CKT 1**

**\$0.00**

Mitigated by replacing terminal equipment at Sub 967

GEN-2011-055 \$0.00

---

**Total Allocated Costs \$0.00**

---

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

## **G: Power Flow Analysis (Constraints For Mitigation)**

See next page.

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FNSL-Blown up	01ALL	0	12G	ASGI_11_004		Non Converged Contingency	0	0.14561	-	DBL-TGA-MATT
FNSL-Blown up	03ALL	0	12G	ASGI_11_004		Non Converged Contingency	0	0.13091	-	DBL-WICH-THI
FNSL-Blown up	03ALL	0	12G	ASGI_11_004		Non Converged Contingency	0	0.05268	-	DBL-SPRVL-MU
FNSL-Blown up	03ALL	0	12G	ASGI_11_004		Non Converged Contingency	0	0.05268	-	DBL-MUL-RENO
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	560	0.46582	140.5326	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	560	0.46582	137.5263	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2	560	0.45516	137.0365	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2	560	0.45516	134.8907	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19841	131.8254	BASE CASE
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.25344	131.5618	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.21806	129.2855	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20556	128.3204	DBL-HTCH-GEN
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20556	128.3204	DBL-HTCH-GEN
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.24819	128.0912	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.32089	127.523	FLOYD COUNTY INTERCHANGE - G11_025T 115.00 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20151	127.4335	DBL-BVR-WWRD
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19249	126.929	WOLFFORTH INTERCHANGE - YUMA INTERCHANGE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20068	126.8135	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20516	126.7958	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.21806	126.6837	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.22915	125.8329	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.21806	125.6192	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19249	125.4788	LP-DOUD_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20577	125.3366	DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20516	125.2477	POTTER COUNTY INTERCHANGE (WAKU 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.21806	124.7014	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20332	124.5804	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20332	124.5787	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19249	124.1973	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.1994	123.8833	CHAVESCO 345.00 - TOLK STATION 345KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.1994	123.8633	TOLK STATION (ABBXLN844501) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.2045	123.7537	PLANT X STATION - S-RANDLCO 230.00 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.21806	123.6554	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20443	123.4515	POTTER COUNTY INTERCHANGE - S-RANDLCO 230.00 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19506	123.0701	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20084	123.0233	SPP-SWPS-03
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19506	122.8186	SPP-SWPS-V62
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.21664	122.7792	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20722	122.7512	DEAF SMITH COUNTY INTERCHANGE - S-RANDLCO 230.00 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20077	122.6206	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20297	122.5779	BUSHLAND INTERCHANGE - S-RANDLCO 230.00 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20086	122.5337	GRASSLAND INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19506	122.5101	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19981	122.2638	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20077	122.2017	SPP-SWPS-02A
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20077	122.1872	SPP-SWPS-02
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20077	122.1871	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20077	122.1811	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19718	121.9493	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19857	121.8956	Jones Station Bus#2 - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19837	121.6968	TOLK STATION EAST - TOLK STATION TAP 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19703	121.6649	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.22566	121.6389	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19991	121.623	BEAVER CO 345.00 - G11-021T 345.00 345KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19855	121.5815	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19888	121.5493	HOBBS INTERCHANGE - LEA COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20142	121.5419	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19664	121.5241	SPP-SWPS-V33
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19855	121.4433	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20635	121.4255	HALE CO INTERCHANGE - KRESS INTERCHANGE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19842	121.3926	SPP-SWPS-V49
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19991	121.3471	G11-021T 345.00 - Hitchland Interchange 345KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19925	121.3263	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19664	121.2027	GRASSLAND INTERCHANGE - LYNN COUNTY INTERCHANGE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19977	121.2022	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.1991	121.1008	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING	CONTINGENCY
							(MVA)	TDF		
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20034	121.0862	G11_012T 230.00 - HITCHLAND INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19506	121.0624	INDIANA SUB - STANTON SUB 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19896	120.9518	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19896	120.9518	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19935	120.9111	GRAY CO 345.00 - SPEARVILLE 345KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20034	120.906	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19842	120.8592	SPP-SWPS-V55
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19948	120.8215	DBL-FINY-HOL
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.2003	120.8185	Lamb County REC-Opydyke Sub - SUNDOWN INTERCHANGE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.2003	120.8116	SPP-SWPS-T31
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19842	120.7666	SPP-SWPS-T14
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20975	120.7458	COX INTERCHANGE - FLOYD COUNTY INTERCHANGE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19506	120.7375	SPP-SWPS-V15
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.23713	120.7233	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19841	120.3084	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	TO->FROM	FLOYD COUNTY INTERCHANGE - G11_025T 115.00 115KV CKT 1	96	0.42132	119.9518	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.1981	118.9742	PLANT X STATION - TOLK STATION EAST 230KV CKT 2
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.2003	118.7379	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19911	118.7165	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19911	118.7128	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19733	118.6839	LAWTON EASTSIDE - SUNNYSIDE 345KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.1956	118.4579	TUCO INTERCHANGE (UPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19896	118.2829	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20412	118.0682	HOBBS INTERCHANGE - MIDLAND COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20412	118.0479	CAPROCK REC-TATE - CAPROCK REC-TRIANGLE 138KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20412	118.0456	SPP-SWPS-K71
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.21906	117.9032	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.19404	117.7454	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20332	117.5082	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20178	116.9679	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.1994	115.9328	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.1994	115.9296	CHAVESCO 345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.20005	115.7616	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.2021	114.4588	GRASSLAND INTERCHANGE - Jones Station Bus#2 230KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	TO->FROM	FLOYD COUNTY INTERCHANGE - G11_025T 115.00 115KV CKT 1	96	0.42667	106.3811	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1	560	0.29741	100.9	DBL-HTCH-GEN
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	559	0.20189	100.7785	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
FDNS	06ALL	0	12G	ASGI_11_004	FROM->TO	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	559	0.20189	100	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.11055	317.8862	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.1439	252.3106	MOORE (MOORE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06567	233.9689	NW68TH & HOLDREGE (T141) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07053	226.95	103RD & ROKEBY - WAGENER 345KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07251	222.2207	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06884	219.2012	WAGENER (T851) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06904	218.0486	WAGENER (T852) 345/115/13.8KV TRANSFORMER CKT 2
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08719	216.4466	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06965	215.396	84TH & LEIGHTON - WAGENER 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07409	214.8102	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08894	214.7859	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	214.4387	GEN645001 1-FORT CALHOUN 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07127	213.1594	CRETE - SHELDON 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07229	213.0047	ENRONTAP
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07229	213.0044	HYDROCARBON TAP - SUB 974 69KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07229	212.9988	HYDROCARBON TAP - SUB 970 69KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07354	212.5812	FIRTH - SHELDON 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	212.5661	GEN645012 2-NEBRASKA CITY 2
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08204	212.4007	LN-1176
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08204	212.3838	BEATRICE - STEINAUER 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07132	212.2886	KELLY - MADISONCO 230.00 230KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07229	212.1487	NEB CITY U SVR SUB - SUB 970 69KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	205.3622	BASE CASE
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	198.4915	LN-STOCKVILL
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07132	198.4879	LN-1094
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	198.3405	NEB02WAPAB2
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06249	198.0236	CLATONIA - SHELDON 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	197.7617	LN-WAP4
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06249	197.4984	LN-CLATONIA

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING	CONTINGENCY
							(MVA)	TDF		
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06249	197.4935	BEATRICE POWER STATION - CLATONIA 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	196.0249	GEN562029 1-G11_018_3 0.6900
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0652	193.4667	ROKEBY - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05778	193.401	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	190.9669	GEN560711 1-G10_044_3 0.6900
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	187.8933	GEN640019 1-SHELDON STATION UNIT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	187.8828	GEN640022 1-BEATRICE POWER STATION UNIT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	187.8824	GEN640023 2-BEATRICE POWER STATION UNIT 2
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	185.6889	GEN640024 3-BEATRICE POWER STATION UNIT 3
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	179.2239	GEN640020 2-SHELDON STATION UNIT 2
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0598	165.1337	20TH & PIONEERS - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	137	0.35486	113.0942	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G10_044	FROM->TO	CLATONIA - SHELDON 115KV CKT 1	137	0.35486	108.6862	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08406	358.8083	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08173	343.7032	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.04989	270.6732	NW68TH & HOLDREGE (T141) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05359	264.7809	103RD & ROKEBY - WAGENER 345KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05487	261.4297	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.04856	260.8364	NW68TH & HOLDREGE (T141) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	251.3676	GEN650092 2-ROKEBY
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0522	250.8695	103RD & ROKEBY - WAGENER 345KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05236	250.476	WAGENER (T851) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05251	248.8354	WAGENER (T852) 345/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	248.7422	LES0001
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05348	248.295	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05296	245.4263	84TH & LEIGHTON - WAGENER 115KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0539	244.5937	CRETE - SHELDON 115KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.11023	244.1731	MOORE (MOORE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	243.3542	GEN645001 1-FORT CALHOUN 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05567	243.1962	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07082	243.1831	FAIRBURY - HARBINE 115KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05578	241.7766	FIRTH - SHELDON 115KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05496	241.2825	ENRONTAP
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05496	241.2816	HYDROCARBON TAP - SUB 974 69KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05496	241.2789	HYDROCARBON TAP - SUB 970 69KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05097	240.1955	WAGENER (T851) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05496	239.8364	NEB CITY U SYR SUB - SUB 970 69KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05411	239.4934	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06945	239.4259	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	239.1546	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05411	238.9428	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05496	238.7791	NEB CITY U SYR SUB - SUB 971 69KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	238.6669	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05112	238.6027	WAGENER (T852) 345/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05362	238.4459	1281LINBUS
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05362	238.3864	SUB 1281 - SUB 1287 161KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	238.349	LES0001
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	238.108	GEN650004 4-SALT VALLEY
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	237.9546	GEN650003 3-SALT VALLEY
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05511	237.7788	MCCOOL - YORK SOUTHWEST 115KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05154	235.9325	84TH & LEIGHTON - WAGENER 115KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05384	233.9349	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05216	233.3485	CRETE - SHELDON 115KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06937	232.6724	FAIRBURY - HARBINE 115KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	232.5119	GEN650092 2-ROKEBY
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.11056	232.0361	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06741	231.5181	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05414	231.4675	FIRTH - SHELDON 115KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	230.8689	BASE CASE
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05342	230.8391	ENRONTAP
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05342	230.8384	HYDROCARBON TAP - SUB 974 69KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05342	230.8332	HYDROCARBON TAP - SUB 970 69KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	230.0852	GEN645001 1-FORT CALHOUN 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05342	229.5294	NEB CITY U SYR SUB - SUB 970 69KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05218	229.0027	1281LINBUS
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05218	228.9985	SUB 1281 - SUB 1287 161KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06069	228.9716	BEATRICE - STEINAUER 115KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06069	228.588	HUMBOLDT - STEINAUER 115KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05342	228.5003	NEB CITY U SYR SUB - SUB 971 69KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING		CONTINGENCY
							(MVA)	TDF	(% MVA)		
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05265	228.4961	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06069	228.4644	LN-1176	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	223.7319	LN-MALONEY	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.04743	223.6572	LN-CLATONIA	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	223.6472	LN-CALLAWAY	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05424	223.6425	LN-1142	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.04743	223.6355	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	223.2399	LN-TSGT6	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05348	221.7829	LN-1156	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	221.722	NEB02WAPAB2	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0532	221.4136	27TH & PINE LAKE - ROKEBY 115KV CKT 1	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	221.2942	GEN562029 1-G11_018_3 0.6900	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05427	221.2586	LN-PROSSER	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	221.1862	BASE CASE	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05422	220.5734	LN-1163	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	220.3471	LN-STOCKVILL	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	219.9249	LN-S-CREEK2	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.04381	219.5324	BEATRICE POWER STATION - SHELDON 115KV CKT 1	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	216.0342	GEN560711 1-G10_044_3 0.6900	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	215.4279	LN-WAPA4	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	214.9617	LN-WAPA2	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	214.4599	LN-MALONEY	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05274	214.2187	LN-1147	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05182	214.1735	LN-1156	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	214.1641	LN-TSGT6	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.04634	214.0839	LN-CLATONIA	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.04634	214.034	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.04816	213.9307	ROKEBY - SW7TH & PLEASANT HILL 115KV CKT 1	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05272	213.6268	NEB02WAPAB2	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05272	213.4994	LN-CALLAWAY	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05174	213.1827	27TH & PINE LAKE - ROKEBY 115KV CKT 1	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	213.0156	GEN640022 1-BEATRICE POWER STATION UNIT 1	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	213.0152	GEN640023 2-BEATRICE POWER STATION UNIT 2	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05271	212.7797	LN-1163	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	211.9376	LN-1142	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	211.7371	GEN562029 1-G11_018_3 0.6900	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05272	211.7163	LN-S-CREEK	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	211.4426	LN-STOCKVILL	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	210.7753	GEN640024 3-BEATRICE POWER STATION UNIT 3	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.04293	209.6316	BEATRICE POWER STATION - SHELDON 115KV CKT 1	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	208.9193	GEN640019 1-SHELDON STATION UNIT 1	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	207.0201	LN-WAPA4	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	206.6356	GEN560711 1-G10_044_3 0.6900	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05272	205.9211	LN-WAPA2	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	203.7066	GEN640022 1-BEATRICE POWER STATION UNIT 1	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	203.7061	GEN640023 2-BEATRICE POWER STATION UNIT 2	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	203.4014	GEN640019 1-SHELDON STATION UNIT 1	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05423	203.2477	GEN640020 2-SHELDON STATION UNIT 2	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	201.5154	GEN640024 3-BEATRICE POWER STATION UNIT 3	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05273	198.6958	GEN640020 2-SHELDON STATION UNIT 2	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06567	183.2094	NW68TH & HOLDREGE (T141) 345/115/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	17SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0455	176.6898	20TH & PIONEERS - SW7TH & PLEASANT HILL 115KV CKT 1	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07053	172.3426	103RD & ROKEBY - WAGENER 345KV CKT 1	
FDNS	00NR	0	12SP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.04427	171.9831	20TH & PIONEERS - SW7TH & PLEASANT HILL 115KV CKT 1	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07251	166.5271	MOORE - NW68TH & HOLDREGE 345KV CKT 1	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06884	165.8178	WAGENER (T851) 345/115/13.8KV TRANSFORMER CKT 1	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06904	164.4835	WAGENER (T852) 345/115/13.8KV TRANSFORMER CKT 2	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06965	161.351	84TH & LEIGHTON - WAGENER 115KV CKT 1	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	158.9123	GEN645001 1-FORT CALHOUN 1	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07409	157.5068	103RD & ROKEBY - MOORE 345KV CKT 1	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	157.0078	GEN645012 2-NEBRASKA CITY 2	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07229	156.7377	ENRONTAP	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07229	156.7375	HYDROCARBON TAP - SUB 974 69KV CKT 1	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07229	156.7327	HYDROCARBON TAP - SUB 970 69KV CKT 1	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	149.8356	BASE CASE	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	143.0229	LN-STOCKVILL	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07132	143.0079	LN-1094	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0652	142.8282	ROKEBY - SW7TH & PLEASANT HILL 115KV CKT 1	
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	142.7995	NEB02WAPAB2	



SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	142.2807	LN-WAPA4
FDNS	00NR	0	17WP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.07948	140.9555	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS	00NR	0	12WP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.0795	140.749	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	140.4233	GEN562029 1-G11_018_3 0.6900
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	135.2269	GEN560711 1-G10_044_3 0.6900
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.1439	133.3504	MOORE (MOORE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	132.2917	GEN640019 1-SHELDON STATION UNIT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.74444	125.47	LN-1175B
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.74444	125.0478	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07131	125.0043	GEN640020 2-SHELDON STATION UNIT 2
FDNS	09NR	0	12G	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0598	118.578	20TH & PIONEERS - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.68882	116.3919	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.60032	115.3917	G09-40T 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.60032	115.0194	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E.) 115KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.60032	114.4105	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
FDNS	00NR	0	12WP	G10_044	FROM->TO	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	137	0.24498	112.0559	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.74444	111.774	FAIRBURY - NORTH HEBRON 115KV CKT 1
FDNS	00NR	0	12WP	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.76469	111.3971	LN-1175B
FDNS	00NR	0	12WP	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.76469	110.807	FAIRBURY - HARBINE 115KV CKT 1
FDNS	00NR	0	17WP	G10_044	FROM->TO	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	137	0.24634	110.6178	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	00NR	0	12WP	G10_044	FROM->TO	CLATONIA - SHELDON 115KV CKT 1	137	0.24498	108.6324	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	00NR	0	17WP	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.76077	107.6259	LN-1175B
FDNS	00NR	0	17WP	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.76077	107.0142	FAIRBURY - HARBINE 115KV CKT 1
FDNS	00NR	0	17WP	G10_044	FROM->TO	CLATONIA - SHELDON 115KV CKT 1	137	0.24634	106.7142	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.57849	106.2452	G08-123N 115.00 - PAULINE 115KV CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	137	0.25677	106.1237	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	00NR	0	17WP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.0521	105.2311	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR	0	12WP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.05212	104.8852	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR	0	17WP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.04723	104.7178	NW68TH & HOLDREGE (T141) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17WP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.0508	104.7076	103RD & ROKEBY - WAGENER 345KV CKT 1
FDNS	00NR	0	17SP	G10_044	FROM->TO	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	137	0.27201	104.3895	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	00NR	0	12WP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.05083	104.2348	103RD & ROKEBY - WAGENER 345KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.63013	103.9711	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	00NR	0	12WP	G10_044	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.04724	103.8183	NW68TH & HOLDREGE (T141) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	12SP	G10_044	FROM->TO	CLATONIA - SHELDON 115KV CKT 1	137	0.25677	103.4385	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.60032	103.3146	KELLY - SOUTH SENECA 115KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.55838	102.6907	HUMBOLDT - S1399 5 161KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.63013	101.6796	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.57909	101.5773	CLIFTON - CONCORDIA 115KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.55419	101.5498	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR	0	12SP	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.76263	101.4667	LN-1175B
FDNS	00NR	0	17SP	G10_044	FROM->TO	CLATONIA - SHELDON 115KV CKT 1	137	0.27201	101.3117	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.55419	101.2045	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR	0	12SP	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.76263	100.7917	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.55419	100.1887	GEN645011 1-NEBRASKA CITY 1
FDNS	09NR	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.5617	100.1133	EAST MANHATTAN - ELM CREEK 230KV CKT 1
FDNS	09ALL_BPSON	0	12G	G10_044	FROM->TO	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	137	0.34559	112.658	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	9G10_044_BPSON	0	12G	G10_044	FROM->TO	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	137	0.34553	110.4517	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	09ALL_BPSON	0	12G	G10_044	FROM->TO	CLATONIA - SHELDON 115KV CKT 1	137	0.34559	108.2422	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	09_BPSON	0	12G	G10_044	FROM->TO	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	137	0.34553	106.064	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	9G10_044_BPSON	0	12G	G10_044	FROM->TO	CLATONIA - SHELDON 115KV CKT 1	137	0.34553	106.0467	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	09_BPSON	0	12G	G10_044	FROM->TO	CLATONIA - SHELDON 115KV CKT 1	137	0.34553	101.6613	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FNSL-Blown up	01ALL	0	12G	G10_044		Non Converged Contingency	0	0.04715	-	DBL-TGA-MATT
FNSL-Blown up	03ALL	0	12G	G10_044		Non Converged Contingency	0	0.05177	-	DBL-THIS-CLR
FDNS	09G10_044	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.73222	116.8943	LN-1175B
FDNS	09G10_044	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.73222	116.4721	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL	0	12G	G10_044	FROM->TO	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	137	0.33891	112.7421	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	09ALL	0	12G	G10_044	FROM->TO	CLATONIA - SHELDON 115KV CKT 1	137	0.33891	108.3256	BEATRICE POWER STATION - SHELDON 115KV CKT 1
FDNS	09G10_044	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.59311	108.1185	G09-40T 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
FDNS	09G10_044	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.59311	107.7449	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E.) 115KV CKT 1
FDNS	09G10_044	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.59311	107.136	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
FDNS	09G10_044	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.69007	106.6801	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	9	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.73222	103.3369	LN-1175B
FDNS	09G10_044	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.73222	103.2015	FAIRBURY - NORTH HEBRON 115KV CKT 1
FDNS	9	0	12G	G10_044	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99	0.73222	102.9134	FAIRBURY - HARBINE 115KV CKT 1
FNSL-Blown Up	03NR	0	12G	G10_061		Non Converged Contingency	0	0.04991	-	DBL-SPRVL-MU
FNSL-Blown Up	03NR	0	12G	G10_061		Non Converged Contingency	0	0.04991	-	DBL-MUL-RENO

