

Definitive Interconnection System Impact Re-Study for Generation Interconnection Requests

Southwest Power Pool
Engineering Department
Generation Interconnection

(DISIS-2009-001-2 Study)
January 2011



SPP RESTRICTED

Definitive Interconnection System Impact Study for Generation Interconnection Requests

Southwest Power Pool
Engineering Department
Tariff Studies – Generation Interconnection

(DISIS-2009-001-2 Study)

| Date | Rev. | Comment |
|-------------------------|-------------|----------------|
| January 17, 2011 | 0 | Restudy |
| | | |

Executive Summary

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 Impact Study. This restudy is being conducted to account for the withdrawal of higher queued projects and the inclusion of priority projects by the SPP Board of Directors. The customers will be referred to in this study as the DISIS-2009-001 Interconnection Customers. This Impact Study analyzes the interconnecting of multiple generation interconnection requests associated with new generation totaling 2,859 MW of new generation which would be located within the transmission systems of American Electric Power West (AEPW), Midwest Energy Inc. (MIDW), Missouri Public Service (MIPU), Mid-Kansas Electric Power LLC (MKEC), Nebraska Public Power District (NPPD), Oklahoma Gas and Electric (OKGE), Southwestern Public Service (SPS), Sunflower Electric Power Corporation (SUNC), Westar Energy (WERE). The various generation interconnection requests have differing proposed in-service dates¹. The generation interconnection requests included in this DISIS are listed in Appendix A by their queue number, amount, area, requested interconnection point, proposed interconnection point, and the requested in-service date.

Power flow analysis has indicated that for the powerflow cases studied, 2,859 MW of nameplate generation may be interconnected with transmission system reinforcements within the SPP transmission system. Previously performed dynamic stability analysis and additional powerflow analysis for power factor requirements has determined the need for reactive. Previously performed dynamic stability analysis has determined that the transmission system will remain stable with the assigned Network Upgrades and Interconnection Facilities to the DISIS.

The need for reactive compensation in accordance with Order No. 661-A for wind farm interconnection requests and those requirements were determined in the previous Impact Study DISIS-2009-001 and those results still apply.

The total estimated minimum cost for interconnecting the DISIS-2009-001 interconnection customers is \$146,000,000. These costs are shown in Appendix E and F. Interconnection Service to DISIS-2009-001 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.

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 (ER) Interconnection Request. 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.

These costs do not include the Interconnection Customer Interconnection Facilities as defined by the SPP Open Access Transmission Tariff (OATT). The required interconnection costs listed in Appendix

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

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.

Based on the SPP Tariff Attachment O, transmission facilities that are part of the SPP Transmission Expansion Plan (STEP) including Sponsored Economic Upgrades or the Balanced Portfolio that may be approved by the SPP Board of Directors will receive notifications to construct. These projects will then be considered construction pending projects and would not be assignable to the Impact Cluster Study Generation Interconnection Requests.

Table of Contents

| | |
|---|-------------------------------------|
| Introduction | 6 |
| Model Development | 6 |
| Identification of Network Constraints | 9 |
| Determination of Cost Allocated Network Upgrades | 9 |
| Interconnection Facilities | 10 |
| Powerflow | 10 |
| Stability Analysis | 13 |
| Regional Maps with Proposed Upgrades | Error! Bookmark not defined. |
| Conclusion | 13 |
| Appendix | 14 |
| A: Generation Interconnection Requests Considered for Impact Study..... | A-1 |
| B: Prior Queued Interconnection Requests | B-1 |
| C: Study Groupings..... | C-1 |
| D: Proposed Point of Interconnection One line Diagrams | D-1 |
| E: Cost Allocation per Interconnection Request | E-1 |
| F: Cost Allocation per Proposed Study Network Upgrade | F-1 |
| G: ACCC Analysis (No Upgrades)..... | Error! Bookmark not defined. |
| H: ACCC Analysis (No Prior Queued Upgrades) | H-1 |

Introduction

Pursuant to the Southwest Power Pool (SPP) Open Access Transmission Tariff (OATT), SPP has conducted this Definitive Interconnection System Impact Study (DISIS) for certain generation interconnection requests in the SPP Generation Interconnection Queue. These interconnection requests have been clustered together for the following Impact Study. The customers will be referred to in this study as the DISIS-2009-001 Interconnection Customers. This Impact Study analyzes the interconnecting of multiple generation interconnection requests associated with new generation totaling 2,859 MW of new generation which would be located within the transmission systems of American Electric Power West (AEPW), Midwest Energy Inc. (MIDW), Missouri Public Service (MIPU), Mid-Kansas Electric Power LLC (MKEC), Nebraska Public Power District (NPPD), Oklahoma Gas and Electric (OKGE), Southwestern Public Service (SPS), Sunflower Electric Power Corporation (SUNC), Westar Energy (WERE). The various generation interconnection requests have differing proposed in-service dates². The generation interconnection requests included in this Impact Cluster Study are listed in Appendix A by their queue number, amount, area, requested interconnection point, proposed interconnection point, and the requested in-service date.

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.

Model Development

Interconnection Requests Included in the DISIS-2009-001-2 Study

SPP has included all interconnection requests that submitted a Definitive Interconnection System Impact Study request no later than September 30, 2009 and were subsequently accepted by Southwest Power Pool under the terms of the Large Generation Interconnection Procedures (LGIP) that became effective June 2, 2009.

In addition, SPP included GEN-2009-017 which is an interconnection into the Caprock system as an affected system. GEN-2009-017 was analyzed for its impacts upon the SPP Transmission System. The report for GEN-2009-017 will be posted separately.

The interconnection requests that are included in this study are listed in Appendix A.

² The generation interconnection requests in-service dates will need to be deferred based on the required lead time for the Network Upgrades necessary. The Interconnection Customer's that proceed to the Facility Study will be provided a new in-service date based on the completion of the Facility Study.

Previous Queued Projects

The previous queued projects included in this study are listed in Appendix B. In addition to the Base Case Upgrades, the previous queued projects 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.

Development of Base Cases

Powerflow - The 2010 series Transmission Service Request (TSR) Models 2011 spring and 2011 and 2016 summer and winter peak scenario 0 peak cases were used for this study. Each of the control areas' resources were then re-dispatched using current dispatch orders.

Stability – The stability analysis was not performed for this study.

Base Case Upgrades

The following facilities are part of the SPP Transmission Expansion Plan or the Balanced Portfolio. These facilities have been approved 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-2009-001 Customers have no potential cost for the below listed projects. However, the DISIS-2009-001 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 345/230/115kV upgrades to be built by SPS for 2010/2011 in-service³.
- Hitchland – Moore County 230kV line
- Hitchland – Ochiltree 230kV line
- Hitchland – Texas County 115kV line
- Hitchland – Hansford County 115kV line
- Hitchland – Sherman County Tap 115kV line
- Valliant – Hugo – Sunnyside 345kV – assigned to Aggregate Study AG3-2006 Customers for 2011 in-service
- Wichita – Reno County – Summit 345kV to be built by WERE for 2011 in-service⁴.
- Rose Hill – Sooner 345kV to be built by WERE/OKGE for 2010 in-service.
- Tuco – Woodward 345kV line approved by the SPP Board of Directors as part of the Balanced Portfolio and issued an NTC in June, 2009
- Spearville – Post Rock - Axtell 345kV line approved by the SPP Board of Directors as part of the Balanced Portfolio and issued an NTC in June, 2009

³ Approved 230kV upgrades are based on SPP 2007 STEP. Upgrades may need to be re-evaluated in the system impact study.

⁴ Approved based on an order of the Kansas Corporation Commission issued in Docket no. 07-WSEE-715-MIS

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-2009-001-1 study and are assumed to be in service. The DISIS-2009-001-1 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 LGIA or withdraw from the interconnection queue. The DISIS-2009-001-1 Customer Generation Facilities in service dates may need to be delayed until the completion of the following upgrades.

- Finney – Holcomb 345kV ckt #2 line assigned to GEN-2006-044 interconnection customer. This customer is currently in suspension⁵.
- Central Plains – Setab 115kV transmission line assigned to GEN-2007-013 interconnection customer.
- Grassland 230/115kV autotransformer #2 assigned to GEN-2008-016
- Spearville 345/230kV autotransformer #2 assigned to GEN-2006-006.
- Priority Projects⁶
 - Hitchland-Woodward double circuit 345kV transmission line
 - Comanche-Woodward double circuit 345kV transmission line
 - Comanche-Medicine Lodge double circuit 345kV transmission line
 - Medicine Lodge – Wichita double circuit 345kV transmission line
 - Medicine Lodge 345/138kV autotransformer

Potential Upgrades Not in the Base Case

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

Regional Groupings

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

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

Powerflow - 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 twelve 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. 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. Each interconnection request was also modeled separately at 100% nameplate for certain analyses.

⁵ Based on Facility Study Posting November 2008

⁶ Notice to Construct issued June, 2010

Peaking units were not dispatched in the 2011 spring model. To study peaking units' impacts, the 2016 summer and winter peak model was chosen and peaking units were modeled at 100% of the nameplate rating and wind generating facilities were modeled at 10% of the nameplate rating.

Stability - For each group, all interconnection requests (wind and non-wind) were modeled at 100% nameplate of maximum generation in both winter and summer seasonal models. The wind interconnection requests in the other areas were modeled at 20% nameplate of maximum generation while fossil units were modeled at 100% in the other areas. This process created twelve different scenarios with each group being studied at 100% nameplate rating. These projects were dispatched as Energy Resources with equal distribution across the SPP footprint.

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.