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING		CONTINGENCY
							(MVA)	TDF	(% MVA)		
FDNS	03NR	0	12G	G10_061	TO->FROM	N HAYS3 115.00 - VINE STREET 115KV CKT 1	99	0.03201	129.0111	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	
FDNS	03NR	0	12G	G10_061	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	99	0.03201	124.4583	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	
FNSL-Blown up	01ALL	0	12G	G10_061		Non Converged Contingency	0	0.11774	-	DBL-TGA-MATT	
FNSL-Blown up	03ALL	0	12G	G10_061		Non Converged Contingency	0	0.1274	-	DBL-WICH-THI	
FNSL-Blown up	03ALL	0	12G	G10_061		Non Converged Contingency	0	0.23891	-	DBL-THIS-CLR	
FNSL-Blown up	03ALL	0	12G	G10_061		Non Converged Contingency	0	0.16436	-	DBL-SPRVL-MU	
FNSL-Blown up	03ALL	0	12G	G10_061		Non Converged Contingency	0	0.16436	-	DBL-MUL-RENO	
FNSL-Blown up	01ALL	0	12G	G11_043		Non Converged Contingency	0	0.14589	-	DBL-TGA-MATT	
FNSL-Blown up	03ALL	0	12G	G11_043		Non Converged Contingency	0	0.43064	-	DBL-WICH-THI	
FNSL-Blown up	03ALL	0	12G	G11_043		Non Converged Contingency	0	0.04902	-	DBL-SPRVL-MU	
FNSL-Blown up	03ALL	0	12G	G11_043		Non Converged Contingency	0	0.04902	-	DBL-MUL-RENO	
FNSL	03ALL	0	12G	G11_043	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.20591	123.0452	DBL-TGA-MATT	
FDNS	03ALL	0	12G	G11_043	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.20591	116.1311	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL	0	12G	G11_043	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.20591	115.7196	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
FDNS	03ALL	0	12G	G11_043	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.21849	115.1841	G08-13T 345.00 - WOODRING 345KV CKT 1	
FDNS	03ALL	0	12G	G11_043	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.21849	113.0295	G08-13T 345.00 - SUMNERCO 345.00 345KV CKT 1	
FDNS	03ALL	0	12G	G11_043	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.21849	108.7391	SUMNERCO 345.00 - WICHITA 345KV CKT 1	
FDNS	03ALL	0	12G	G11_043	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.19235	106.199	EVANS ENERGY CENTER NORTH - MAIZE 138KV CKT 1	
FDNS	03ALL	0	12G	G11_043	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.19235	105.7246	CHISHOLM - MAIZE 138KV CKT 1	
FDNS	03ALL	0	12G	G11_043	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.1903	102.9655	AXTELL - POST ROCK 345KV CKT 1	
FDNS	03ALL	0	12G	G11_043	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.19259	102.5469	SWISSVALE - WEST GARDNER 345KV CKT 1	
FDNS	03ALL	0	12G	G11_043	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.20737	102.221	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1	
FDNS	03ALL	0	12G	G11_043	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.24154	102.1826	DBL-THIS-WWR	
FDNS	00NR	0	17WP	G11_044	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.04536	235.9415	DBL-TGA-MATT	
FDNS	00NR	0	17SP	G11_044	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.04586	232.6497	DBL-TGA-MATT	
FDNS	00NR	0	17WP	G11_044	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.04536	214.917	DBL-TGA-MATT	
FDNS	00NR	0	17SP	G11_044	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.04586	208.1992	DBL-TGA-MATT	
FDNS	03NR	0	12G	G11_044	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03378	204.6043	DBL-TGA-MATT	
FDNS	03NR	0	12G	G11_044	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	110	0.03378	198.6115	DBL-TGA-MATT	
FDNS	03NR	0	12G	G11_044	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.03378	185.9268	DBL-WICH-THI	
FDNS	00NR	0	12WP	G11_044	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03338	161.7623	DBL-WICH-THI	
FDNS	00NR	0	12WP	G11_044	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	110	0.03338	161.3077	DBL-WICH-THI	
FDNS	00NR	0	12SP	G11_044	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	110	0.03418	156.7961	DBL-WICH-THI	
FDNS	00NR	0	12SP	G11_044	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03418	151.1571	DBL-WICH-THI	
FDNS	00NR	0	12WP	G11_044	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.03338	144.359	DBL-WICH-THI	
FDNS	00NR	0	12SP	G11_044	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.03418	131.5757	DBL-THIS-CLR	
FDNS	03NR	0	12G	G11_044	TO->FROM	NINNES3 115.00 - PRATT 115KV CKT 1	87.6	0.04715	121.7925	DBL-THIS-CLR	
FDNS	03NR	0	12G	G11_044	FROM->TO	NINNES3 115.00 - ST JOHN 115KV CKT 1	87.6	0.04715	114.8029	DBL-THIS-CLR	
FDNS	00NR	0	17WP	G11_044	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.04536	235.9466	DBL-WICH-THI	
FDNS	00NR	0	17SP	G11_044	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.04586	232.6542	DBL-WICH-THI	
FDNS	00NR	0	17WP	G11_044	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.04536	214.922	DBL-WICH-THI	
FDNS	00NR	0	17SP	G11_044	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.04586	208.2035	DBL-WICH-THI	
FDNS	03NR	0	12G	G11_044	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03474	204.2994	DBL-WICH-THI	
FDNS	03NR	0	12G	G11_044	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	110	0.03474	198.3416	DBL-WICH-THI	
FDNS	03NR	0	12G	G11_044	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.03474	185.624	DBL-WICH-THI	
FDNS	00NR	0	12WP	G11_044	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03421	162.2864	DBL-WICH-THI	
FDNS	00NR	0	12WP	G11_044	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	110	0.03421	161.8109	DBL-WICH-THI	
FDNS	00NR	0	12SP	G11_044	FROM->TO	FLATRDG3 - HARPER 138KV CKT 1	110	0.03501	157.3782	DBL-WICH-THI	
FDNS	00NR	0	12SP	G11_044	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03501	151.8079	DBL-WICH-THI	
FDNS	00NR	0	12WP	G11_044	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.03421	144.8649	DBL-WICH-THI	
FDNS	00NR	0	12SP	G11_044	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.03501	132.2206	DBL-WICH-THI	
FDNS	03NR	0	12G	G11_044	TO->FROM	NINNES3 115.00 - PRATT 115KV CKT 1	87.6	0.0417	124.1443	DBL-WICH-THI	
FDNS	03NR	0	12G	G11_044	FROM->TO	NINNES3 115.00 - ST JOHN 115KV CKT 1	87.6	0.0417	117.174	DBL-WICH-THI	
FDNS	03NR	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.0563	113.8319	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1	
FDNS	03NR	0	12G	G11_044	FROM->TO	MEDILODGEFR	65	0.05534	111.4	BASE CASE	
FDNS	03NR	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.05833	103.7506	DBL-TGA-MATT	
FDNS	00NR	0	12SP	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.06271	100.4946	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1	
FDNS	03NR	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.06433	100.4226	G08-13T 345.00 - WOODRING 345KV CKT 1	
FDNS	03NR	0	12G	G11_044	TO->FROM	NINNES3 115.00 - PRATT 115KV CKT 1	87.6	0.03279	100.3906	GEN539677 3-A. M. MULLERGREN GENERATOR	
FNSL-Blown up	01ALL	0	12G	G11_044		Non Converged Contingency	0	0.14589	-	DBL-TGA-MATT	
FNSL-Blown up	03ALL	0	12G	G11_044		Non Converged Contingency	0	0.43064	-	DBL-WICH-THI	
FNSL-Blown up	03ALL	0	12G	G11_044		Non Converged Contingency	0	0.04902	-	DBL-SPRVL-MU	
FNSL-Blown up	03ALL	0	12G	G11_044		Non Converged Contingency	0	0.04902	-	DBL-MUL-RENO	
FNSL	03ALL	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.20591	123.0452	DBL-TGA-MATT	
FDNS	03ALL	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.20591	116.1311	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	03ALL	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.20591	115.7196	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
FDNS	03ALL	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.21849	115.1841	G08-13T 345.00 - WOODRING 345KV CKT 1	
FDNS	03ALL	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.21849	113.0295	G08-13T 345.00 - SUMNERCO 345.00 345KV CKT 1	
FDNS	03ALL	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.21849	108.7391	SUMNERCO 345.00 - WICHITA 345KV CKT 1	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING		CONTINGENCY
							(MVA)	TDF	(% MVA)		
FDNS	03ALL	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.19235	106.199	EVANS ENERGY CENTER NORTH - MAIZE 138KV CKT 1	
FDNS	03ALL	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.19235	105.7246	CHISHOLM - MAIZE 138KV CKT 1	
FDNS	03ALL	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.1903	102.9655	AXTELL - POST ROCK 345KV CKT 1	
FDNS	03ALL	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.19259	102.5469	SWISSVALE - WEST GARDNER 345KV CKT 1	
FDNS	03ALL	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.20737	102.221	EMPORIA ENERGY CENTER - WICHITA 345KV CKT 1	
FDNS	03ALL	0	12G	G11_044	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.24154	102.1826	DBL-THIS-WWR	
FDNS	00NR	2	17SP	G11_045	TO->FROM	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1	160	0.0512	103.888	DBL-MUL-RENO	
FDNS	00NR	2	17SP	G11_045	TO->FROM	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1	160	0.07556	100.5378	DBL-MUL-RENO	
FDNS	00NR	0	17SP	G11_045	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.1058	108.2565	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1	
FDNS	00NR	0	17SP	G11_045	FROM->TO	Jones Station Bus#2 - LUBBOCK SOUTH INTERCHANGE 230KV CKT 2	351	0.3207	106.1979	JONES STATION - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1	
FDNS	06NR	0	12G	G11_045	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.27153	102.145	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	
FDNS	00NR	0	12SP	G11_045	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.10319	101.4915	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1	
FDNS	00NR	0	17SP	G11_045	FROM->TO	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1	290	0.1058	100.9175	Jones Station Bus#2 - LUBBOCK EAST INTERCHANGE 230KV CKT 1	
FDNS	00NR	0	17SP	G11_046	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.04412	102.7838	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1	
FDNS	00NR	0	17SP	G11_046	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.04412	102.7717	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1	
FDNS	00NR	0	17SP	G11_046	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.04412	102.7389	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1	
FDNS	00NR	0	17SP	G11_046	FROM->TO	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1	239	0.04412	102.7269	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1	
FDNS	06NR	0	12G	G11_048	FROM->TO	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	351	0.05693	102.145	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1	
FDNS	00NR	2	17WP	G11_049	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03547	235.1761	DBL-MUL-RENO	
FDNS	00NR	2	17SP	G11_049	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03502	231.9031	DBL-MUL-RENO	
FDNS	00NR	2	17WP	G11_049	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.03547	214.1859	DBL-MUL-RENO	
FDNS	00NR	2	17SP	G11_049	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.03502	207.4922	DBL-MUL-RENO	
FDNS	00NR	2	12SP	G11_049	TO->FROM	WOODWARD - WOODWARD EHV 138KV CKT 1	308	0.0897	100.9379	STEGALL - STEGALL TY 345KV CKT 1	
FDNS	00NR	2	12WP	G11_049	TO->FROM	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1	185	0.0476	100.4054	TRF-STEGALL	
FDNS	00NR	2	17SP	G11_049	TO->FROM	WOODWARD - WOODWARD EHV 138KV CKT 1	308	0.09048	100	NEB01WAPAB3	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05902	111.7897	LACYGNE - NEOSHO 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06045	106.7749	LACYGNE - NEOSHO 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05877	111.0612	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06015	106.5441	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	
FDNS	00NR	0	17WP	G11_049	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03563	235.9466	DBL-WICH-THI	
FDNS	00NR	0	17SP	G11_049	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	95.6	0.03518	232.6542	DBL-WICH-THI	
FDNS	00NR	0	17WP	G11_049	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.03563	214.922	DBL-WICH-THI	
FDNS	00NR	0	17SP	G11_049	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	100	0.03518	208.2035	DBL-WICH-THI	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0993	198.2625	DBL-TGA-MATT	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.10057	195.0215	DBL-TGA-MATT	
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.10007	171.8338	DBL-TGA-MATT	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0993	165.851	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.10057	161.7428	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0993	157.8071	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.10057	153.5224	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06658	147.7909	WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1	
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.10007	142.9394	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06782	141.7587	WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	141.2169	GEN520998 1-MORLND3	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06774	140.7796	DBL-WICH-THI	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	140.1134	GEN520998 1-MORLND3	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	138.923	GEN520997 1-MORLND2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.07092	138.4314	IODINE - WOODWARD EHV 138KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	138.2127	GEN520997 1-MORLND2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.07092	136.9096	DEWEY - IODINE 138KV CKT 1	
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.10007	135.8959	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.07214	133.6832	IODINE - WOODWARD EHV 138KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.07214	132.114	DEWEY - IODINE 138KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06887	132.0381	DBL-WICH-THI	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06658	128.1623	WOODWARD - WOODWARD 69KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06757	125.6398	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	125.0646	BASE CASE	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.07459	124.3907	DBL-THIS-WWR	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06573	124.3157	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06573	124.3157	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06492	123.9374	SPP-SWPS-03	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05803	123.5927	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06483	123.5388	ELK CITY 230KV - SWEETWATER 230KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06483	123.5373	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06483	122.9463	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06483	122.288	SPP-SWPS-02A	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06782	121.6336	WOODWARD - WOODWARD 69KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06198	120.7571	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06893	120.6054	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06712	119.3422	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06712	119.3422	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06483	119.3264	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06483	119.323	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06483	119.3213	SPP-SWPS-02
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	119.0425	BASE CASE
FDNS	00NR	0	12WP	G11_049	TO->FROM	GLASS MOUNTAIN - MOORELAND 138KV CKT 1	152	0.04626	118.8482	DBL-TGA-MATT
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06616	118.6069	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06616	118.5946	ELK CITY 230KV - SWEETWATER 230KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06616	118.5931	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06762	118.1562	WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05976	117.8348	DBL-MUL-RENO
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05976	117.7338	DBL-SPRVL-MU
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.07651	117.6899	DBL-THIS-WWR
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06616	117.2978	SPP-SWPS-02A
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06106	117.0771	THISTLE 7 345.00 - WICHITA 345KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06106	117.0771	THISTLE 7 345.00 - WICHITA 345KV CKT 2
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.07344	116.6863	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05988	116.3863	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06331	115.9793	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06757	115.9301	G05-15T 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	115.5107	GEN560180 1-G07-51 0.6000
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	115.2839	GEN514805 1-SOONER UNIT 1
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06881	115.1471	DBL-WICH-THI
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06616	114.6806	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06616	114.6748	SPP-SWPS-02
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06616	114.6692	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06034	114.6074	BENTON - WICHITA 345KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06162	114.4232	G08-13T 345.00 - WOODRING 345KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	114.2582	GEN336821 1-GRAND GULF UNIT
FDNS	00NR	0	12SP	G11_049	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.04009	114.1333	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	114.0016	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	113.8565	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0634	113.7311	THISTLE 7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0634	113.7311	THISTLE 7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06162	113.6907	G08-13T 345.00 - SUMNERCO 345.00 345KV CKT 1
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.0718	113.5979	IODINE - WOODWARD EHV 138KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05791	113.3532	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05986	113.2089	GEN520998 1-MORLND3
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	113.2049	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	113.1468	GEN514806 1-SOONER UNIT 2
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	113.1263	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05908	113.0487	G11-17T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR	0	12SP	G11_049	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZE 138KV CKT 1	382	0.04232	113.0481	BENTON - WICHITA 345KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	112.7153	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.0718	112.6983	DEWEY - IODINE 138KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05791	112.6655	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	112.5473	GEN515042 1-SEMINOLE 3G
FDNS	00NR	0	17WP	G11_049	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.10007	112.4134	DBL-TGA-MATT
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	112.3697	GEN509416 1-TURK GENERATION
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	112.3558	GEN509403 1-PIRKEY GENERATION
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.07489	112.3452	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	112.2985	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	112.277	GEN511848 1-SOUTHWESTERN STATION #3
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06114	112.2112	DBL-MUL-RENO
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06162	112.1985	SUMNERCO 345.00 - WICHITA 345KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06018	112.0726	FARGO JCT - WOODWARD 69KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.059	112.0194	DEWEY - TALOGA 138KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.9978	GEN515225 1-MUSKOGEE 5G
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06114	111.9896	DBL-SPRVL-MU
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.984	GEN515226 1-MUSKOGEE 6G
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.9833	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.9557	GEN515223 1-MUSKOGEE 4G
FDNS	00NR	0	12SP	G11_049	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.04009	111.9439	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	111.938	GEN514805 1-SOONER UNIT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.8851	GEN520947 1-HUGO1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING		CONTINGENCY
							(MVA)	TDF	(% MVA)		
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.8625	GEN338146 1-INDEPENDENCE UNIT #2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.8235	GEN336252 1-NINEMILE POINT UNIT#5	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.7874	GEN338143 1-INDEPENDENCE UNIT #1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.7724	GEN515040 1-SEMINOLE 1G	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.7393	GEN336251 1-NINEMILE POINT UNIT#4	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05943	111.7327	DBL-HTCH-GEN	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05943	111.7327	DBL-HTCH-GEN	
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05986	111.7223	GEN520997 1-MORLND2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.6933	GEN511843 1-RIVERSIDE STATION #2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.6781	GEN509406 1-WELSH #3	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.6779	GEN509405 1-WELSH #2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.6778	GEN509404 1-WELSH #1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.6183	GEN501813 1-RODEMACHER UNIT 3	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.6027	GEN337041 1-GERALD ANDRUS	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06067	111.583	GRAY CO 345.00 - SPEARVILLE 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.5463	GEN511839 1-NORTHEASTERN STATION #2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.5056	GEN512688 2-GRDA1 GSU2 22	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06893	111.4755	G05-15T 345.00 - OKLAUNION 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.4407	GEN512689 1-GRDA1 GSU1 22	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.4096	GEN560323 1-G10-40 0.6900	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05972	111.3976	BENTON - ROSE HILL 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.3866	GEN514939 1-HORSESHOE LAKE 8G	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05903	111.383	AXTELL - POST ROCK 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.3785	GEN515790 1-FPLWND2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05938	111.371	MINGO - SETAB 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.354	GEN562100 1-G11_054_3 0.6900	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.3495	GEN509394 1-FLINT CREEK	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.3405	GEN336831 1-BAXTER WILSON SES	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06241	111.2491	THISTLE 7 345.00 - WICHITA 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06241	111.2491	THISTLE 7 345.00 - WICHITA 345KV CKT 2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.2463	GEN501812 1-RODEMACHER UNIT 2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.2405	GEN511840 1-NORTHEASTERN STATION #3	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.2094	GEN337692 1-LAKE CATHERINE UNIT #4	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05985	111.2052	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.1875	GEN335206 1-NELSON UNIT 6	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.1863	GEN511841 1-NORTHEASTERN STATION #4	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.059	111.1831	RENO COUNTY - WICHITA 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05878	111.1762	WRTOD400	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.1287	GEN520996 1-MORLND1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.0665	GEN335204 1-NELSON UNIT 4	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.0628	GEN334440 1-SABINE UNIT 4	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.0507	GEN520922 1-SLEEPING BEAR	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	111.0496	GEN511842 1-RIVERSIDE STATION #1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05843	111.0443	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05851	110.9961	FAIRVIEW - OKEENE 69KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	110.9674	GEN336191 1-LITTLE GYPSY UNIT#3	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	110.9527	GEN338388 1-PLUMPT 23.000	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05923	110.9484	HOLCOMB - SETAB 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	110.932	GEN336464 1-MICHOUUD UNIT #3	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06893	110.8677	G05-15T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	110.837	GEN560636 1-ASGI-10-06 0.6900	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05891	110.8299	MULGREN7 345.00 - RENO COUNTY 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05891	110.8299	MULGREN7 345.00 - RENO COUNTY 345KV CKT 2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05805	110.8275	ONEY - WASHITA 138KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	110.8152	GEN335614 1-WILLOW GLENN UNIT#4	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05946	110.7354	MINGO - RED WILLOW 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06018	110.6933	FARGO JCT - FT SUPPLY 69KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0589	110.6737	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	110.4738	GEN336821 1-GRAND GULF UNIT	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	110.276	GEN560180 1-G07-51 0.6000	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	109.9499	GEN336153 1-WATERFORD UNIT#3	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	109.9025	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	109.4253	GEN514806 1-SOONER UNIT 2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	CHISHOLM - MAIZE 138KV CKT 1	382	0.04232	109.2901	BENTON - WICHITA 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	109.1189	GEN335831 1-RIVERBEND UNIT#1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06174	109.0989	BENTON - WICHITA 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06284	109.0728	G08-13T 345.00 - WOODRING 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	108.8349	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	108.8122	GEN509403 1-PIRKEY GENERATION	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	108.7586	GEN509416 1-TURK GENERATION
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05922	108.7129	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06284	108.4237	G08-13T 345.00 - SUMNERCO 345.00 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	108.2015	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06495	108.1042	THISTLE 7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06495	108.1042	THISTLE 7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	108.1017	GEN515225 1-MUSKOGEE 5G
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	108.0819	GEN515226 1-MUSKOGEE 6G
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	108.0373	GEN515223 1-MUSKOGEE 4G
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05922	108.027	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.9463	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06047	107.8575	G11-17T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.8386	GEN520947 1-HUGO1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.7761	GEN509406 1-WELSH #3
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.7758	GEN509405 1-WELSH #2
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.7757	GEN509404 1-WELSH #1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06075	107.5972	DBL-HTCH-GEN
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06075	107.5972	DBL-HTCH-GEN
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.5818	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.5498	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR	0	12SP	G11_049	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.0993	107.4898	DBL-TGA-MATT
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.4763	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.4084	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.3946	GEN511839 1-NORTHEASTERN STATION #2
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.301	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06872	107.2857	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06284	107.1831	SUMNERCO 345.00 - WICHITA 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.1625	GEN337041 1-GERALD ANDRUS
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.1597	GEN509394 1-FLINT CREEK
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.0904	GEN511840 1-NORTHEASTERN STATION #3
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06113	107.0879	DEWEY - TALOGA 138KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.0346	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	107.0117	GEN511841 1-NORTHEASTERN STATION #4
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.9673	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.9596	GEN511843 1-RIVERSIDE STATION #2
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.7904	GEN336831 1-BAXTER WILSON SES
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.7312	GEN526333 1-JONES GEN #3 21 KV
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.73	GEN526334 1-JONES 4 116.500
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.7214	GEN515040 1-SEMINOLE 1G
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06016	106.7135	WRTOD400
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05687	106.7076	GOLTRY - HELENA TAP 69KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.6933	GEN562049 1-G11_012_3 0.6900
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.6902	GEN526332 1-JONES GEN #2 21 KV
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.6866	GEN526331 1-JONES GEN #1 22 KV
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.6743	GEN335206 1-NELSON UNIT 6
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05844	106.6574	BRANTLEY - DURHAM 138KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05495	106.6519	DOVER SW - HENESSEY 138KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.6463	GEN334440 1-SABINE UNIT 4
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.6421	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.6187	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.6181	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06036	106.6086	RENO COUNTY - WICHITA 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.5986	GEN512689 1-GRDA1 GSU1 22
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06159	106.5914	FARGO JCT - WOODWARD 69KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05876	106.5883	DBL-THIS-CLR
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.5749	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.5747	GEN560323 1-G10-40 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.5545	GEN337692 1-LAKE CATHERINE UNIT #4
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05849	106.5383	OGESTERM3
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.5159	GEN560386 1-G10-029-1 0.6900
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.5159	GEN560387 1-G10-029-2 0.6900
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.5159	GEN560388 1-G10-029-3 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.5081	GEN562100 1-G11_054_3 0.6900
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.4921	GEN527903 1-HOBBS PLANT #3 (ST)
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.4739	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.4237	GEN560714 1-G10_061_3 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06137	106.4171	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.3784	GEN335204 1-NELSON UNIT 4
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.3329	GEN523971 1-HARRINGTON GEN #1 24 KV

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING		CONTINGENCY
							(MVA)	TDF	(% MVA)		
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.3304	GEN523972 1-HARRINGTON GEN #2 24 KV	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.3181	GEN523973 1-HARRINGTON GEN #3 24 KV	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.3166	GEN336191 1-LITTLE GYPSY UNIT#3	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05766	106.2807	OKEENE - WATONGA SW 69KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.2787	GEN334441 1-SABINE UNIT 5	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.2761	GEN336464 1-MICHOUD UNIT #3	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.2308	GEN562065 1-G11_044_3 0.6900	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	106.2209	GEN562078 1-G11_051_3 0.6900	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05882	106.2112	BEAVER CO 345.00 G11-021T 345.00 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.1917	GEN338388 1-1PLUMPT 23.000	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06043	106.1174	AXTELL - POST ROCK 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.1014	GEN515042 1-SEMINOLE 3G	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06106	106.0732	BENTON - ROSE HILL 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.068	GEN515790 1-FPLWND2	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	106.0344	GEN336801 1-BAXTER WILSON UNIT #1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05835	106.0221	ALVA - KNOBHILL 69KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	105.967	GEN334433 1-SABINE UNIT 3	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	105.9658	GEN515041 1-SEMINOLE 2G	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06008	105.9148	MINGO - SETAB 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05979	105.9115	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	105.8704	GEN514859 1-MUSTANG 4G	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05687	105.8176	HELENA TAP - SALINE 69KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05984	105.8101	FAIRVIEW - OKEENE 69KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06041	105.7968	SPP-MKEC-08	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	105.7864	GEN562035 1-G11_016_3 0.6900	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05915	105.7825	JENSEN ROAD - JENSEN TAP 138KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	105.7735	GEN520922 1-SLEEPING BEAR	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	105.7599	GEN562010 1-G11_024_3 0.6900	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05902	105.7593	OGE3TERM10	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06211	105.7509	GRAY CO 345.00 - SPEARVILLE 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	105.6842	GEN515000 1-MCCLAIN UNIT 3	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	105.6605	GEN560636 1-ASGI-10-06 0.6900	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06064	105.6573	HOLCOMB - SETAB 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	105.6533	GEN560356 1-G10-53 0.6900	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05686	105.6417	CLINTON AIR FORCE BASE TAP - HOBART JUNCTION 138KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	105.6303	GEN336222 1-LITTLE GYPSY UNIT#2	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	105.6178	GEN514999 1-MCCLAIN UNIT 2	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	105.5906	GEN514998 1-MCCLAIN UNIT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	105.5816	GEN501811 1-RODEMACHER UNIT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0598	105.5594	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0598	105.5594	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05734	105.5468	WOODWARD - WOODWARD EHV 138KV CKT 2	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06028	105.5238	MULGREN7 345.00 - RENO COUNTY 345KV CKT 1	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06028	105.5238	MULGREN7 345.00 - RENO COUNTY 345KV CKT 2	
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	105.5031	GEN560687 1-G11-007 0.5750	
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06762	105.4783	WOODWARD - WOODWARD 69KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	105.456	GEN525561 1-TOLK GEN #1 24 KV	
FDNS	00NR	0	12WP	G11_049	TO->FROM	GLASS MOUNTAIN - MOORELAND 138KV CKT 1	152	0.04626	105.3513	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05686	105.3235	CLINTON AIR FORCE BASE TAP - ELK CITY 138KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05687	105.3126	KNOBHILL - SALINE 69KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05923	105.1193	FT SUPPLY - IODINE 138KV CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	105.0839	GEN560329 1-G10-45 0.6900	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	104.9063	GEN562032 1-G11_017_3 0.6900	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	104.7941	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	104.721	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1	
FDNS	00NR	0	12SP	G11_049	FROM->TO	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03884	104.5497	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0562	104.3354	CLINTON JUNCTION - ELK CITY 138KV CKT 1	
FDNS	07NR	0	12G	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.09771	104.2819	DBL-TGA-MATT	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	104.2661	GEN525562 1-TOLK GEN #2 24 KV	
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.07654	104.2187	DBL-THIS-WWR	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	104.1308	GEN562014 1-G11_023_3 0.6900	
FDNS	00NR	0	17SP	G11_049	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.10057	104.0959	DBL-TGA-MATT	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05923	103.521	IODINE - MOORELAND 138KV CKT 1	
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06689	103.3682	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06689	103.3682	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2	
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	103.2637	GEN531447 1-HOLCOMB GENERATOR	
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06602	103.22	SPP-SWPS-03	
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06593	103.0013	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06593	102.9986	ELK CITY 230KV - SWEETWATER 230KV CKT 1	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	102.9926	GEN562042 1-G11_014_3 0.6900
FDNS	00NR	0	12SP	G11_049	FROM->TO	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03884	102.5456	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G11_049	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZE 138KV CKT 1	382	0.04294	102.4385	BENTON - WICHITA 345KV CKT 1
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06593	102.4342	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FDNS	00NR	0	17WP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06593	101.8939	SPP-SWPS-02A
FDNS	00NR	0	12WP	G11_049	TO->FROM	GLASS MOUNTAIN - MOORELAND 138KV CKT 1	152	0.04626	101.8387	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05472	101.7958	ROMAN NOSE - SOUTHARD 138KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06012	101.5866	DBL-THIS-CLR
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05983	101.5404	DURHAM - SWEETWATER 138KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	101.5352	GEN562017 1-G11_022_3 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05983	101.5347	BRANTLEY - MORWOOD 138KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05983	101.5198	MOREWOOD SW - MORWOOD 138KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.4548	GEN539670 4-JUDSON LARGE GENERATOR
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.3727	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05962	101.3655	ARAPAHO - INDUSTRIAL PARK 69KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05962	101.3602	ARAPAHO - HAMON BUTLER 69KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05986	101.3584	OGE3TERM3
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05962	101.3578	HAMON BUTLER - PUTNAM 69KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.3504	GEN560386 1-G10-029-1 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.3504	GEN560387 1-G10-029-2 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.3504	GEN560388 1-G10-029-3 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.3197	GEN527903 1-HOBBS PLANT #3 (ST)
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.3179	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.3167	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.2849	GEN560714 1-G10_061_3 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05983	101.2246	BRANTLEY - DURHAM 138KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0597	101.2201	ALVA - CHEROKEE SW 69KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05962	101.2174	PUTNAM - TALOGA 69KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06018	101.1886	BEAVER CO 345.00 - G11-021T 345.00 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.1103	GEN562065 1-G11_044_3 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.0693	GEN526331 1-JONES GEN #1 22 KV
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.0683	GEN526332 1-JONES GEN #2 21 KV
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	101.0625	GEN562078 1-G11_051_3 0.6900
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	101.0589	GEN562074 1-G11_049_3 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05907	100.927	OKEENE - WATONGA SW 69KV CKT 1
FDNS	00NR	0	12WP	G11_049	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.12635	100.8875	LAWTON EASTSIDE - SUNNYSIDE 345KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05472	100.8748	EL RENO - ROMAN NOSE 138KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05824	100.8169	HELENA TAP - SALINE 69KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	100.801	GEN562010 1-G11_024_3 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	100.657	GEN523971 1-HARRINGTON GEN #1 24 KV
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	100.6522	GEN523972 1-HARRINGTON GEN #2 24 KV
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	100.6438	GEN562035 1-G11_016_3 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	100.6348	GEN523973 1-HARRINGTON GEN #3 24 KV
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05838	100.6259	DOVER - TWIN LAKES 138KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06003	100.5092	GEN560356 1-G10-53 0.6900
FDNS	00NR	0	12SP	G11_049	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.11416	100.4946	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06119	100.4897	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06119	100.4897	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05838	100.4552	DOVER - DOVER SW 138KV CKT 1
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05868	100.3952	WOODWARD - WOODWARD EHV 138KV CKT 2
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05824	100.2993	KNOBHILL - SALINE 69KV CKT 1
FDNS	00NR	0	12SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05866	100.2941	GEN562020 1-G11_021_3 0.6900
FDNS	00NR	0	17SP	G11_049	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05969	100	ALVA - KNOBHILL 69KV CKT 1
FNSL-Blown up	01ALL	0	12G	G11_049		Non Converged Contingency	0	0.25171	-	DBL-TGA-MATT
FNSL-Blown up	03ALL	0	12G	G11_049		Non Converged Contingency	0	0.18017	-	DBL-WICH-THI
FNSL-Blown up	03ALL	0	12G	G11_049		Non Converged Contingency	0	0.05349	-	DBL-SPRVL-MU
FNSL-Blown up	03ALL	0	12G	G11_049		Non Converged Contingency	0	0.05349	-	DBL-MUL-RENO
FDNS	00NR	0	12WP	G11_050	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.09262	100.8875	LAWTON EASTSIDE - SUNNYSIDE 345KV CKT 1
FDNS	00NR	0	12SP	G11_050	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.03776	100.4946	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FNSL	01NR	2	12G	G11_051	TO->FROM	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1	153	0.04446	126.3768	DBL-SPRVL-MU
FNSL	01NR	2	12G	G11_051	TO->FROM	DOVER SW - OKEENE 138KV CKT 1	130	0.03711	112.4964	DBL-SPRVL-MU
FNSL	01NR	2	12G	G11_051	FROM->TO	CLEO CORNER - MEN TAP 138KV CKT 1	191	0.05085	102.7942	DBL-SPRVL-MU
FDNS	00NR	2	12SP	G11_051	TO->FROM	WOODWARD - WOODWARD EHV 138KV CKT 1	308	0.1049	100.9309	DBL-SPRVL-MU
FDNS	00NR	2	12WP	G11_051	TO->FROM	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1	185	0.05323	100.4058	DBL-SPRVL-MU
FDNS	00NR	2	17SP	G11_051	TO->FROM	WOODWARD - WOODWARD EHV 138KV CKT 1	308	0.10576	100	DBL-SPRVL-MU
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05022	111.7897	LACYGNE - NEOSHO 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05133	106.7749	LACYGNE - NEOSHO 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05002	111.0612	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05108	106.5441	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1



SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING		CONTINGENCY
							(MVA)	TDF	(% MVA)		
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.1162	198.2625	DBL-TGA-MATT	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.11764	195.0215	DBL-TGA-MATT	
FNSL	01NR	0	12G	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.11473	186.1422	DBL-TGA-MATT	
FNSL	01NR	0	12G	G11_051	TO->FROM	EL RENO - ROMAN NOSE 138KV CKT 1	153	0.05097	179.1342	DBL-TGA-MATT	
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.11714	171.8338	DBL-TGA-MATT	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.1162	165.851	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.11764	161.7428	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05661	147.7909	WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1	
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.11714	142.9394	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	01NR	0	12G	G11_051	TO->FROM	EL RENO - ROMAN NOSE 138KV CKT 1	153	0.05097	142.3928	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05754	141.7587	WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	141.2169	GEN520998 1-MORLND3	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05731	140.7796	DBL-WICH-THI	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	140.1134	GEN520998 1-MORLND3	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	138.923	GEN520997 1-MORLND2	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06001	138.4314	IODINE - WOODWARD EHV 138KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	138.2127	GEN520997 1-MORLND2	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06001	136.9096	DEWEY - IODINE 138KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06092	133.6832	IODINE - WOODWARD EHV 138KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06092	132.114	DEWEY - IODINE 138KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05819	132.0381	DBL-WICH-THI	
FNSL	01NR	0	12G	G11_051	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.11473	129.8504	DBL-TGA-MATT	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05661	128.1623	WOODWARD - WOODWARD 69KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05297	125.6398	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	125.0646	BASE CASE	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06347	124.3907	DBL-THIS-WWR	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06146	124.3157	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06146	124.3157	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0529	123.9374	SPP-SWPS-03	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05033	123.5927	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05285	123.5388	ELK CITY 230KV - SWEETWATER 230KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05285	123.5373	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05285	122.9463	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05285	122.288	SPP-SWPS-02A	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05754	121.6336	WOODWARD - WOODWARD 69KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05152	120.7571	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.054	120.6054	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	
FNSL	01NR	0	12G	G11_051	TO->FROM	GLASS MOUNTAIN - MOORELAND 138KV CKT 1	152	0.04183	120.3287	DBL-TGA-MATT	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06264	119.3422	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06264	119.3422	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05285	119.3264	STATELINE INTERCHANGE - STLN-DEMARCG 230KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05285	119.323	STLN-DEMARCG - SWEETWATER 230KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05285	119.3213	SPP-SWPS-02	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	119.0425	BASE CASE	
FDNS	00NR	0	12WP	G11_051	TO->FROM	GLASS MOUNTAIN - MOORELAND 138KV CKT 1	152	0.05171	118.8482	DBL-TGA-MATT	
FDNS	01NR	0	12G	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04935	118.7455	GEN560180 1-G07-51 0.6000	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05383	118.6069	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05383	118.5946	ELK CITY 230KV - SWEETWATER 230KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05383	118.5931	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05734	118.1562	WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05076	117.8348	DBL-MUL-RENO	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05076	117.7338	DBL-SPRVL-MU	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06504	117.6899	DBL-THIS-WWR	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05383	117.2978	SPP-SWPS-02A	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05187	117.0771	THISTLE 7 345.00 - WICHITA 345KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05187	117.0771	THISTLE 7 345.00 - WICHITA 345KV CKT 2	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05237	116.6863	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05166	116.3863	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1	
FNSL	01NR	0	12G	G11_051	TO->FROM	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1	153	0.04183	116.2423	DBL-TGA-MATT	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05252	115.9793	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05297	115.9301	G05-15T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	115.5107	GEN560180 1-G07-51 0.6000	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	115.2839	GEN514805 1-SOONER UNIT 1	
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05812	115.1471	DBL-WICH-THI	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05383	114.6806	STATELINE INTERCHANGE - STLN-DEMARCG 230KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05383	114.6748	SPP-SWPS-02	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05383	114.6692	STLN-DEMARCG - SWEETWATER 230KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05133	114.6074	BENTON - WICHITA 345KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05183	114.4232	G08-13T 345.00 - WOODRING 345KV CKT 1	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	114.2582	GEN336821 1-GRAND GULF UNIT
FDNS	00NR	0	12SP	G11_051	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.05088	114.1333	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	114.0016	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	113.8565	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05395	113.7311	THISTLE 7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05395	113.7311	THISTLE 7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05183	113.6907	G08-13T 345.00 - SUMNERCO 345.00 345KV CKT 1
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06058	113.5979	IODINE - WOODWARD EHV 138KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05054	113.3532	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05081	113.2089	GEN520998 1-MORLND3
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	113.2049	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	113.1468	GEN514806 1-SOONER UNIT 2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	113.1263	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05026	113.0487	G11-17T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZE 138KV CKT 1	382	0.03534	113.0481	BENTON - WICHITA 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	112.7153	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06058	112.6983	DEWEY - IODINE 138KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05054	112.6655	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	112.5473	GEN515042 1-SEMINOLE 3G
FDNS	00NR	0	17WP	G11_051	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.11714	112.4134	DBL-TGA-MATT
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	112.3697	GEN509416 1-TURK GENERATION
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	112.3558	GEN509403 1-PIRKEY GENERATION
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05339	112.3452	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	112.2985	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	112.277	GEN511848 1-SOUTHWESTERN STATION #3
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05183	112.2112	DBL-MUL-RENO
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05183	112.1985	SUMNERCO 345.00 - WICHITA 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05121	112.0726	FARGO JCT - WOODWARD 69KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05068	112.0194	DEWEY - TALOGA 138KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.9978	GEN515225 1-MUSKOGEE 5G
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05183	111.9896	DBL-SPRVL-MU
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.984	GEN515226 1-MUSKOGEE 6G
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.9833	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.9557	GEN515223 1-MUSKOGEE 4G
FDNS	00NR	0	12SP	G11_051	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.05088	111.9439	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	111.938	GEN514805 1-SOONER UNIT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.8851	GEN520947 1-HUGO1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.8625	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.8235	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.7874	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.7724	GEN515040 1-SEMINOLE 1G
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.7393	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05336	111.7327	DBL-HTCH-GEN
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05336	111.7327	DBL-HTCH-GEN
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05081	111.7223	GEN520997 1-MORLND2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.6933	GEN511843 1-RIVERSIDE STATION #2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.6781	GEN509406 1-WELSH #3
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.6779	GEN509405 1-WELSH #2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.6778	GEN509404 1-WELSH #1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.6183	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.6027	GEN337041 1-GERALD ANDRUS
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05132	111.583	GRAY CO 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.5463	GEN511839 1-NORTHEASTERN STATION #2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.5056	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.054	111.4755	G05-15T 345.00 - OKLAUNION 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.4407	GEN512689 1-GRDA1 GSU1 22
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.4096	GEN560323 1-G10-40 0.6900
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05079	111.3976	BENTON - ROSE HILL 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.3866	GEN514939 1-HORSESHOE LAKE 8G
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05023	111.383	AXTELL - POST ROCK 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.3785	GEN515790 1-FPLWND2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05047	111.371	MINGO - SETAB 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.354	GEN562100 1-G11_054_3 0.6900
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.3495	GEN509394 1-FLINT CREEK
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.3405	GEN336831 1-BAXTER WILSON SES
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05292	111.2491	THISTLE 7 345.00 - WICHITA 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05292	111.2491	THISTLE 7 345.00 - WICHITA 345KV CKT 2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.2463	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.2405	GEN511840 1-NORTHEASTERN STATION #3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.2094	GEN337692 1-LAKE CATHERINE UNIT #4
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05153	111.2052	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.1875	GEN335206 1-NELSON UNIT 6
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.1863	GEN511841 1-NORTHEASTERN STATION #4
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05015	111.1831	RENO COUNTY - WICHITA 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05002	111.1762	WRTOD400
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.1287	GEN520996 1-MORLND1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.0665	GEN335204 1-NELSON UNIT 4
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.0628	GEN334440 1-SABINE UNIT 4
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.0507	GEN520922 1-SLEEPING BEAR
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	111.0496	GEN511842 1-RIVERSIDE STATION #1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05012	111.0443	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04979	110.9961	FAIRVIEW - OKEENE 69KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	110.9674	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	110.9527	GEN338388 1-PLUMPT 23.000
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05035	110.9484	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	110.932	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.054	110.8677	G05-15T 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	110.837	GEN560636 1-ASGI-10-06 0.6900
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05011	110.8299	MULGREN7 345.00 - RENO COUNTY 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05011	110.8299	MULGREN7 345.00 - RENO COUNTY 345KV CKT 2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04947	110.8275	ONEY - WASHITA 138KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	110.8152	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05054	110.7354	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05121	110.6933	FARGO JCT - FT SUPPLY 69KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05027	110.6737	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	110.4738	GEN336821 1-GRAND GULF UNIT
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	110.276	GEN560180 1-G07-51 0.6000
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	109.9499	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	109.9025	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	109.4253	GEN514806 1-SOONER UNIT 2
FDNS	00NR	0	12SP	G11_051	TO->FROM	CHISHOLM - MAIZE 138KV CKT 1	382	0.03534	109.2901	BENTON - WICHITA 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	109.1189	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05242	109.0989	BENTON - WICHITA 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05276	109.0728	G08-13T 345.00 - SUMNERCO 345.00 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	108.8349	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	108.8122	GEN509403 1-PIRKEY GENERATION
FNSL	01NR	0	12G	G11_051	TO->FROM	DOVER SW - OKEENE 138KV CKT 1	130	0.03592	108.7633	DBL-TGA-MATT
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	108.7586	GEN509416 1-TURK GENERATION
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0516	108.7129	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05276	108.4237	G08-13T 345.00 - SUMNERCO 345.00 345KV CKT 1
FDNS	01NR	0	12G	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.06345	108.3562	DBL-THIS-WWR
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	108.2015	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05518	108.1042	THISTLE 7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05518	108.1042	THISTLE 7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	108.1017	GEN515225 1-MUSKOGEE 5G
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	108.0819	GEN515226 1-MUSKOGEE 6G
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	108.0373	GEN515223 1-MUSKOGEE 4G
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0516	108.027	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.9463	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05134	107.8575	G11-17T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.8386	GEN520947 1-HUGO1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.7761	GEN509406 1-WELSH #3
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.7758	GEN509405 1-WELSH #2
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.7757	GEN509404 1-WELSH #1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05443	107.5972	DBL-HTCH-GEN
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05443	107.5972	DBL-HTCH-GEN
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.5818	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.5498	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR	0	12SP	G11_051	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.1162	107.4898	DBL-TGA-MATT
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.4763	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.4084	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.3946	GEN511839 1-NORTHEASTERN STATION #2
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.301	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05379	107.2857	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05276	107.1831	SUMNERCO 345.00 - WICHITA 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.1625	GEN337041 1-GERALD ANDRUS
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.1597	GEN509394 1-FLINT CREEK
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.0904	GEN511840 1-NORTHEASTERN STATION #3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING		CONTINGENCY
							(MVA)	TDF	(% MVA)		
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05238	107.0879	DEWEY - TALOGA 138KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.0346	GEN501813 1-RODEMACHER UNIT 3	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	107.0117	GEN511841 1-NORTHEASTERN STATION #4	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.9673	GEN512688 2-GRDA1 GSU2 22	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.9596	GEN511843 1-RIVERSIDE STATION #2	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.7904	GEN336831 1-BAXTER WILSON SES	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.7312	GEN526333 1-JONES GEN #3 21 KV	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.73	GEN526334 1-JONES_4 116.500	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.7214	GEN515040 1-SEMINOLE 1G	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05109	106.7135	WRTOD400	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04852	106.7076	GOLTRY - HELENA TAP 69KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.6933	GEN562049 1-G11_012_3 0.6900	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.6902	GEN526332 1-JONES GEN #2 21 KV	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.6866	GEN526331 1-JONES GEN #1 22 KV	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.6743	GEN335206 1-NELSON UNIT 6	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04964	106.6574	BRANTLEY - DURHAM 138KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04708	106.6519	DOVER SW - HENESSEY 138KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.6463	GEN334440 1-SABINE UNIT 4	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.6421	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.6187	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.6181	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0512	106.6086	RENO COUNTY - WICHITA 345KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.5986	GEN512689 1-GRDA1 GSU1 22	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0523	106.5914	FARGO JCT - WOODWARD 69KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05005	106.5883	DBL-THIS-CLR	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.5749	GEN501812 1-RODEMACHER UNIT 2	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.5747	GEN560323 1-G10-40 0.6900	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.5545	GEN337692 1-LAKE CATHERINE UNIT #4	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04979	106.5383	OGE3TERM3	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.5159	GEN560386 1-G10-029-1 0.6900	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.5159	GEN560387 1-G10-029-2 0.6900	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.5159	GEN560388 1-G10-029-3 0.6900	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.5081	GEN562100 1-G11_054_3 0.6900	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.4921	GEN527903 1-HOBBS PLANT #3 (ST)	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.4739	GEN335614 1-WILLOW GLENN UNIT#4	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.4237	GEN560714 1-G10_061_3 0.6900	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05283	106.4171	MATTHEWSON 345.00 - NORTHWEST 345KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.3784	GEN335204 1-NELSON UNIT 4	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05237	106.3483	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.3329	GEN523971 1-HARRINGTON GEN #1 24 KV	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.3304	GEN523972 1-HARRINGTON GEN #2 24 KV	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.3181	GEN523973 1-HARRINGTON GEN #3 24 KV	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.3166	GEN336191 1-LITTLE GYPSY UNIT#3	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04909	106.2807	OKEENE - WATONGA SW 69KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.2787	GEN334441 1-SABINE UNIT 5	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.2761	GEN336464 1-MICHOUD UNIT #3	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.2308	GEN562065 1-G11_044_3 0.6900	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	106.2209	GEN562078 1-G11_051_3 0.6900	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05063	106.2112	BEAVER CO 345.00 - G11-021T 345.00 345KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.1917	GEN338388 1-1PLUMPT 23.000	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05132	106.1174	AXTELL - POST ROCK 345KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.1014	GEN515042 1-SEMINOLE 3G	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05183	106.0732	BENTON - ROSE HILL 345KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.068	GEN515790 1-FPLWND2	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	106.0344	GEN336801 1-BAXTER WILSON UNIT #1	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04967	106.0221	ALVA - KNOBHILL 69KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	105.967	GEN334433 1-SABINE UNIT 3	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	105.9658	GEN515041 1-SEMINOLE 2G	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05157	105.9148	MINGO - SETAB 345KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05117	105.9115	G11_012T 230.00 - MOORE COUNTY INTERCHANGE 230KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	105.8704	GEN514859 1-MUSTANG 4G	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04852	105.8176	HELENA TAP - SALINE 69KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05083	105.8101	FAIRVIEW - OKEENE 69KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0513	105.7968	SPP-MKEC-08	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	105.7864	GEN562035 1-G11_016_3 0.6900	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05055	105.7825	JENSEN ROAD - JENSEN TAP 138KV CKT 1	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	105.7735	GEN520922 1-SLEEPING BEAR	
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	105.7599	GEN562010 1-G11_024_3 0.6900	
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05045	105.7593	OGE3TERM10	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING	CONTINGENCY
							(MVA)	TDF		
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05244	105.7509	GRAY CO 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	105.6842	GEN515000 1-MCCLAIN UNIT 3
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	105.6605	GEN560636 1-ASGI-10-06 0.6900
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05144	105.6573	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	105.6533	GEN560356 1-G10-53 0.6900
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04864	105.6417	CLINTON AIR FORCE BASE TAP - HOBART JUNCTION 138KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	105.6303	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	105.6178	GEN514999 1-MCCLAIN UNIT 2
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	105.5906	GEN514998 1-MCCLAIN UNIT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	105.5816	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05149	105.5594	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05149	105.5594	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04888	105.5468	WOODWARD - WOODWARD EHV 138KV CKT 2
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05117	105.5238	MULGREN7 345.00 - RENO COUNTY 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05117	105.5238	MULGREN7 345.00 - RENO COUNTY 345KV CKT 2
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	105.5031	GEN560687 1-G11-007 0.5750
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05734	105.4783	WOODWARD - WOODWARD 69KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	105.456	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR	0	12WP	G11_051	TO->FROM	GLASS MOUNTAIN - MOORELAND 138KV CKT 1	152	0.05171	105.3513	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04864	105.3235	CLINTON AIR FORCE BASE TAP - ELK CITY 138KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04852	105.3126	KNOBHILL - SALINE 69KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05044	105.1193	FT SUPPLY - IODINE 138KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	105.0839	GEN560329 1-G10-45 0.6900
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	104.9063	GEN562032 1-G11_017_3 0.6900
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	104.7941	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	104.721	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR	0	12SP	G11_051	FROM->TO	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1	493	0.04929	104.5497	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04842	104.3354	CLINTON JUNCTION - ELK CITY 138KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	104.2661	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06506	104.2187	DBL-THIS-WWR
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	104.1308	GEN562014 1-G11_023_3 0.6900
FDNS	00NR	0	17SP	G11_051	FROM->TO	FPL SWITCH - MOORELAND 138KV CKT 1	287	0.11764	104.0959	DBL-TGA-MATT
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05044	103.521	IODINE - MOORELAND 138KV CKT 1
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06241	103.3682	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.06241	103.3682	MATTHEWSON 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	103.2637	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05364	103.22	SPP-SWPS-03
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05359	103.0013	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05359	102.9986	ELK CITY 230KV - SWEETWATER 230KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	102.9926	GEN562042 1-G11_014_3 0.6900
FDNS	01NR	0	12G	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.111473	102.8738	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	FROM->TO	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1	493	0.04929	102.5456	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G11_051	FROM->TO	EVANS ENERGY CENTER NORTH - MAIZE 138KV CKT 1	382	0.036	102.4385	BENTON - WICHITA 345KV CKT 1
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05359	102.4342	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
FNLS	01NR	0	12G	G11_051	TO->FROM	ROMAN NOSE - SOUTHARD 138KV CKT 1	153	0.05097	102.3417	DBL-TGA-MATT
FDNS	00NR	0	17WP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	185	0.05359	101.8939	SPP-SWPS-02A
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04681	101.7958	ROMAN NOSE - SOUTHARD 138KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05111	101.5866	DBL-THIS-CLR
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05071	101.5404	DURHAM - SWEETWATER 138KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	101.5352	GEN562017 1-G11_022_3 0.6900
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05071	101.5347	BRANTLEY - MORWOOD 138KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05071	101.5198	MOREWOOD SW - MORWOOD 138KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.4548	GEN539670 4-JUDSON LARGE GENERATOR
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.3727	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05057	101.3655	ARAPAHO - INDUSTRIAL PARK 69KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05057	101.3602	ARAPAHO - HAMON BUTLER 69KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05084	101.3584	OGE3TERM3
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05057	101.3578	HAMON BUTLER - PUTNAM 69KV CKT 1
FDNS	00NR	0	12WP	G11_051	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03152	101.3539	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.3504	GEN560386 1-G10-029-1 0.6900
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.3504	GEN560387 1-G10-029-2 0.6900
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.3504	GEN560388 1-G10-029-3 0.6900
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.3197	GEN527903 1-HOBBS PLANT #3 (ST)
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.3179	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.3167	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.2849	GEN560714 1-G10_061_3 0.6900
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05071	101.2246	BRANTLEY - DURHAM 138KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05072	101.2201	ALVA - CHEROKEE SW 69KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05057	101.2174	PUTNAM - TALOGA 69KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.0517	101.1886	BEAVER CO 345.00 - G11-021T 345.00 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.1103	GEN562065 1-G11_044_3 0.6900
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.0693	GEN526331 1-JONES GEN #1 22 KV
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.0683	GEN526332 1-JONES GEN #2 21 KV
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	101.0625	GEN562078 1-G11_051_3 0.6900
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	101.0589	GEN562074 1-G11_049_3 0.6900
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05019	100.927	OKEENE - WATONGA SW 69KV CKT 1
FDNS	00NR	0	12WP	G11_051	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.14337	100.8875	LAWTON EASTSIDE - SUNNYSIDE 345KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04681	100.8748	EL RENO - ROMAN NOSE 138KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04957	100.8169	HELENA TAP - SALINE 69KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	100.801	GEN562010 1-G11_024_3 0.6900
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	100.657	GEN523971 1-HARRINGTON GEN #1 24 KV
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	100.6522	GEN523972 1-HARRINGTON GEN #2 24 KV
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	100.6438	GEN562035 1-G11_016_3 0.6900
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	100.6348	GEN523973 1-HARRINGTON GEN #3 24 KV
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04964	100.6259	DOVER - TWIN LAKES 138KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05098	100.5092	GEN560356 1-G10-53 0.6900
FDNS	00NR	0	12SP	G11_051	TO->FROM	BENTON - WICHITA 345KV CKT 1	956	0.09551	100.4946	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05258	100.4897	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05258	100.4897	BEAVER CO 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04964	100.4552	DOVER - DOVER SW 138KV CKT 1
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04983	100.3952	WOODWARD - WOODWARD EHV 138KV CKT 2
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04957	100.2993	KNOBHILL - SALINE 69KV CKT 1
FDNS	00NR	0	12SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.04992	100.2941	GEN562020 1-G11_021_3 0.6900
FDNS	00NR	0	17SP	G11_051	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	153	0.05071	100	ALVA - KNOBHILL 69KV CKT 1
FNSL-Blown up	01ALL	0	12G	G11_051		Non Converged Contingency	0	0.46506	-	DBL-TGA-MATT
FNSL-Blown up	03ALL	0	12G	G11_051		Non Converged Contingency	0	0.14403	-	DBL-WICH-THI
FNSL-Blown up	03ALL	0	12G	G11_051		Non Converged Contingency	0	0.03883	-	DBL-SPRVL-MU
FNSL-Blown up	03ALL	0	12G	G11_051		Non Converged Contingency	0	0.03883	-	DBL-MUL-RENO
FDNS	00NR	0	12SP	G11_054	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.05078	114.1333	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	12SP	G11_054	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.05078	111.9439	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	12SP	G11_054	FROM->TO	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1	493	0.04919	104.5497	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	12SP	G11_054	FROM->TO	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1	493	0.04919	102.5456	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	12WP	G11_054	FROM->TO	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1	493	0.03215	101.3539	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR	0	12WP	G11_054	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.22179	100.8875	LAWTON EASTSIDE - SUNNYSIDE 345KV CKT 1
FDNS	01ALL	0	12G	G11_054	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	0.19032	100.1383	LAWTON EASTSIDE - SUNNYSIDE 345KV CKT 1
FDNS	00NR	3	17SP	G11_055	TO->FROM	HYDROCARBON TAP - SUB 974 69KV CKT 1	60	0.179	102.8498	STEGALL - STEGALL TY 345KV CKT 1
FDNS	00NR	3	17SP	G11_055	TO->FROM	HYDROCARBON TAP - SUB 974 69KV CKT 1	60	0.179	101.811	TRF-STEGALL
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.10458	317.8862	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.1344	252.3106	MOORE (MOORE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0623	233.9689	NW68TH & HOLDREGE (T141) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06661	226.95	103RD & ROKEBY - WAGENER 345KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06906	222.2207	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06471	219.2012	WAGENER (T851) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06494	218.0486	WAGENER (T852) 345/115/13.8KV TRANSFORMER CKT 2
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0668	216.4466	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06564	215.396	84TH & LEIGHTON - WAGENER 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07301	214.8102	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0685	214.7859	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	214.4387	GEN645001 1-FORT CALHOUN 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07073	213.1594	CRETE - SHELDON 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.085	213.0047	ENRONTAP
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.085	213.0044	HYDROCARBON TAP - SUB 974 69KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.085	212.9988	HYDROCARBON TAP - SUB 970 69KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	212.5661	GEN645012 2-NEBRASKA CITY 2
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06639	212.4007	LN-1176
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06639	212.3838	BEATRICE - STEINAUER 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06744	212.2886	KELLY - MADISONCO 230.00 230KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.085	212.1487	NEB CITY U YR SUB - SUB 970 69KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	205.3622	BASE CASE
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	198.4915	LN-STOCKVILL
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	198.4879	LN-1094
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	198.3405	NEB02WAPAB2
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06768	198.0236	CLATONIA - SHELDON 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	197.7617	LN-WAP4
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06768	197.4984	LN-CLATONIA
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06768	197.4935	BEATRICE POWER STATION - CLATONIA 115KV CKT 1
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	196.0249	GEN562029 1-G11_018_3 0.6900
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06968	195.4537	BEATRICE - HARBINE 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING		CONTINGENCY
							(MVA)	TDF	(% MVA)		
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06173	193.4667	ROKEBY - SW7TH & PLEASANT HILL 115KV CKT 1	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0678	193.401	BEATRICE POWER STATION - SHELDON 115KV CKT 1	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	190.9669	GEN560711 1-G10_044_3 0.6900	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	187.8933	GEN640019 1-SHELDON STATION UNIT 1	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	187.8828	GEN640022 1-BEATRICE POWER STATION UNIT 1	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	187.8824	GEN640023 2-BEATRICE POWER STATION UNIT 2	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	185.6889	GEN640024 3-BEATRICE POWER STATION UNIT 3	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	179.2239	GEN640020 2-SHELDON STATION UNIT 2	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0565	165.1337	20TH & PIONEERS - SW7TH & PLEASANT HILL 115KV CKT 1	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	122.3195	S968LINBUS	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	122.3062	SUB 968 - SUB 969 69KV CKT 1	
FDNS	09NR_BPSON	0	12G	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	121.2947	SUB 969 - SUB 974 69KV CKT 1	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	112.2935	SUB 967 - SUB 968 69KV CKT 1	
FDNS	09NR_BPSON	0	12G	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	111.8378	SUB 969 - SUB 974 69KV CKT 1	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.3193	SUB 967 - WEST BROCK 69KV CKT 1	
FDNS	09NR_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.0623	S1263T1 AUTO	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.10466	358.8083	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.10501	343.7032	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06254	270.6732	NW68TH & HOLDREGE (T141) 345/115/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06737	264.7809	103RD & ROKEBY - WAGENER 345KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06933	261.4297	MOORE - NW68TH & HOLDREGE 345KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06281	260.8364	NW68TH & HOLDREGE (T141) 345/115/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	251.3676	GEN650092 2-ROKEBY	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06767	250.8695	103RD & ROKEBY - WAGENER 345KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06485	250.476	WAGENER (T851) 345/115/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06507	248.8354	WAGENER (T852) 345/115/13.8KV TRANSFORMER CKT 2	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	248.7422	LES0001	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06965	248.295	MOORE - NW68TH & HOLDREGE 345KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06572	245.4263	84TH & LEIGHTON - WAGENER 115KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0708	244.5937	CRETE - SHELDON 115KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.13368	244.1731	MOORE (MOORE T1) 345/115/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	243.3542	GEN645001 1-FORT CALHOUN 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0728	243.1962	103RD & ROKEBY - MOORE 345KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06854	243.1831	FAIRBURY - HARBINE 115KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08519	241.2825	ENRONTAP	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08519	241.2816	HYDROCARBON TAP - SUB 974 69KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08519	241.2789	HYDROCARBON TAP - SUB 970 69KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0651	240.1955	WAGENER (T851) 345/115/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08519	239.8364	NEB CITY U SYR SUB - SUB 970 69KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06765	239.4934	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06812	239.4259	KNOB HILL - STEELE CITY 115KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	239.1546	GEN645012 2-NEBRASKA CITY 2	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06765	238.9428	ATCHSNT3 345.00 - COOPER 345KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08519	238.7791	NEB CITY U SYR SUB - SUB 971 69KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	238.6669	GEN645011 1-NEBRASKA CITY 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06532	238.6027	WAGENER (T852) 345/115/13.8KV TRANSFORMER CKT 2	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06544	238.4459	1281LINBUS	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06544	238.3864	SUB 1281 - SUB 1287 161KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	238.349	LES0001	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	238.108	GEN650004 4-SALT VALLEY	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	237.9546	GEN650003 3-SALT VALLEY	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06767	237.7788	MCCOOL - YORK SOUTHWEST 115KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06596	235.9325	84TH & LEIGHTON - WAGENER 115KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0731	233.9349	103RD & ROKEBY - MOORE 345KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07101	233.3485	CRETE - SHELDON 115KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06878	232.6724	FAIRBURY - HARBINE 115KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	232.5119	GEN650092 2-ROKEBY	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.10459	232.0361	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06828	231.5181	KNOB HILL - STEELE CITY 115KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	230.8689	BASE CASE	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08547	230.8391	ENRONTAP	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08547	230.8384	HYDROCARBON TAP - SUB 974 69KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08547	230.8332	HYDROCARBON TAP - SUB 970 69KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	230.0852	GEN645001 1-FORT CALHOUN 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08547	229.5294	NEB CITY U SYR SUB - SUB 970 69KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06575	229.0027	1281LINBUS	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06575	228.9985	SUB 1281 - SUB 1287 161KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06674	228.9716	BEATRICE - STEINAUER 115KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06674	228.588	HUMBOLDT - STEINAUER 115KV CKT 1	