Determination of Cost Allocated Network Upgrades

Cost Allocated Network Upgrades of wind generation interconnection requests were determined using the 2010 spring model. Cost Allocated Network Upgrades of peaking units was determined using the 2014 summer peak model. Once a determination of the required Network Upgrades was made, a powerflow model of the 2010 spring case was developed with all cost allocated Network Upgrades in-service. A MUST FCITC analysis was performed to determine the Power Transfer Distribution Factors (PTDF), defined as a distribution factor with system impact conditions 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 Z1 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.

Interconnection Facilities

The requirement to interconnect the 2,859 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. These network upgrades total \$146,000,000. Interconnection Facilities specific to each generation interconnection request are listed in Appendix E.

Network Constraints in the AEPW, MIDW, MIPU, MKEC, NPPD, OKGE, SPS, SUNC, AND WERE transmission systems that were identified are shown in Appendix G. 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.

A preliminary one-line drawing for each generation interconnection request are listed in Appendix D. Figure 1 depicts the major transmission line Network Upgrades needed to support the interconnection of the generation amounts requested in this study.

Powerflow

Powerflow 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 contingencies in portions or all of the modeled control areas of American Electric Power West (AEPW), Empire District Electric (EMDE), Grand River Dam Authority (GRDA), Kansas City Power & Light (KCPL), Midwest Energy (MIDW), MIPU, MKEC, Nebraska Public Power District (NPPD), OG&E Electric Services (OKGE), Omaha Public Power District (OPPD), Southwest Public Service (SPS), Sunflower Electric (SUNC), Westar Energy (WERE), Western Farmers Electric Cooperative (WFEC) and other control areas were applied and the resulting scenarios analyzed. This satisfies the “more probable” contingency testing criteria mandated by NERC and the SPP criteria.

Powerflow Analysis

A powerflow analysis was conducted for each Interconnection Customer’s facility using modified versions of the 2010 spring peak and the 2014 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. The available seasonal models used were through the 2014 Summer Peak.

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 additional criteria violations will occur on the AEPW, MIDW, OKGE, SPS, SUNC, SWPA, MKEC, WERE, AND WFEC transmission systems under steady state and contingency conditions in the peak seasons.

Cluster Group 1 (Woodward Area)

The Woodward area contained approximately 250.5 MW of new interconnection requests in addition to the 2,802 MW of prior queued interconnection requests. No new constraints were found in this area.

Cluster Group 2 (Hitchland Area)

The Hitchland area contained 0 MW of interconnection request in addition to the 2,482 MW of previous queued generation interconnection requests. No new constraints were found in this area.

Cluster Group 3 (Spearville Area)

The Spearville area contained 500.6 MW of interconnection requests and 1,832 MW of previous queued interconnection requests. Constraints were observed in the Judson Large area. To mitigate these issues, a second 115kV circuit from Judson Large – North Judson Large – Spearville was added. In addition, a Spearville 345/115kV autotransformer was added.

Cluster Group 4 (Mingo/NW Kansas Group)

The Mingo/NW Kansas group had 101.2 MW in addition to the 823 MW of previously queued generation in the area. No new constraints were found in this area.

Cluster Group 5 (Amarillo Area)

The Amarillo group had 322 MW of interconnection requests in addition to the 1,846 MW of previously queued interconnection requests in this area. No new constraints were found in this area. However, the interconnection requests in service dates in this group will be dependent upon the upgrades assigned to higher queued interconnection requests including the completion of the Hitchland-Woodward 345kV line and Balanced Portfolio project Tuco-Woodward 345kV.

Cluster Group 6 (South Panhandle/New Mexico)

The Group 6 study which includes GEN-2009-017 is posted separately

Cluster Group 7 (Southwestern Oklahoma)

This group had 290 MW of interconnection requests in addition to the 1,548 MW of previous queued generation in the area. No new constraints were found in this area.

Cluster Group 8 (South Central Kansas/North Oklahoma)

This group had 446 MW of interconnection requests in addition to the 1,801 MW of previous queued generation in the area. With the exception of GEN-2008-038, no constraints are found in the area. GEN-2008-038 has been studied separately due to relative isolation and its proximity to higher queued interconnection requests in the Associated Electric Cooperative Inc (AECI) interconnection queue.

Cluster Group 9 (Northeast Nebraska)

This group had 391 MW of interconnection requests in addition to the 207 MW of previous queued generation in the area. The major constraints were overloads on the Albion – Petersburg 115kV line and the Bloomfield – Gavins 115kV line. To mitigate these constraints, a 115kV line was modeled from Bloomfield – Belden as well as a 115kV line from Petersburg – Madison. Additionally, the Petersburg-Albion line will need to have line structures raised to accommodate a higher line rating. The Fort Randall – Kelley 230kV line was found to have a lower rating in the Facility Study of 192MVA. This requires the raising of structures to accommodate GEN-2008-086N2.

Cluster Group 10 (North Nebraska)

This group had 75 MW of interconnection requests in addition to the 209 MW of previous queued generation in the area. No constraints were found.

Cluster Group 11 (North Kansas)

This group had 251 MW of interconnection requests in addition to the 725 MW of previous queued generation in the area. The major constraints for the North Kansas area included several 115kV lines in the area due to too much generation requested on the 115kV system at Knoll. As a result of the constraints, the proposed point of interconnection for GEN-2008-092 was moved to Knoll 230kV.

Cluster Group 13 (Kansas City Kansas)

This group had 80 MW of interconnection requests in addition to the 1,806 MW of previous queued generation in the area. The only constraint was a line trap on the Kansas City South – Longview 161kV line.

Stability Analysis

The stability analysis was not performed again for this study. The power factor analysis from the original impact study was not performed again.

Conclusion

The minimum cost of interconnecting all of the interconnection requests included in this Impact Cluster Study is estimated at \$146,000,000 for the Allocated Network Upgrades and Transmission Owner Interconnection Facilities are listed in Appendix E and F These costs do not include the cost of upgrades of other transmission facilities listed in Appendix H which are Network Constraints.

These interconnection costs do not include any cost of Network Upgrades determined to be required by short circuit analysis. These studies are being performed as part of the Interconnection System Facility Study that each customer has already executed.

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

| Request | Amount | Area | Requested Point of Interconnection | Proposed Point of Interconnection | Requested In-Service Date |
|----------------------|----------------|------|------------------------------------|-----------------------------------|---------------------------|
| GEN-2006-037N1 | 75 | NPPD | BROKEN BOW 115kV | BROKEN BOW 115kV | 1/1/2010 |
| GEN-2006-044N | 40.5 | NPPD | TAP NELIGH-PETERSBURG 115kV | TAP NELIGH-PETERSBURG 115kV | 1/1/2010 |
| GEN-2007-011N06 | 75 | NPPD | TAP NELIGH-PETERSBURG 115kV | PETERSBURG 115kV | 1/1/2010 |
| GEN-2007-011N09 | 75 | NPPD | BLOOMFIELD 115kV | BLOOMFIELD 115kV | |
| GEN-2007-040 | 200 | SUNC | Tap Holcomb – Spearville 345kV | Tap Holcomb – Spearville 345kV | 12/15/2010 |
| GEN-2008-021 | 42 | WERE | WOLF CREEK 345kV | WOLF CREEK 345kV | 5/16/2011 |
| GEN-2008-023 | 150 | AEPW | HOBART JUNCTION 138kV | HOBART JUNCTION 138kV | 12/31/2012 |
| GEN-2008-025 | 101.2 | SUNC | RULETON 115kV | RULETON 115kV | 11/1/2009 |
| GEN-2008-029 | 250.5 | OKGE | WOODWARD EHV 138kV | WOODWARD EHV 138kV | 1/1/2010 |
| GEN-2008-038 | 144 | AEPW | TAP SHIDLER-WEST PAWHUSKA 138kV | TAP SHIDLER-WEST PAWHUSKA 138kV | 12/1/2010 |
| GEN-2008-051 | 322 | SPS | POTTER 345kV | POTTER 345kV | 12/31/2010 |
| GEN-2008-079 | 100.5 | MKEC | TAP JUDSON LARGE-CUDAHY 115kV | TAP JUDSON LARGE-CUDAHY 115kV | 12/1/2010 |
| GEN-2008-086N02 | 200 | NPPD | TAP FT RANDALL-COLUMBUS 230kV | TAP FT RANDALL-COLUMBUS 230kV | |
| GEN-2008-092 | 201 | MIDW | KNOLL 115kV | KNOLL 230kV | 12/1/2011 |
| GEN-2008-124 | 200.1 | SUNC | SPEARVILLE 230kV | SPEARVILLE 345kV | 11/30/2011 |
| GEN-2008-127 | 200.1 | WERE | TAP SOONER-ROSE HILL 345kV | TAP SOONER-ROSE HILL 345kV | 10/31/2011 |
| GEN-2008-129 | 80 | MIPU | PLEASANT HILL 161kV | PLEASANT HILL 161kV | 5/1/2009 |
| GEN-2009-011 | 50 | SUNC | TAP PLAINVILLE-PHILLIPSBURG 115kV | TAP PLAINVILLE-PHILLIPSBURG 115kV | 7/31/2011 |
| GEN-2009-016 | 140 | MKEC | FALCON ROAD 138kV | FALCON ROAD 138kV | 12/1/2011 |
| GEN-2009-017** | 151.8 | SPS | TAP PEMBROOK-STILES 138kV | TAP PEMBROOK-STILES 138kV | 6/1/2011 |
| GEN-2009-025 | 60 | OKGE | KAYCOOP 69kV | TAP Deer Creek – Sinclair 69kV | 12/31/2011 |
| GROUPED TOTAL | 2,858.7 | | | | |

** Interconnection on Caprock Electric tested for impacts on SPP

* Planned Facility

^ Proposed Facility

*** Electrically Remote Interconnection Requests

B: Prior Queued Interconnection Requests

| Request | Amount | Area | Requested/Proposed Point of Interconnection | Status or In-Service Date |
|----------------|---------------|-------------|--|------------------------------------|
| GEN-2001-014 | 96 | WFEC | Fort Supply 138kV | On-Line |
| GEN-2001-026 | 74 | WFEC | Washita 138kV | On-Line |
| GEN-2001-033 | 180 | SPS | San Juan Mesa Tap 230kV | On-Line |
| GEN-2001-036 | 80 | SPS | Caprock Tap 115kV | On-Line |
| GEN-2001-037 | 100 | OKGE | Windfarm Switching 138kV | On-Line |
| GEN-2001-039A | 105 | MKEC | Greensburg - Judson-Large 115kV | On Schedule for 2011 |
| GEN-2001-039M | 100 | SUNC | Leoti – City Services 115kV | On-Line |
| GEN-2002-004 | 200 | WERE | Latham 345kV | On-Line |
| GEN-2002-005 | 120 | WFEC | Morewood - Elk City 138kV | On-Line |
| GEN-2002-006 | 150 | SPS | Texas County 115kV | IA Executed/On Schedule 12/31/2010 |
| GEN-2002-008 | 240 | SPS | *Hitchland 345kV | On-Line at 120MW |
| GEN-2002-009 | 80 | SPS | Hansford County 115kV | On-Line |
| GEN-2002-022 | 240 | SPS | Bushland 230kV | On-Line at 160MW |
| GEN-2002-025A | 150 | MKEC | Spearville 230kV | On-Line at 100MW |
| GEN-2003-005 | 100 | WFEC | Anadarko - Paradise 138kV | On Line |
| GEN-2003-006A | 200 | MKEC | Elm Creek 230kV | On-Line |
| GEN-2003-013 | 198 | SPS | *Hitchland - Finney 345kV | On Schedule for 2012 |
| 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 | On-Line |
| GEN-2003-022 | 120 | AEPW | Washita 138kV | On-Line |
| GEN-2004-005N | 30 | NPPD | St. Francis 115kV | IA Pending |
| GEN-2004-010 | 300 | WERE | Latham 345kV | On-Line |
| GEN-2004-014 | 155 | MKEC | Spearville 230kV | On Schedule for 2011 |
| GEN-2004-020 | 27 | AEPW | Washita 138kV | On-Line |
| GEN-2005-005 | 18 | OKGE | Windfarm Tap 138kV | IA Pending |
| GEN-2005-008 | 120 | OKGE | Woodward 138kV | On-Line |
| GEN-2005-012 | 250 | SUNC | Spearville 345kV | On Suspension |
| GEN-2005-013 | 201 | WERE | Tap Latham - Neosho | On Schedule for 2011 |
| GEN-2005-015 | 150 | SPS | Tuco - Oklaunion 345kV | On Suspension |
| GEN-2005-016 | 150 | WFEC | Tap Latham - Neosho | On Schedule for 2012 |
| GEN-2005-017 | 340 | SPS | *Hitchland - Potter County 345kV | On Suspension |
| GEN-2005-021 | 86 | SPS | Kirby 115kV | On Suspension |
| GEN-2006-002 | 101 | AEPW | Grapevine - Elk City 230kV | On-Line |
| GEN-2006-006 | 206 | MKEC | Spearville 230kV | Under Study (ICS-2008-001) |
| GEN-2006-014 | 300 | MIPU | Tap Maryville – Clarinda 161kV | On Suspension |
| GEN-2006-017 | 300 | MIPU | Tap Maryville – Clarinda 161kV | On Suspension |
| GEN-2006-020 | 18.9 | SPS | DWS Frisco Tap | IA Executed/On Schedule 12/31/2011 |
| GEN-2006-020N | 42 | NPPD | Bloomfield 115kV | 1/1/2009 |
| GEN-2006-021 | 101 | WPEK | Flat Ridge Tap 138kV | On-Line |
| GEN-2006-022 | 150 | WPEK | Ninnescah Tap 115kV | On Suspension |
| GEN-2006-024 | 20 | WFEC | South Buffalo Tap 69kV | On-Line |
| GEN-2006-031 | 75 | MIDW | Knoll 115kV | On-Line |
| GEN-2006-032 | 200 | MIDW | South Hays 230kV | On Suspension |

B-1

Appendix B: Prior Queued Interconnection Requests



| Request | Amount | Area | Requested/Proposed Point of Interconnection | Status or In-Service Date |
|------------------|--------|------|--|---------------------------|
| GEN-2006-034 | 81 | SUNC | Kanarado - Sharon Springs 115kV | On Suspension |
| GEN-2006-035 | 225 | AEPW | Grapevine - Elk City 230kV | IA Executed/On Schedule |
| GEN-2006-038N005 | 80 | NPPD | Broken Bow 115kV | On-Line |
| GEN-2006-038N019 | 80 | NPPD | Petersburg 115kV | 5/1/2011 |
| GEN-2006-039 | 400 | SPS | Tap and Tie both Potter County - Plant X 230kV and Bushland - Deaf Smith 230kV | On Suspension |
| GEN-2006-040 | 108 | SUNC | Mingo 115kV | IA Executed/On Schedule |
| GEN-2006-043 | 99 | AEPW | Grapevine - Elk City 230kV | On-Line |
| GEN-2006-044 | 370 | SPS | *Hitchland 345kV | On Suspension |
| GEN-2006-045 | 240 | SPS | Tap and Tie both Potter County - Plant X 230kV and Bushland - Deaf Smith 230kV | On Suspension |
| GEN-2006-046 | 131 | OKGE | Dewey 138kV | On Schedule for 2011 |
| GEN-2006-047 | 240 | SPS | Tap and Tie both Potter County - Plant X 230kV and Bushland - Deaf Smith 230kV | On Schedule for 2013 |
| GEN-2006-049 | 400 | SPS | *Hitchland - Finney 345kV | On schedule for 2014 |
| GEN-2007-002 | 160 | SPS | Grapevine 115kV | On Suspension |
| GEN-2007-006 | 160 | OKGE | Roman Nose 138kV | On Suspension |
| GEN-2007-011 | 135 | SUNC | Syracuse 115kV | On Schedule |
| GEN-2007-011N08 | 81 | NPPD | Bloomfield 115kV | On-Line |
| GEN-2007-013 | 99 | SUNC | Selkirk 115kV | On Suspension |
| GEN-2007-015 | 135 | WERE | Tap Humboldt – Kelly 161kV | On Suspension |
| GEN-2007-017 | 101 | MIPU | Tap Maryville – Clarinda 161kV | On Suspension |
| GEN-2007-021 | 201 | OKGE | *Tatonga 345kV | IA Pending |
| GEN-2007-025 | 300 | WERE | Tap Woodring – Wichita 345kV | On Suspension |
| GEN-2007-032 | 150 | WFEC | Tap Clinton Junction – Clinton 138kV | IA Pending |
| GEN-2007-038 | 200 | SUNC | Spearville 345kV | IA Pending |
| GEN-2007-043 | 200 | AEPW | Tap Lawton Eastside – Cimarron 345kV | IA Pending |
| GEN-2007-044 | 300 | OKGE | *Tatonga 345kV | IA Pending |
| GEN-2007-046 | 200 | SPS | *Hitchland 115kV | IA Pending |
| GEN-2007-048 | 400 | SPS | Tap Amarillo South – Swisher 230kV | IA Pending |
| GEN-2007-050 | 170 | OKGE | *Woodward 138kV | IA Pending |
| GEN-2007-051 | 200 | WFEC | Mooreland 138kV | IA Pending |
| GEN-2007-052 | 150 | WFEC | Anadarko 138kV | On Line |
| GEN-2007-053 | 110 | MIPU | Tap Maryville – Clarinda 161kV | On Schedule for 2013 |
| GEN-2007-057 | 35 | SPS | Moore County East 115kV | IA Pending |
| GEN-2007-062** | 765 | OKGE | *Woodward 345kV | IA Pending |
| GEN-2008-003 | 101 | OKGE | *Woodward EHV 138kV | IA Pending |
| GEN-2008-008 | 60 | SPS | Graham 115kV | IA Pending |
| GEN-2008-009 | 60 | SPS | San Juan Mesa Tap 230kV | IA Pending |
| GEN-2008-013 | 300 | OKGE | Tap Woodring – Wichita 345kV | On Schedule for 2013 |
| GEN-2008-014 | 150 | SPS | Tap Tuco – Oklaunion 345kV | IA Pending |
| GEN-2008-016 | 248 | SPS | Grassland 230kV | IA Pending |
| GEN-2008-017 | 300 | SUNC | Setab 345kV | IA Pending |
| GEN-2008-018 | 405 | SUNC | Finney 345kV | IA Pending |
| GEN-2008-019** | 300 | OKGE | *Tatonga 345kV | IA Pending |
| GEN-2008-119O | 60 | OPPD | Tap Humboldt – Kelly 161kV | On-Line |
| Broken Bow | 8.3 | NPPD | Broken Bow 115kV | On-Line |
| Ord | 13.9 | NPPD | Ord 115kV | On-Line |
| Stuart | 2.1 | NPPD | Stuart 115kV | On-Line |
| Genoa | 4 | NPPD | Genoa 115kV | On-Line |