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB		TC%LOADING		CONTINGENCY
							(MVA)	TDF	(% MVA)		
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.08547	228.5003	NEB CITY U SYR SUB - SUB 971 69KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06787	228.4961	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06674	228.4644	LN-1176	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	223.7319	LN-MALONEY	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06777	223.6572	LN-CLATONIA	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	223.6472	LN-CALLAWAY	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	223.6425	LN-1142	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06777	223.6355	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0698	223.562	BEATRICE - HARBINE 115KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	223.2399	LN-TSGT6	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06688	221.7829	LN-1156	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06753	221.722	NEB02WAPAB2	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06618	221.4136	27TH & PINE LAKE - ROKEBY 115KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	221.2942	GEN562029 1-G11_018_3 0.6900	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06753	221.2586	LN-PROSSER	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	221.1862	BASE CASE	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06753	220.5734	LN-1163	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	220.3471	LN-STOCKVILL	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06757	219.9249	LN-S-CREEK2	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0679	219.5324	BEATRICE POWER STATION - SHELDON 115KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	216.0342	GEN560711 1-G10_044_3 0.6900	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	215.4279	LN-WAPA4	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06753	214.9617	LN-WAPA2	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	214.4599	LN-MALONEY	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	214.2187	LN-1147	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0671	214.1735	LN-1156	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	214.1641	LN-TSGT6	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06798	214.0839	LN-CLATONIA	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06798	214.034	BEATRICE POWER STATION - CLATONIA 115KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06203	213.9307	ROKEBY - SW7TH & PLEASANT HILL 115KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	213.6268	NEB02WAPAB2	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	213.4994	LN-CALLAWAY	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0664	213.1827	27TH & PINE LAKE - ROKEBY 115KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	213.0156	GEN640022 1-BEATRICE POWER STATION UNIT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	213.0152	GEN640023 2-BEATRICE POWER STATION UNIT 2	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	212.7797	LN-1163	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06995	212.6658	BEATRICE - HARBINE 115KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	211.9376	LN-1142	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	211.7371	GEN562029 1-G11_018_3 0.6900	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06781	211.7163	LN-S-CREEK	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	211.4426	LN-STOCKVILL	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	210.7753	GEN640024 3-BEATRICE POWER STATION UNIT 3	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0681	209.6316	BEATRICE POWER STATION - SHELDON 115KV CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	208.9193	GEN640019 1-SHELDON STATION UNIT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	207.0201	LN-WAPA4	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	206.6356	GEN560711 1-G10_044_3 0.6900	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	205.9211	LN-WAPA2	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	203.7066	GEN640022 1-BEATRICE POWER STATION UNIT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	203.7061	GEN640023 2-BEATRICE POWER STATION UNIT 2	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	203.4014	GEN640019 1-SHELDON STATION UNIT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06752	203.2477	GEN640020 2-SHELDON STATION UNIT 2	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	201.5154	GEN640024 3-BEATRICE POWER STATION UNIT 3	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06775	198.6958	GEN640020 2-SHELDON STATION UNIT 2	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0623	183.2094	NW68TH & HOLDREGE (T141) 345/115/13.8KV TRANSFORMER CKT 1	
FDNS	00NR	0	17SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.05651	176.6898	20TH & PIONEERS - SW7TH & PLEASANT HILL 115KV CKT 1	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06662	172.3426	103RD & ROKEBY - WAGENER 345KV CKT 1	
FDNS	00NR	0	12SP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0567	171.9831	20TH & PIONEERS - SW7TH & PLEASANT HILL 115KV CKT 1	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06906	166.5271	MOORE - NW68TH & HOLDREGE 345KV CKT 1	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06471	165.8178	WAGENER (T851) 345/115/13.8KV TRANSFORMER CKT 1	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06494	164.4835	WAGENER (T852) 345/115/13.8KV TRANSFORMER CKT 2	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06564	161.351	84TH & LEIGHTON - WAGENER 115KV CKT 1	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	158.9123	GEN645001 1-FORT CALHOUN 1	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.07301	157.5068	103RD & ROKEBY - MOORE 345KV CKT 1	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	157.0078	GEN645012 2-NEBRASKA CITY 2	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.085	156.7377	ENRONTAP	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.085	156.7375	HYDROCARBON TAP - SUB 974 69KV CKT 1	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.085	156.7327	HYDROCARBON TAP - SUB 970 69KV CKT 1	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	149.8356	BASE CASE	
FDNS	09NR	0	12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	143.0229	LN-STOCKVILL	



SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS		09NR	0 12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	143.0079	LN-1094
FDNS		09NR	0 12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06173	142.8282	ROKEBY - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS		09NR	0 12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	142.7995	NEB02WAPAB2
FDNS		09NR	0 12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	142.2807	LN-WAPA4
FDNS		00NR	0 17WP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.1046	140.9555	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS		00NR	0 12WP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.1046	140.749	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS		09NR	0 12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	140.4233	GEN562029 1-G11_018_3 0.6900
FDNS		09NR	0 12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	135.2269	GEN560711 1-G10_044_3 0.6900
FDNS		09NR	0 12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.1344	133.3504	MOORE (MOORE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS		09NR	0 12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	132.2917	GEN640019 1-SHELDON STATION UNIT 1
FDNS		09NR	0 12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06969	130.0333	BEATRICE - HARBINE 115KV CKT 1
FDNS		09NR	0 12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.06746	125.0043	GEN640020 2-SHELDON STATION UNIT 2
FDNS		09NR	0 12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	122.4452	S968LINBUS
FDNS		09NR	0 12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	122.4312	SUB 968 - SUB 969 69KV CKT 1
FDNS		00NR	0 17WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.39758	121.6394	FIRTH - SHELDON 115KV CKT 1
FDNS		09NR	0 12G	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	121.323	SUB 969 - SUB 974 69KV CKT 1
FDNS		00NR	0 17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	121.3114	S968LINBUS
FDNS		00NR	0 17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	121.2871	SUB 968 - SUB 969 69KV CKT 1
FDNS		00NR	0 12SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	121.2762	S968LINBUS
FDNS		00NR	0 12SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	121.2525	SUB 968 - SUB 969 69KV CKT 1
FDNS		00NR	0 17WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	119.94	S968LINBUS
FDNS		00NR	0 17WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	119.9187	SUB 968 - SUB 969 69KV CKT 1
FDNS		00NR	0 12WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	119.8171	S968LINBUS
FDNS		00NR	0 12WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	119.7973	SUB 968 - SUB 969 69KV CKT 1
FDNS		00NR	0 12SP	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	119.6777	SUB 969 - SUB 974 69KV CKT 1
FDNS		00NR	0 17SP	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	119.501	SUB 969 - SUB 974 69KV CKT 1
FDNS		09NR	0 12G	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	43	0.0565	118.578	20TH & PIONEERS - SW7TH & PLEASANT HILL 115KV CKT 1
FDNS		00NR	0 12WP	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	118.4017	SUB 969 - SUB 974 69KV CKT 1
FDNS		00NR	0 17WP	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	118.301	SUB 969 - SUB 974 69KV CKT 1
FDNS		00NR	0 17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.39782	116.5346	FIRTH - SHELDON 115KV CKT 1
FDNS		00NR	0 17SP	G11_055	TO->FROM	NEB CITY U SYR SUB - SUB 970 69KV CKT 1	47	0.17928	115.7053	SUB 963 - SUB 977 69KV CKT 1
FDNS		00NR	0 12WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.39746	115.0378	FIRTH - SHELDON 115KV CKT 1
FDNS		00NR	0 17SP	G11_055	TO->FROM	NEB CITY U SYR SUB - SUB 970 69KV CKT 1	47	0.17928	114.4122	NEB CITY U SUB 903 - SUB 977 69KV CKT 1
FDNS		09NR	0 12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	112.4553	SUB 967 - SUB 968 69KV CKT 1
FDNS		09NR	0 12G	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	111.8863	SUB 969 - SUB 974 69KV CKT 1
FDNS		00NR	0 17WP	G11_055	TO->FROM	NEB CITY U SYR SUB - SUB 970 69KV CKT 1	47	0.17814	109.8735	SUB 963 - SUB 977 69KV CKT 1
FDNS		00NR	0 17SP	G11_055	TO->FROM	HYDROCARBON TAP - SUB 974 69KV CKT 1	57	0.17928	108.6515	SUB 963 - SUB 977 69KV CKT 1
FDNS		00NR	0 17WP	G11_055	TO->FROM	NEB CITY U SYR SUB - SUB 970 69KV CKT 1	47	0.17814	108.514	NEB CITY U SUB 903 - SUB 977 69KV CKT 1
FDNS		09NR	0 12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.4901	SUB 967 - WEST BROCK 69KV CKT 1
FDNS		00NR	0 12SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.4611	SUB 967 - SUB 968 69KV CKT 1
FDNS		00NR	0 17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.3118	SUB 967 - SUB 968 69KV CKT 1
FDNS		09NR	0 12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.2366	S1263T1 AUTO
FDNS		00NR	0 12SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.39803	107.9121	FIRTH - SHELDON 115KV CKT 1
FDNS		00NR	0 12WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	107.7026	SUB 967 - SUB 968 69KV CKT 1
FDNS		00NR	0 17SP	G11_055	TO->FROM	HYDROCARBON TAP - SUB 974 69KV CKT 1	57	0.17928	107.5583	NEB CITY U SUB 903 - SUB 977 69KV CKT 1
FDNS		00NR	0 17WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	107.4654	SUB 967 - SUB 968 69KV CKT 1
FDNS		00NR	0 12SP	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	107.3411	SUB 969 - SUB 974 69KV CKT 1
FDNS		00NR	0 12WP	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	106.9115	SUB 969 - SUB 974 69KV CKT 1
FDNS		00NR	0 17SP	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	106.7649	SUB 969 - SUB 974 69KV CKT 1
FDNS		00NR	0 17WP	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	106.349	SUB 969 - SUB 974 69KV CKT 1
FDNS		00NR	0 12SP	G11_055	TO->FROM	NEB CITY U SYR SUB - SUB 970 69KV CKT 1	47	0.17993	106.0932	SUB 963 - SUB 977 69KV CKT 1
FDNS		00NR	0 17WP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.06923	105.2311	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS		00NR	0 12WP	G11_055	TO->FROM	NEB CITY U SYR SUB - SUB 970 69KV CKT 1	47	0.1776	105.1397	SUB 963 - SUB 977 69KV CKT 1
FDNS		00NR	0 12WP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.06913	104.8852	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS		00NR	0 17WP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.06245	104.7178	NW68TH & HOLDREGE (T141) 345/115/13.8KV TRANSFORMER CKT 1
FDNS		00NR	0 17WP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.06712	104.7076	103RD & ROKEBY - WAGENER 345KV CKT 1
FDNS		00NR	0 12SP	G11_055	TO->FROM	NEB CITY U SYR SUB - SUB 970 69KV CKT 1	47	0.17993	104.6345	NEB CITY U SUB 903 - SUB 977 69KV CKT 1
FDNS		00NR	0 12WP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.06672	104.2348	103RD & ROKEBY - WAGENER 345KV CKT 1
FDNS		00NR	0 12WP	G11_055	FROM->TO	SHELDON - SW7TH & PLEASANT HILL 115KV CKT 2	105	0.0624	103.8183	NW68TH & HOLDREGE (T141) 345/115/13.8KV TRANSFORMER CKT 1
FDNS		00NR	0 12WP	G11_055	TO->FROM	NEB CITY U SYR SUB - SUB 970 69KV CKT 1	47	0.1776	103.6521	NEB CITY U SUB 903 - SUB 977 69KV CKT 1
FDNS		00NR	0 17WP	G11_055	TO->FROM	HYDROCARBON TAP - SUB 974 69KV CKT 1	57	0.17814	102.0227	SUB 963 - SUB 977 69KV CKT 1
FDNS		00NR	0 12SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	101.9981	SUB 967 - WEST BROCK 69KV CKT 1
FDNS		00NR	0 17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	101.8525	SUB 967 - WEST BROCK 69KV CKT 1
FDNS		00NR	0 12SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	101.647	S1263T1 AUTO
FDNS		00NR	0 17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	101.0801	S1263T1 AUTO
FDNS		00NR	0 17WP	G11_055	TO->FROM	HYDROCARBON TAP - SUB 974 69KV CKT 1	57	0.17814	100.876	NEB CITY U SUB 903 - SUB 977 69KV CKT 1
FDNS		00NR	0 17SP	G11_055	TO->FROM	NEB CITY U SYR SUB - SUB 970 69KV CKT 1	47	0.30729	100.7328	S1263T1 AUTO
FDNS		00NR	0 17SP	G11_055	TO->FROM	NEB CITY U SYR SUB - SUB 970 69KV CKT 1	47	0.18953	100.676	SUB 963 - WEST BROCK 69KV CKT 1
FDNS		9G11_055_BPSON	0 12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	122.3564	S968LINBUS