Appendix B: Prior Queued Interconnection Requests



| Request | Amount | Area | Requested/Proposed Point of Interconnection | Status or In-Service Date |
|----------------------|-----------------|------|---|---------------------------|
| AECI-1 | 400 | AECI | Tap Cooper – Fairport 345kV | Under Study by AECI |
| AECI-3 | 201 | AECI | Osborn 161kV | Under Study by AECI |
| AECI-4 | 150 | AECI | Tap Fairfax – Fairfax Tap 138kV | Under Study by AECI |
| AECI-5 | 100 | AECI | Maryville 161kV | Under Study by AECI |
| AECI-6 | 200 | AECI | Tap Fairfax – Fairfax Tap 138kV | Under Study by AECI |
| Llano Estacado | 80 | SPS | Llano Wind Farm Tap 115kV | On-Line |
| Distribution Wind | 90 | SPS | DUMAS_19ST 115kV | On-Line |
| | | | Etter 115kV | On-Line |
| | | | Sherman 115kV | On-Line |
| | | | Spearman 115kV | On-Line |
| | | | Texas County 115kV | On-Line |
| Blue Canyon II | 153 | WFEC | Washita 138kV (GEN-2003-004) | On-Line |
| | | | Washita 138kV (GEN-2004-023) | On-Line |
| | | | Washita 138kV (GEN-2005-003) | On-Line |
| Montezuma | 110 | MKEC | Haggard 115kV | On-Line |
| GROUPED TOTAL | 17,319.2 | | | |

* Planned Facility

C: Study Groupings

| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
|------------------------------|--------------|----------------|----------------|-----------------------------------|
| Prior Queued | GEN-2001-014 | 96 | WFEC | Fort Supply 138kV |
| | GEN-2001-037 | 100 | OKGE | Windfarm Switching 138kV |
| | GEN-2002-005 | 120 | WFEC | Tap Morewood - Elk City 138kV |
| | GEN-2005-005 | 18 | OKGE | Windfarm Tap 138kV |
| | GEN-2005-008 | 120 | OKGE | Woodward 138kV |
| | GEN-2006-024 | 20 | WFEC | South Buffalo Tap 69kV |
| | GEN-2006-046 | 131 | OKGE | Dewey 138kV |
| | GEN-2007-006 | 160 | OKGE | Roman Nose 138kV |
| | GEN-2007-021 | 201 | OKGE | *Tatonga 345kV |
| | GEN-2007-044 | 300 | OKGE | *Tatonga 345kV |
| | GEN-2007-050 | 170 | OKGE | *Woodward 138kV |
| | GEN-2007-051 | 200 | WFEC | Mooreland 138kV |
| | GEN-2007-062 | 765 | OKGE | *Woodward 345kV |
| | GEN-2008-003 | 101 | OKGE | *Woodward EHV 138kV |
| GEN-2008-019 | 300 | OKGE | *Tatonga 345kV | |
| PRIOR QUEUED SUBTOTAL | | 2,802 | | |
| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
| Woodward | GEN-2008-029 | 250.5 | OKGE | WOODWARD EHV 138kV |
| WOODWARD SUBTOTAL | | 250.5 | | |
| AREA SUBTOTAL | | 3,052.5 | | |

| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
|------------------------------|------------------|----------------|------|--------------------------------------|
| Prior Queued | SPS Distribution | 90 | SPS | Various |
| | GEN-2002-006 | 150 | SPS | Texas County 115kV |
| | GEN-2002-008 | 240 | SPS | *Hitchland 345kV |
| | GEN-2002-009 | 80 | SPS | Hansford County 115kV |
| | GEN-2003-013 | 198 | SPS | *Tap Hitchland - Finney 345kV |
| | GEN-2003-020 | 160 | SPS | Martin 115kV |
| | GEN-2005-017 | 340 | SPS | *Tap Hitchland - Potter County 345kV |
| | GEN-2006-020 | 18.9 | SPS | DWS Frisco Tap |
| | GEN-2006-044 | 370 | SPS | *Hitchland 345kV |
| | GEN-2006-049 | 400 | SPS | *Tap Hitchland - Finney 345kV |
| | GEN-2007-046 | 200 | SPS | *Hitchland 115kV |
| | GEN-2007-057 | 35 | SPS | Moore County East 115kV |
| PRIOR QUEUED SUBTOTAL | | 2,481.9 | | |
| AREA SUBTOTAL | | 2,481.9 | | |

| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
|------------------------------|---------------|----------------|--------------|-------------------------------------|
| Prior Queued | Montezuma | 110 | MKEC | Haggard 115kV |
| | GEN-2001-039A | 105 | WPEK | Tap Greensburg - Judson-Large 115kV |
| | GEN-2002-025A | 150 | WPEK | Spearville 230kV |
| | GEN-2004-014 | 155 | MIDW | Spearville 230kV |
| | GEN-2005-012 | 250 | WPEK | Spearville 345kV |
| | GEN-2006-006 | 206 | MKEC | Spearville 230kV |
| | GEN-2006-021 | 101 | WPEK | Flat Ridge Tap 138kV |
| | GEN-2006-022 | 150 | WPEK | Ninnescah Tap 115kV |
| | GEN-2007-038 | 200 | SUNC | Spearville 345kV |
| GEN-2008-018 | 405 | SUNC | Finney 345kV | |
| PRIOR QUEUED SUBTOTAL | | 1,832 | | |
| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
| Spearville | GEN-2007-040 | 200 | SUNC | Tap Holcomb – Spearville 345kV |
| | GEN-2008-079 | 100.5 | MKEC | Tap Judson Large – Cudahy 115kV |
| | GEN-2008-124 | 200.1 | SUNC | Spearville 230kV |
| SPEARVILLE SUBTOTAL | | 500.6 | | |
| AREA SUBTOTAL | | 2,332.6 | | |

| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
|---------------------------------|---------------|--------------|------|-------------------------------------|
| Prior Queued | GEN-2001-039M | 100 | SUNC | Tap Leoti - City Services 115kV |
| | GEN-2006-034 | 81 | SUNC | Tap Kanarado - Sharon Springs 115kV |
| | GEN-2006-040 | 108 | SUNC | Mingo 115kV |
| | GEN-2007-011 | 135 | SUNC | Syracuse 115kV |
| | GEN-2007-013 | 99 | SUNC | Selkirk 115kV |
| | GEN-2008-017 | 300 | SUNC | Setab 345kV |
| PRIOR QUEUED SUBTOTAL | | 823 | | |
| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
| Mingo | GEN-2008-025 | 101.2 | SUNC | Ruleton 115kV |
| MINGO/NW KANSAS SUBTOTAL | | 101.2 | | |
| AREA SUBTOTAL | | 924.2 | | |

| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
|------------------------------|----------------|--------------|------|--|
| Prior Queued | Llano Estacado | 80 | SPS | Llano Estacado Tap 115kV |
| | GEN-2002-022 | 240 | SPS | Bushland 230kV |
| | GEN-2005-021 | 86 | SPS | Kirby 115kV |
| | GEN-2006-039 | 400 | SPS | Tap and Tie both Potter County - Plant X 230kV and Bushland - Deaf Smith 230kV |
| | GEN-2006-045 | 240 | SPS | Tap and Tie both Potter County - Plant X 230kV and Bushland - Deaf Smith 230kV |
| | GEN-2006-047 | 240 | SPS | Tap and Tie both Potter County - Plant X 230kV and Bushland - Deaf Smith 230kV |
| | GEN-2007-002 | 160 | SPS | Grapevine 115kV |
| | GEN-2007-048 | 400 | SPS | Tap Amarillo South – Swisher 230kV |
| PRIOR QUEUED SUBTOTAL | | 1,846 | | |
| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
| Amarillo | GEN-2008-051 | 322 | SPS | Potter 345kV |
| AMARILLO SUBTOTAL | | 322 | | |
| AREA SUBTOTAL | | 2,168 | | |

| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
|------------------------------------|--------------|----------------|------|-----------------------------------|
| Prior Queued | GEN-2001-033 | 180 | SPS | San Juan Mesa Tap 230kV |
| | GEN-2001-036 | 80 | SPS | Norton 115kV |
| | GEN-2005-015 | 150 | SPS | Tap TUCO - Oklaunion 345kV |
| | GEN-2008-008 | 60 | SPS | Graham 115kV |
| | GEN-2008-009 | 60 | SPS | San Juan Mesa Tap 230kV |
| | GEN-2008-014 | 150 | SPS | Tap Tuco – Oklaunion 345kV |
| | GEN-2008-016 | 248 | SPS | Grassland 230kV |
| PRIOR QUEUED SUBTOTAL | | 1,238 | | |
| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
| S Pandle | GEN-2009-017 | 151.8 | SPS | Tap Pembroke – Stiles 138kV |
| SOUTH PANHANDLE/NM SUBTOTAL | | 151.8 | | |
| AREA SUBTOTAL | | 1,389.8 | | |

| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
|------------------------------|--------------|--------------|------|--------------------------------------|
| Prior Queued | GEN-2001-026 | 74 | WFEC | Washita 138kV |
| | GEN-2003-004 | 101 | WFEC | Washita 138kV |
| | GEN-2003-005 | 100 | WFEC | Anadarko - Paradise 138kV |
| | GEN-2003-022 | 120 | AEPW | Washita 138kV |
| | GEN-2004-020 | 27 | AEPW | Washita 138kV |
| | GEN-2004-023 | 21 | WFEC | Washita 138kV |
| | GEN-2005-003 | 31 | WFEC | Washita 138kV |
| | GEN-2006-002 | 101 | AEPW | Grapevine - Elk City 230kV |
| | GEN-2006-035 | 225 | AEPW | Grapevine - Elk City 230kV |
| | GEN-2006-043 | 99 | AEPW | Grapevine - Elk City 230kV |
| | GEN-2007-032 | 150 | WFEC | Tap Clinton Junction – Clinton 138kV |
| | GEN-2007-043 | 200 | AEPW | Tap Lawton Eastside – Cimarron 345kV |
| | GEN-2007-052 | 150 | WFEC | Anadarko 138kV |
| PRIOR QUEUED SUBTOTAL | | 1,548 | | |
| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
| SW Oklahoma | GEN-2008-023 | 150 | AEPW | Hobart Junction 138kV |
| | GEN-2009-016 | 140 | AEPW | Falcon Road 138kV |
| SW OKLAHOMA SUBTOTAL | | 190 | | |
| AREA SUBTOTAL | | 1738 | | |

| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
|--------------------------------|--------------|----------------|------|-----------------------------------|
| Prior Queued | AECI-4 | 150 | AECI | Tap Fairfax – Fairfax Tap 138kV |
| | AECI-6 | 200 | AECI | Tap Fairfax- Fairfax Tap 138kV |
| | GEN-2002-004 | 200 | WERE | Latham 345kV |
| | GEN-2004-010 | 300 | WERE | Latham 345kV |
| | GEN-2005-013 | 201 | WERE | Tap Latham - Neosho |
| | GEN-2007-025 | 300 | WERE | Tap Woodring – Wichita 345kV |
| | GEN-2008-013 | 300 | OKGE | Tap Woodring – Wichita 345kV |
| PRIOR QUEUED SUBTOTAL | | 1,801 | | |
| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
| North Oklahoma | GEN-2008-021 | 42 | WERE | Wolf Creek 345kV |
| | GEN-2008-038 | 144 | AEPW | Tap Shidler – West Pawhuska 138kV |
| | GEN-2008-127 | 200.1 | WERE | Tap Sooner – Rose Hill 345kV |
| | GEN-2009-025 | 60 | OKGE | Kay Coop 69kV |
| North OKLAHOMA SUBTOTAL | | 446.1 | | |
| AREA SUBTOTAL | | 2,247.1 | | |

| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
|------------------------------|------------------|--------------|------|-----------------------------------|
| Prior Queued | Genoa | 4 | NPPD | Genoa 115kV |
| | GEN-2006-020N | 42 | NPPD | Bloomfield 115kV |
| | GEN-2006-038N019 | 80 | NPPD | Petersburg 115kV |
| | GEN-2007-011N08 | 81 | NPPD | Bloomfield 115kV |
| PRIOR QUEUED SUBTOTAL | | 207 | | |
| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
| NE Nebraska | GEN-2006-044N | 40.5 | NPPD | Tap Neligh – Petersburg 115kV |
| | GEN-2007-011N06 | 75 | NPPD | Tap Neligh – Petersburg 115kV |
| | GEN-2007-011N09 | 75 | NPPD | Bloomfield 115kV |
| | GEN-2008-086N02 | 200 | NPPD | Tap Ft. Randall - Columbus |
| NE NEBRASKA SUBTOTAL | | 390.5 | | |
| AREA SUBTOTAL | | 597.5 | | |

| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
|--------------------------------|-----------------|--------------|------|-----------------------------------|
| Prior Queued | Broken Bow | 8.3 | NPPD | Broken Bow 115kV |
| | Ord | 13.9 | NPPD | Bloomfield 115kV |
| | Stuart | 2.1 | NPPD | Petersburg 115kV |
| | Ainsworth | 75 | NPPD | Ainsworth Wind Tap 115kV |
| | GEN-2004-005N | 30 | NPPD | St. Francis 115kV |
| | GEN-2006-038N05 | 80 | NPPD | Broken Bow 115kV |
| PRIOR QUEUED SUBTOTAL | | 209.3 | | |
| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
| NORTH NEBRASKA | GEN-2006-037N1 | 75 | NPPD | Broken Bow 115kV |
| | | | | |
| NORTH NEBRASKA SUBTOTAL | | 75 | | |
| AREA SUBTOTAL | | 284.3 | | |

| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
|---------|---------|--------|------|-----------------------------------|
|---------|---------|--------|------|-----------------------------------|

| | | | | |
|------------------------------|-----------------|---------------|-------------|--|
| Prior Queued | GEN-2003-006A-E | 100 | EMDE | Elm Creek 230kV |
| | GEN-2003-006A-W | 100 | WERE | Elm Creek 230kV |
| | GEN-2003-019 | 250 | MIDW | Smoky Hills Tap 230kV |
| | GEN-2006-031 | 75 | MIDW | Knoll 115kV |
| | GEN-2006-032 | 200 | MIDW | South Hays 230kV |
| PRIOR QUEUED SUBTOTAL | | 725 | | |
| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
| North Kansas | GEN-2008-092 | 201 | MIDW | Knoll 115kV |
| | GEN-2009-011 | 50 | MKEC | Tap Plainville – Phillipsburg 115kV |
| | | | | |
| NORTH KANSAS SUBTOTAL | | 251 | | |
| AREA SUBTOTAL | | 976 | | |

| | | | | |
|--|----------------|-----------------|-------------|--|
| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
| Prior Queued | AECI-1 | 400 | AECI | Tap Cooper – Fairport 345kV |
| | AECI-2 | 99 | AECI | Lathrop 161kV |
| | AECI-3 | 201 | AECI | Osborn 161kV |
| | AECI-5 | 100 | AECI | Maryville 161kV |
| | GEN-2006-014 | 300 | MIPU | Tap Maryville – Clarinda 161kV |
| | GEN-2006-017 | 300 | MIPU | Tap Maryville – Clarinda 161kV |
| | GEN-2007-015 | 135 | WERE | Tap Humboldt – Kelly 161kV |
| | GEN-2007-017 | 101 | MIPU | Tap Maryville – Clarinda 161kV |
| | GEN-2007-053 | 110 | MIPU | Tap Maryville – Clarinda 161kV |
| | GEN-2008-1190 | 60 | OPPD | Tap Humboldt – Kelly 161kV |
| PRIOR QUEUED SUBTOTAL | | 1,806 | | |
| Cluster | Request | Amount | Area | Proposed Point of Interconnection |
| NW Missouri | GEN-2008-129 | 80 | MIPU | Pleasant Hill 161kV |
| KANSAS CITY KANSAS SUBTOTAL | | 80 | | |
| AREA SUBTOTAL | | 1,886 | | |
| ***CLUSTERED TOTAL (w/o PRIOR QUEUED) | | 2,858.7 | | |
| ***CLUSTERED TOTAL (w/PRIOR QUEUED) | | 20,509.4 | | |

* Planned Facility
 ^ Proposed Facility
 ** Alternate requests - counted as one request for study purpose
 *** Electrically Remote Interconnection Requests included in total

D: Proposed Point of Interconnection One line Diagrams

See Facility Studies posted for each individual request

E: Cost Allocation per Interconnection Request

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

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

If a higher queued interconnection request (listed in Appendix B.) withdraws or terminates their LGIA the Network Upgrades assigned to the higher queued requests may be reallocated to the remaining requests that have an impact on the Network Upgrade under a restudy. The actual costs allocated to each Generation Interconnection Request Customer will be determined at the time of a restudy.

Additionally, Expansion Plan (STEP), Aggregate Study, and Balanced Portfolio assigned projects are also included in this table so that the Customer will know that interconnection service may be delayed until the completion of these projects.

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 | Upgrade Type | Allocated Costs | E + C Costs |
|---|----------------------------|------------------------|-----------------|
| GEN-2006-037N1 | | | |
| GEN-2006-037N1 Interconnection Costs See Online Diagram | Current Study Allocation | \$10,000,000.00 | \$10,000,000.00 |
| | Current Study Total | \$10,000,000.00 | |
| GEN-2006-044N | | | |
| GEN-2006-044N Interconnection Costs See Online Diagram | Current Study Allocation | \$1,300,000.00 | \$1,300,000.00 |
| Neligh - Petersburg 115KV CKT 1 Per GEN-2006-044N Impact Restudy | Current Study Allocation | \$540,000.00 | \$540,000.00 |
| Albion - Petersburg 115KV CKT1 Line re-rating to 100°C | Current Study Allocation | \$112,109.85 | \$360,000.00 |
| Petersburg - Madison 115KV CKT 1 Construct approximately 35 miles of new 115kV | Current Study Allocation | \$7,341,838.67 | \$22,400,000.00 |
| Belden - Bloomfield 115KV CKT 1 Construct approximately 45 miles of new 115kV | Current Study Allocation | \$1,181,137.26 | \$23,200,000.00 |
| | Current Study Total | \$10,475,085.78 | |
| GEN-2007-011N6 | | | |
| GEN-2007-011N6 Interconnection Costs See Online Diagram | Current Study Allocation | \$500,000.00 | \$500,000.00 |
| Albion - Petersburg 115KV CKT1 Line re-rating to 100°C | Current Study Allocation | \$205,079.00 | \$360,000.00 |
| Petersburg - Madison 115KV CKT 1 Construct approximately 35 miles of new 115kV | Current Study Allocation | \$13,430,192.68 | \$22,400,000.00 |
| Belden - Bloomfield 115KV CKT 1 Construct approximately 45 miles of new 115kV | Current Study Allocation | \$2,160,616.94 | \$23,200,000.00 |
| | Current Study Total | \$16,295,888.62 | |
| GEN-2007-011N9 | | | |
| GEN-2007-011N9 Interconnection Costs See Online Diagram | Current Study Allocation | \$500,000.00 | \$500,000.00 |
| Belden - Bloomfield 115KV CKT 1 Construct approximately 45 miles of new 115kV | Current Study Allocation | \$19,858,245.81 | \$23,200,000.00 |
| Albion - Petersburg 115KV CKT1 Line re-rating to 100°C | Current Study Allocation | \$42,811.15 | \$360,000.00 |
| Petersburg - Madison 115KV CKT 1 Construct approximately 35 miles of new 115kV | Current Study Allocation | \$1,627,968.65 | \$22,400,000.00 |
| | Current Study Total | \$22,029,025.61 | |
| GEN-2007-040 | | | |
| GEN-2007-040 Interconnection Costs See Online Diagram | Current Study Allocation | \$10,404,019.00 | \$10,404,019.00 |

* Current Study Requests' Costs of Previously Allocated Network Upgrades will be determined by a restudy, if necessary.

| Interconnection Request | Upgrade Type | Allocated Costs | E + C Costs |
|--|----------------------------|------------------------|--------------------|
| Comanche - Medicine Lodge 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Spearville - Comanche 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| PostRock - Spearville 345KV CKT 1 Balanced Portfolio: Spearville-PostRock-Axtell 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$112,700,000.00 |
| Medicine Lodge - Wichita 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Axtell - PostRock 345KV CKT 1 Balanced Portfolio: Spearville-PostRock-Axtell 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$112,700,000.00 |
| Medicine Lodge - Woodward 345KV CKT 1 Priority Project: Med Lodge-Woodward 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$194,972,759.00 |
| Hitchland - Woodward 345KV CKT 1 Priority Project: Hitchland-Woodward Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$247,005,793.00 |
| | Current Study Total | \$10,404,019.00 | |
| GEN-2008-023 | | | |
| GEN-2008-023 Interconnection Costs See Online Diagram | Current Study Allocation | \$1,038,000.00 | \$1,038,000.00 |
| Gracemont Transformer 345/138/13.8KV CKT 1 Priority Project: Gracemont Transformer 345/138/13.8KV CKT 1 | Previously Allocated | | \$8,000,000.00 |
| Clinton Junction - Elk City 138KV CKT 1 Replaced terminal equipment | Previously Allocated | | \$0.00 |
| | Current Study Total | \$1,038,000.00 | |
| GEN-2008-025 | | | |
| GEN-2008-025 Interconnection Costs See Online Diagram | Current Study Allocation | \$1,767,858.00 | \$1,767,858.00 |
| Spearville - Comanche 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Comanche - Medicine Lodge 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Central Plains - Setab 115KV CKT 1 Per GEN-2007-013 Facility Study | Previously Allocated | | \$4,800,000.00 |
| Medicine Lodge - Wichita 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| | Current Study Total | \$1,767,858.00 | |
| GEN-2008-029 | | | |
| GEN-2008-029 Interconnection Costs See Online Diagram | Current Study Allocation | \$4,610,000.00 | \$4,610,000.00 |

* Current Study Requests' Costs of Previously Allocated Network Upgrades will be determined by a restudy, if necessary.

| Interconnection Request | Upgrade Type | Allocated Costs | E + C Costs |
|--|----------------------------|------------------------|--------------------|
| Medicine Lodge - Woodward 345KV CKT 1 Priority Project: Med Lodge-Woodward 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$194,972,759.00 |
| Medicine Lodge - Wichita 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: TUCO-Woodward 345kV (Total Project E&C Cost Shown) | Previously Allocated | | \$148,727,500.00 |
| Border - Woodward 345KV CKT 1 Balanced Portfolio: TUCO-Woodward 345kV (Total Project E&C Cost Shown) | Previously Allocated | | \$148,727,500.00 |
| PostRock - Spearville 345KV CKT 1 Balanced Portfolio: Spearville-PostRock-Axtell 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$112,700,000.00 |
| Axtell - PostRock 345KV CKT 1 Balanced Portfolio: Spearville-PostRock-Axtell 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$112,700,000.00 |
| | Current Study Total | \$4,610,000.00 | |
| GEN-2008-038 | | | |
| GEN-2008-038 Interconnection Costs See separately posted impact study for all costs | Current Study Allocation | \$6,843,000.00 | \$6,843,000.00 |
| | Current Study Total | \$6,843,000.00 | |
| GEN-2008-051 | | | |
| GEN-2008-051 Interconnection Costs See Online Diagram | Current Study Allocation | \$2,346,379.00 | \$2,346,379.00 |
| Hitchland - Woodward 345kV CKT 1 Priority Project: Hitchland-Woodward Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$247,005,793.00 |
| Medicine Lodge - Woodward 345KV CKT 1 Priority Project: Med Lodge-Woodward 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$194,972,759.00 |
| Medicine Lodge - Wichita 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Border - Woodward 345KV CKT 1 Balanced Portfolio: TUCO-Woodward 345kV (Total Project E&C Cost Shown) | Previously Allocated | | \$148,727,500.00 |
| Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: TUCO-Woodward 345kV (Total Project E&C Cost Shown) | Previously Allocated | | \$148,727,500.00 |
| | Current Study Total | \$2,346,379.00 | |
| GEN-2008-079 | | | |
| GEN-2008-079 Interconnection Costs See Online Diagram | Current Study Allocation | \$4,484,903.00 | \$4,484,903.00 |
| Spearville (SPEARVL2) 345/230/13.8KV Transformer CKT 1 Install 345/230/13.8kV Transformer CKT 1 | Current Study Allocation | \$6,700,000.00 | \$6,700,000.00 |
| Judson Large - North Judson Large 115KV CKT 2 Construct approximately 1 mile of new 115kV for 2nd circuit | Current Study Allocation | \$1,500,000.00 | \$1,500,000.00 |
| North Judson Large - Spearville 115KV CKT 2 Construct approximately 15 miles of new 115kV for 2nd circuit | Current Study Allocation | \$8,000,000.00 | \$8,000,000.00 |

* Current Study Requests' Costs of Previously Allocated Network Upgrades will be determined by a restudy, if necessary.

| Interconnection Request | Upgrade Type | Allocated Costs | E + C Costs |
|--|----------------------------|------------------------|--------------------|
| Spearville - Comanche 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Comanche - Medicine Lodge 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| PostRock - Spearville 345KV CKT 1 Balanced Portfolio: Spearville-PostRock-Axtell 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$112,700,000.00 |
| Medicine Lodge - Wichita 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Axtell - PostRock 345KV CKT 1 Balanced Portfolio: Spearville-PostRock-Axtell 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$112,700,000.00 |
| Medicine Lodge - Woodward 345KV CKT 1 Priority Project: Med Lodge-Woodward 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$194,972,759.00 |
| | Current Study Total | \$20,684,903.00 | |
| GEN-2008-086N2 | | | |
| GEN-2008-086N2 Interconnection Costs See Online Diagram | Current Study Allocation | \$6,400,000.00 | \$6,400,000.00 |
| Fort Randall- Kelley 230KV CKT 1 Total E & C Cost for Fort Randall-Madison-Kelly Project | Current Study Allocation | \$2,900,000.00 | \$2,900,000.00 |
| | Current Study Total | \$9,300,000.00 | |
| GEN-2008-092 | | | |
| GEN-2008-092 Interconnection Costs See Online Diagram | Current Study Allocation | \$1,140,505.00 | \$1,140,505.00 |
| PostRock - Spearville 345KV CKT 1 Balanced Portfolio: Spearville-PostRock-Axtell 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$112,700,000.00 |
| Axtell - PostRock 345KV CKT 1 Balanced Portfolio: Spearville-PostRock-Axtell 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$112,700,000.00 |
| Spearville - Comanche 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Comanche - Medicine Lodge 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Medicine Lodge - Wichita 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| | Current Study Total | \$1,140,505.00 | |
| GEN-2008-124 | | | |
| GEN-2008-124 Interconnection Costs See Online Diagram | Current Study Allocation | \$7,353,935.00 | \$7,353,935.00 |
| Comanche - Medicine Lodge 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |

* Current Study Requests' Costs of Previously Allocated Network Upgrades will be determined by a restudy, if necessary.

| Interconnection Request | Upgrade Type | Allocated Costs | E + C Costs |
|--|----------------------------|------------------------|--------------------|
| Spearville - Comanche 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| PostRock - Spearville 345KV CKT 1 Balanced Portfolio: Spearville-PostRock-Axtell 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$112,700,000.00 |
| Medicine Lodge - Wichita 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Axtell - PostRock 345KV CKT 1 Balanced Portfolio: Spearville-PostRock-Axtell 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$112,700,000.00 |
| Medicine Lodge - Woodward 345KV CKT 1 Priority Project: Med Lodge-Woodward 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$194,972,759.00 |
| Border - Woodward 345KV CKT 1 Balanced Portfolio: TUCO-Woodward 345kV (Total Project E&C Cost Shown) | Previously Allocated | | \$148,727,500.00 |
| Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: TUCO-Woodward 345kV (Total Project E&C Cost Shown) | Previously Allocated | | \$148,727,500.00 |
| | Current Study Total | \$7,353,935.00 | |
| GEN-2008-127 | | | |
| GEN-2008-127 Interconnection Costs See Online Diagram | Current Study Allocation | \$9,160,000.00 | \$9,160,000.00 |
| | Current Study Total | \$9,160,000.00 | |
| GEN-2008-129 | | | |
| GEN-2008-129 Interconnection Costs See Online Diagram | Current Study Allocation | \$1.00 | \$1.00 |
| KC South - Longview 161KV CKT 1 Replace terminal equipment to increase limit to conductor rating | Current Study Allocation | \$150,000.00 | \$150,000.00 |
| | Current Study Total | \$150,001.00 | |
| GEN-2009-011 | | | |
| GEN-2009-011 Interconnection Costs See Online Diagram | Current Study Allocation | \$3,267,727.00 | \$3,267,727.00 |
| PostRock - Spearville 345KV CKT 1 Balanced Portfolio: Spearville-PostRock-Axtell 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$112,700,000.00 |
| Axtell - PostRock 345KV CKT 1 Balanced Portfolio: Spearville-PostRock-Axtell 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$112,700,000.00 |
| Spearville - Comanche 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Comanche - Medicine Lodge 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| | Current Study Total | \$3,267,727.00 | |
| GEN-2009-016 | | | |