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	9G11_055_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	122.343	SUB 968 - SUB 969 69KV CKT 1
FDNS	09ALL_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	122.2327	S968LINBUS
FDNS	09ALL_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	122.2196	SUB 968 - SUB 969 69KV CKT 1
FDNS	9G11_055_BPSON	0	12G	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	121.3033	SUB 969 - SUB 974 69KV CKT 1
FDNS	09ALL_BPSON	0	12G	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	121.263	SUB 969 - SUB 974 69KV CKT 1
FDNS	9G11_055_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	112.3415	SUB 967 - SUB 968 69KV CKT 1
FDNS	09ALL_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	112.1804	SUB 967 - SUB 968 69KV CKT 1
FDNS	9G11_055_BPSON	0	12G	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	111.8526	SUB 969 - SUB 974 69KV CKT 1
FDNS	09ALL_BPSON	0	12G	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	111.7829	SUB 969 - SUB 974 69KV CKT 1
FDNS	9G11_055_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.3701	SUB 967 - WEST BROCK 69KV CKT 1
FDNS	09ALL_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.2511	S1263T1 AUTO
FDNS	09ALL_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.2	SUB 967 - WEST BROCK 69KV CKT 1
FDNS	9G11_055_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.1128	S1263T1 AUTO
FDNS	09_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	100.2503	SUB 968 - SUB 969 69KV CKT 1
FDNS	09_BPSON	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	100.2495	S968LINBUS
FNSL-Blown up	01ALL	0	12G	G11_055		Non Converged Contingency	0	0.04037	-	DBL-TGA-MATT
FNSL-Blown up	03ALL	0	12G	G11_055		Non Converged Contingency	0	0.04331	-	DBL-THIS-CLR
FDNS	09G11_055	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	122.4796	S968LINBUS
FDNS	09G11_055	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	122.4654	SUB 968 - SUB 969 69KV CKT 1
FDNS	09ALL	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	122.2234	S968LINBUS
FDNS	09ALL	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	122.2102	SUB 968 - SUB 969 69KV CKT 1
FDNS	09G11_055	0	12G	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	121.337	SUB 969 - SUB 974 69KV CKT 1
FDNS	09ALL	0	12G	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	121.2597	SUB 969 - SUB 974 69KV CKT 1
FDNS	09G11_055	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	112.4996	SUB 967 - SUB 968 69KV CKT 1
FDNS	09ALL	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	112.1682	SUB 967 - SUB 968 69KV CKT 1
FDNS	09G11_055	0	12G	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	111.9102	SUB 969 - SUB 974 69KV CKT 1
FDNS	09ALL	0	12G	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	111.777	SUB 969 - SUB 974 69KV CKT 1
FDNS	09G11_055	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.5369	SUB 967 - WEST BROCK 69KV CKT 1
FDNS	09G11_055	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.2859	S1263T1 AUTO
FDNS	09ALL	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.2376	S1263T1 AUTO
FDNS	09ALL	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.1871	SUB 967 - WEST BROCK 69KV CKT 1
FDNS	9	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	100.4136	SUB 968 - SUB 969 69KV CKT 1
FDNS	9	0	12G	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	100.4106	S968LINBUS
FDNS	00G11_055	0	12SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	101.8515	SUB 967 - WEST BROCK 69KV CKT 1
FDNS	00G11_055	0	17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	121.365	S968LINBUS
FDNS	00G11_055	0	17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	121.3428	SUB 968 - SUB 969 69KV CKT 1
FDNS	00G11_055	0	12SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	121.1855	S968LINBUS
FDNS	00G11_055	0	12SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	121.1648	SUB 968 - SUB 969 69KV CKT 1
FDNS	00G11_055	0	17WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	119.9137	S968LINBUS
FDNS	00G11_055	0	17WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	119.9038	SUB 968 - SUB 969 69KV CKT 1
FDNS	00G11_055	0	17WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.39564	119.7812	FIRTH - SHELDON 115KV CKT 1
FDNS	00G11_055	0	12SP	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	119.7772	SUB 969 - SUB 974 69KV CKT 1
FDNS	00G11_055	0	12WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	119.7648	S968LINBUS
FDNS	00G11_055	0	12WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	119.7455	SUB 968 - SUB 969 69KV CKT 1
FDNS	00G11_055	0	17SP	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	119.6589	SUB 969 - SUB 974 69KV CKT 1
FDNS	00G11_055	0	12WP	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	118.4861	SUB 969 - SUB 974 69KV CKT 1
FDNS	00G11_055	0	17WP	G11_055	TO->FROM	SUB 968 - SUB 969 69KV CKT 1	43	1	118.3819	SUB 969 - SUB 974 69KV CKT 1
FDNS	00G11_055	0	12WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.39554	113.301	FIRTH - SHELDON 115KV CKT 1
FDNS	00G11_055	0	17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.39565	112.6692	FIRTH - SHELDON 115KV CKT 1
FDNS	00G11_055	0	17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.3878	SUB 967 - SUB 968 69KV CKT 1
FDNS	00G11_055	0	12SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	108.3309	SUB 967 - SUB 968 69KV CKT 1
FDNS	00G11_055	0	12WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	107.6281	SUB 967 - SUB 968 69KV CKT 1
FDNS	00G11_055	0	12SP	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	107.5484	SUB 969 - SUB 974 69KV CKT 1
FDNS	00G11_055	0	17WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	107.4277	SUB 967 - SUB 968 69KV CKT 1
FDNS	00G11_055	0	17SP	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	107.1272	SUB 969 - SUB 974 69KV CKT 1
FDNS	00G11_055	0	12WP	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	107.0699	SUB 969 - SUB 974 69KV CKT 1
FDNS	00G11_055	0	17WP	G11_055	TO->FROM	SUB 967 - SUB 968 69KV CKT 1	43	1	106.5105	SUB 969 - SUB 974 69KV CKT 1
FDNS	00G11_055	0	12SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.39554	105.9121	FIRTH - SHELDON 115KV CKT 1
FDNS	00G11_055	0	17WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.60769	102.589	SUB 963 - SUB 977 69KV CKT 1
FDNS	00G11_055	0	17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	101.9329	SUB 967 - WEST BROCK 69KV CKT 1
FDNS	00G11_055	0	17WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.60769	101.6141	NEB CITY U SUB 903 - SUB 977 69KV CKT 1
FDNS	00G11_055	0	12SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	101.6006	S1263T1 AUTO
FDNS	00G11_055	0	17WP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.61903	101.3893	SUB 963 - WEST BROCK 69KV CKT 1
FDNS	00G11_055	0	17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	1	101.2361	S1263T1 AUTO
FDNS	00G11_055	0	17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.60767	101.1105	SUB 963 - SUB 977 69KV CKT 1
FDNS	00G11_055	0	17SP	G11_055	FROM->TO	SUB 969 - SUB 974 69KV CKT 1	43	0.60767	100.3939	NEB CITY U SUB 903 - SUB 977 69KV CKT 1
FNSL-Blown up	00G11_056	0	12SP	G11_056		Non Converged Contingency	480	0.03924	-	STEGALL - STEGALL TY 345KV CKT 1
FNSL-Blown up	00G11_056	0	12SP	G11_056		Non Converged Contingency	0	0.11771	-	TRF-STEGALL
FNSL-Blown up	00G11_056	0	12SP	G11_056		Non Converged Contingency	0	0.07847	-	NEB01WAPAB3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEB (MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FNSL-Blown up	0	0	12SP	G11_056		Non Converged Contingency	480	0.03924	-	STEGALL - STEGALL TY 345KV CKT 1
FNSL-Blown up	0	0	12SP	G11_056		Non Converged Contingency	0	0.11771	-	TRF-STEGALL
FNSL-Blown up	0	0	12SP	G11_056		Non Converged Contingency	0	0.07847	-	NEB01WAPAB3
FNSL-Blown up	00G11_056	2	12SP	G11_056		Non Converged Contingency	480	0.03901	-	STEGALL - STEGALL TY 345KV CKT 1
FNSL-Blown up	00G11_056	2	12SP	G11_056		Non Converged Contingency	0	0.11703	-	TRF-STEGALL
FNSL-Blown up	00G11_056	2	12SP	G11_056		Non Converged Contingency	0	0.07802	-	NEB01WAPAB3

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

**\*\*The results will be available by request\*\***

## **I: Group 1 Dynamic Stability Analysis Report**

Available upon request

## **J: Group 6 Dynamic Stability Analysis Report**

Available upon request