* Current Study Requests' Costs of Previously Allocated Network Upgrades will be determined by a restudy, if necessary.

| Interconnection Request | Upgrade Type | Allocated Costs | E + C Costs |
|--|----------------------------|------------------------|--------------------|
| GEN-2009-016 Interconnection Costs See Online Diagram | Current Study Allocation | \$4,543,000.00 | \$4,543,000.00 |
| Clinton Junction - Elk City 138KV CKT 1 Replaced terminal equipment | Previously Allocated | | \$0.00 |
| Gracemont Transformer 345/138/13.8KV CKT 1 Priority Project: Gracemont Transformer 345/138/13.8KV CKT 1 | Previously Allocated | | \$8,000,000.00 |
| Medicine Lodge - Woodward 345KV CKT 1 Priority Project: Med Lodge-Woodward 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$194,972,759.00 |
| | Current Study Total | \$4,543,000.00 | |
| GEN-2009-017 | | | |
| GEN-2009-017 Interconnection Costs** See separately posted study | Current Study Allocation | \$2,000,000.00 | \$2,000,000.00 |
| Border - TUCO Interchange 345KV CKT 1 Balanced Portfolio: TUCO-Woodward 345kV (Total Project E&C Cost Shown) | Previously Allocated | | \$148,727,500.00 |
| Border - Woodward 345KV CKT 1 Balanced Portfolio: TUCO-Woodward 345kV (Total Project E&C Cost Shown) | Previously Allocated | | \$148,727,500.00 |
| Medicine Lodge - Woodward 345KV CKT 1 Priority Project: Med Lodge-Woodward 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$194,972,759.00 |
| Medicine Lodge - Wichita 345KV CKT 1 Priority Project: Spearville-Comanche-Med Lodge-Wichita Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$356,300,000.00 |
| Hitchland - Woodward 345kV CKT 1 Priority Project: Hitchland-Woodward Dbl 345kV CKT (Total Project E&C Cost Shown) | Previously Allocated | | \$247,005,793.00 |
| | Current Study Total | \$2,000,000.00 | |
| GEN-2009-025 | | | |
| GEN-2009-025 Interconnection Costs See Online Diagram | Current Study Allocation | \$2,889,212.00 | \$2,889,212.00 |
| | Current Study Total | \$2,889,212.00 | |

* Current Study Requests' Costs of Previously Allocated Network Upgrades will be determined by a restudy, if necessary.



F: Cost Allocation per Proposed Study Network Upgrade

Appendix F. - Cost Allocation Per Upgrade Facility

| Upgrade Facility | Allocated Costs | E + C Costs |
|--|------------------------|------------------------|
| Albion - Petersburg 115KV CKT1 Line re-rating to 100°C | | \$360,000.00 |
| GEN-2006-044N | \$112,109.85 | |
| GEN-2007-011N6 | \$205,079.00 | |
| GEN-2007-011N9 | \$42,811.15 | |
| Total | \$360,000.00 | |
| Belden - Bloomfield 115KV CKT 1 Construct approximately 45 miles of new 115kV | | \$23,200,000.01 |
| GEN-2006-044N | \$1,181,137.26 | |
| GEN-2007-011N6 | \$2,160,616.94 | |
| GEN-2007-011N9 | \$19,858,245.81 | |
| Total | \$23,200,000.01 | |
| Fort Randall- Kelley 230KV CKT 1 Total E & C Cost for Fort Randall-Madison-Kelly Project | | \$2,900,000.00 |
| GEN-2008-086N2 | \$2,900,000.00 | |
| Total | \$2,900,000.00 | |
| GEN-2006-037N1 Interconnection Costs See Online Diagram | | \$10,000,000.00 |
| GEN-2006-037N1 | \$10,000,000.00 | |
| Total | \$10,000,000.00 | |
| GEN-2006-044N Interconnection Costs See Online Diagram | | \$1,300,000.00 |
| GEN-2006-044N | \$1,300,000.00 | |
| Total | \$1,300,000.00 | |
| GEN-2007-011N6 Interconnection Costs See Online Diagram | | \$500,000.00 |
| GEN-2007-011N6 | \$500,000.00 | |
| Total | \$500,000.00 | |
| GEN-2007-011N9 Interconnection Costs See Online Diagram | | \$500,000.00 |
| GEN-2007-011N9 | \$500,000.00 | |
| Total | \$500,000.00 | |
| GEN-2007-040 Interconnection Costs See Online Diagram | | \$10,404,019.00 |
| GEN-2007-040 | \$10,404,019.00 | |
| Total | \$10,404,019.00 | |

| Upgrade Facility | Allocated Costs | E + C Costs |
|---|------------------------|-----------------------|
| GEN-2008-023 Interconnection Costs See Online Diagram | | \$1,038,000.00 |
| GEN-2008-023 | \$1,038,000.00 | |
| | Total | \$1,038,000.00 |
| GEN-2008-025 Interconnection Costs See Online Diagram | | \$1,767,858.00 |
| GEN-2008-025 | \$1,767,858.00 | |
| | Total | \$1,767,858.00 |
| GEN-2008-029 Interconnection Costs See Online Diagram | | \$4,610,000.00 |
| GEN-2008-029 | \$4,610,000.00 | |
| | Total | \$4,610,000.00 |
| GEN-2008-038 Interconnection Costs See separately posted impact study for all costs | | \$6,843,000.00 |
| GEN-2008-038 | \$6,843,000.00 | |
| | Total | \$6,843,000.00 |
| GEN-2008-051 Interconnection Costs See Online Diagram | | \$2,346,379.00 |
| GEN-2008-051 | \$2,346,379.00 | |
| | Total | \$2,346,379.00 |
| GEN-2008-079 Interconnection Costs See Online Diagram | | \$4,484,903.00 |
| GEN-2008-079 | \$4,484,903.00 | |
| | Total | \$4,484,903.00 |
| GEN-2008-086N2 Interconnection Costs See Online Diagram | | \$6,400,000.00 |
| GEN-2008-086N2 | \$6,400,000.00 | |
| | Total | \$6,400,000.00 |
| GEN-2008-092 Interconnection Costs See Online Diagram | | \$1,140,505.00 |
| GEN-2008-092 | \$1,140,505.00 | |
| | Total | \$1,140,505.00 |
| GEN-2008-124 Interconnection Costs See Online Diagram | | \$7,353,935.00 |
| GEN-2008-124 | \$7,353,935.00 | |
| | Total | \$7,353,935.00 |
| GEN-2008-127 Interconnection Costs See Online Diagram | | \$9,160,000.00 |

| Upgrade Facility | Allocated Costs | E + C Costs |
|--|-----------------------|-----------------------|
| GEN-2008-127 | \$9,160,000.00 | |
| Total | \$9,160,000.00 | |
| <hr/> | | |
| GEN-2008-129 Interconnection Costs | | \$1.00 |
| See Online Diagram | | |
| GEN-2008-129 | \$1.00 | |
| Total | \$1.00 | |
| <hr/> | | |
| GEN-2009-011 Interconnection Costs | | \$3,267,727.00 |
| See Online Diagram | | |
| GEN-2009-011 | \$3,267,727.00 | |
| Total | \$3,267,727.00 | |
| <hr/> | | |
| GEN-2009-016 Interconnection Costs | | \$4,543,000.00 |
| See Online Diagram | | |
| GEN-2009-016 | \$4,543,000.00 | |
| Total | \$4,543,000.00 | |
| <hr/> | | |
| GEN-2009-017 Interconnection Costs** | | \$2,000,000.00 |
| See separately posted study | | |
| GEN-2009-017 | \$2,000,000.00 | |
| Total | \$2,000,000.00 | |
| <hr/> | | |
| GEN-2009-025 Interconnection Costs | | \$2,889,212.00 |
| See Online Diagram | | |
| GEN-2009-025 | \$2,889,212.00 | |
| Total | \$2,889,212.00 | |
| <hr/> | | |
| Judson Large - North Judson Large 115KV CKT 2 | | \$1,500,000.00 |
| Construct approximately 1 mile of new 115kV for 2nd circuit | | |
| GEN-2008-079 | \$1,500,000.00 | |
| Total | \$1,500,000.00 | |
| <hr/> | | |
| KC South - Longview 161KV CKT 1 | | \$150,000.00 |
| Replace terminal equipment to increase limit to conductor rating | | |
| GEN-2008-129 | \$150,000.00 | |
| Total | \$150,000.00 | |
| <hr/> | | |
| Neligh - Petersburg 115KV CKT 1 | | \$540,000.00 |
| Per GEN-2006-044N Impact Restudy | | |
| GEN-2006-044N | \$540,000.00 | |
| Total | \$540,000.00 | |
| <hr/> | | |
| North Judson Large - Spearville 115KV CKT 2 | | \$8,000,000.00 |
| Construct approximately 15 miles of new 115kV for 2nd circuit | | |
| GEN-2008-079 | \$8,000,000.00 | |
| Total | \$8,000,000.00 | |

| Upgrade Facility | Allocated Costs | E + C Costs |
|---|------------------------|-------------------------|
| Petersburg - Madison 115KV CKT 1 | | \$22,400,000.00 |
| Construct approximately 35 miles of new 115kV | | |
| GEN-2006-044N | \$7,341,838.67 | |
| GEN-2007-011N6 | \$13,430,192.68 | |
| GEN-2007-011N9 | \$1,627,968.65 | |
| Total | \$22,400,000.00 | |
| Spearville (SPEARVL2) 345/230/13.8KV Transformer CKT 1 | | \$6,700,000.00 |
| Install 345/230/13.8kV Transformer CKT 1 | | |
| GEN-2008-079 | \$6,700,000.00 | |
| Total | \$6,700,000.00 | |
| Current Study Upgrades Total | | \$146,298,539.01 |

G: ACCC Analysis (No Upgrades)

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|------------|--------|----------|-----------|---------------------------------------|-------|---------|------------|---|
| 09G06_044N | 11G | G06_044N | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.9928 | 166.6058 | ALBION - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.99489 | 166.5373 | NELIGH - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 11WP | G06_044N | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.99301 | 166.413 | ALBION - PETERSBURG 115KV CKT 1 |
| 09G06_044N | 11G | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.9928 | 166.3472 | NELIGH - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 11WP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.99301 | 165.862 | NELIGH - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.99489 | 165.5498 | ALBION - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 16WP | G06_044N | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.99363 | 156.1205 | ALBION - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.99528 | 155.4223 | NELIGH - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 16WP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.99363 | 155.1776 | NELIGH - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.99528 | 155.0683 | ALBION - PETERSBURG 115KV CKT 1 |
| 9 | 11G | G06_044N | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.99423 | 134.3441 | ALBION - PETERSBURG 115KV CKT 1 |
| 9 | 11G | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.99423 | 134.111 | NELIGH - PETERSBURG 115KV CKT 1 |
| 09G06_044N | 11G | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.51383 | 118.7151 | BLOOMFIELD - GAVINS POINT 115KV CKT 1 |
| 09G06_044N | 11G | G06_044N | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.25335 | 117.8514 | ALBION - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 11WP | G06_044N | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.72309 | 116.4344 | ALBION - GENOA 115KV CKT 1 |
| 09G06_044N | 11G | G06_044N | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21288 | 115.7916 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 09G06_044N | 11G | G06_044N | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21288 | 115.7468 | LN-1163 |
| 09G06_044N | 11G | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57366 | 115.6647 | LN-1163 |
| 09G06_044N | 11G | G06_044N | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21288 | 115.648 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 09G06_044N | 11G | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57366 | 115.6035 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 09G06_044N | 11G | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57366 | 115.4257 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57576 | 115.2468 | LN-1163 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57576 | 115.0131 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 09G06_044N | 11G | G06_044N | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21288 | 114.1732 | BATTLE CREEK - NORTH NORFOLK 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57576 | 113.8673 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 09G06_044N | 11G | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57366 | 113.5994 | BATTLE CREEK - NORTH NORFOLK 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.40411 | 110.8512 | LOUP CITY - NORTH LOUP 115KV CKT 1 |
| 9 | 11G | G06_044N | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.25372 | 109.8134 | ALBION - PETERSBURG 115KV CKT 1 |
| 09G06_044N | 11G | G06_044N | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.72341 | 109.474 | ALBION - GENOA 115KV CKT 1 |
| 9 | 11G | G06_044N | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21319 | 109.0832 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 109.0677 | CREIGHTON 115/69KV TRANSFORMER CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.46089 | 109.0418 | GRAND ISLAND - ST LIBORY 115KV CKT 1 |
| 9 | 11G | G06_044N | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21319 | 109.0362 | LN-1163 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.40359 | 108.9595 | LOUP CITY - NORTH LOUP 115KV CKT 1 |
| 9 | 11G | G06_044N | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21319 | 108.9378 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47836 | 108.3819 | FT THOMPSON - GRAND ISLAND 345KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 108.2063 | NELIGH 115/69KV TRANSFORMER CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47506 | 108.094 | CALLAWAY - MAXWELL 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47764 | 107.9362 | KELLY - MADISONCO 230.00 230KV CKT 1 |
| 00G06_044N | 11WP | G06_044N | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.72309 | 107.9279 | COLUMBUS - GENOA 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 107.7058 | GEN640010 1-GERALD GENTLEMAN STATION UNIT 1 |
| 9 | 11G | G06_044N | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21319 | 107.4585 | BATTLE CREEK - NORTH NORFOLK 115KV CKT 1 |
| 00G06_044N | 16WP | G06_044N | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.71894 | 107.3804 | ALBION - GENOA 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 107.3066 | GEN640011 2-GERALD GENTLEMAN STATION UNIT 2 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47875 | 107.2679 | NEB02WAPAB2 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.4636 | 107.2368 | BROKEN BOW - LOUP CITY 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47767 | 107.0405 | FT RANDAL - MADISONCO 230.00 230KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 106.7898 | NELIGH 115/34.5KV TRANSFORMER CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.46089 | 106.7445 | LOUP CITY - ST LIBORY 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 106.6696 | BATTLE CREEK 115/69KV TRANSFORMER CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.46089 | 106.6668 | LN-1169 |
| 09G06_044N | 11G | G06_044N | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.72341 | 106.4764 | COLUMBUS - GENOA 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.48516 | 106.4511 | GAVINS POINT - YANKON JCT 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57629 | 106.2237 | LN-1163 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57629 | 106.0428 | COUNTY LINE - NELIGH 115KV CKT 1 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|------------|--------|-----------|-----------|--|-------|---------|------------|---|
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.27507 | 105.2898 | COLUMBUS - GENOA 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57629 | 104.871 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 103.8577 | BASE CASE |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 103.7803 | CREIGHTON 115/69KV TRANSFORMER CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47952 | 103.1458 | FT THOMPSON - GRAND ISLAND 345KV CKT 1 |
| 09G06_044N | 11G | G06_044N | TO->FROM | COUNTY LINE - NELIGH 115KV CKT 1 | 120 | 0.31075 | 103.1428 | BLOOMFIELD - GAVINS POINT 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 102.74 | ERICSON7 115.00 - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 102.6398 | NELIGH 115/69KV TRANSFORMER CKT 1 |
| 00G06_044N | 11WP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57443 | 102.5957 | LN-1163 |
| 09G06_044N | 11G | G06_044N | TO->FROM | BATTLE CREEK - COUNTY LINE 115KV CKT 1 | 120 | 0.31075 | 102.5579 | BLOOMFIELD - GAVINS POINT 115KV CKT 1 |
| 00G06_044N | 11WP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57443 | 102.5372 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 102.3709 | ERICSON7 115.00 115/6.9KV TRANSFORMER CKT 1 |
| 00G06_044N | 11WP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57443 | 102.3218 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47877 | 102.2162 | KELLY - MADISONCO 230.00 230KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 102.1655 | GEN640010 1-GERALD GENTLEMAN STATION UNIT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.4604 | 102.0886 | LOUP CITY - ST LIBORY 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.4604 | 101.9828 | LN-1169 |
| 00G06_044N | 11WP | G06_044N | FROM->TO | ALBION - GENOA 115KV CKT 1 | 113 | 0.67066 | 101.9657 | NELIGH - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47656 | 101.9315 | CALLAWAY - MAXWELL 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47991 | 101.5847 | NEB02WAPAB2 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 101.4967 | GEN640011 2-GERALD GENTLEMAN STATION UNIT 2 |
| 9 | 11G | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.51457 | 101.4562 | BLOOMFIELD - GAVINS POINT 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.46694 | 101.4036 | BROKEN BOW - LOUP CITY 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.4788 | 101.371 | FT RANDAL - MADISONCO 230.00 230KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.48047 | 101.2857 | LN-1090 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.48047 | 101.2672 | CALAMUS - THEDFORD 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 101.2209 | NELIGH 115/34.5KV TRANSFORMER CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 101.0425 | BATTLE CREEK 115/69KV TRANSFORMER CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.48047 | 100.9411 | MAXWELL - THEDFORD 115KV CKT 1 |
| 00G06_044N | 16SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47991 | 100.623 | GAVINS POINT - HARTINGTON 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 100.5679 | SPALDING 115/34.5KV TRANSFORMER CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47803 | 100.3204 | TRF-STEGALL |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47803 | 100.3202 | NEB01WAPAB3 |
| 09G06_044N | 11G | G06_044N | TO->FROM | COUNTY LINE - NELIGH 115KV CKT 1 | 120 | 0.48766 | 100.1901 | ALBION - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 11SP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.48305 | 100 | TRF-HOSKINS |
| 00G06_044N | 11WP | G06_044N | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57443 | 100 | BATTLE CREEK - NORTH NORFOLK 115KV CKT 1 |
| 09G06_044N | 11G | G07_011N6 | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.9928 | 166.6058 | ALBION - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.99489 | 166.5373 | NELIGH - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 11WP | G07_011N6 | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.99301 | 166.413 | ALBION - PETERSBURG 115KV CKT 1 |
| 09G06_044N | 11G | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.9928 | 166.3472 | NELIGH - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 11WP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.99301 | 165.862 | NELIGH - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.99489 | 165.5498 | ALBION - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 16WP | G07_011N6 | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.99363 | 156.1205 | ALBION - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.99528 | 155.4223 | NELIGH - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 16WP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.99363 | 155.1776 | NELIGH - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.99528 | 155.0683 | ALBION - PETERSBURG 115KV CKT 1 |
| 9 | 11G | G07_011N6 | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.99423 | 134.3441 | ALBION - PETERSBURG 115KV CKT 1 |
| 9 | 11G | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.99423 | 134.111 | NELIGH - PETERSBURG 115KV CKT 1 |
| 09G06_044N | 11G | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.51383 | 118.7151 | BLOOMFIELD - GAVINS POINT 115KV CKT 1 |
| 09G06_044N | 11G | G07_011N6 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.25335 | 117.8514 | ALBION - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 11WP | G07_011N6 | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.72309 | 116.4344 | ALBION - GENOA 115KV CKT 1 |
| 09G06_044N | 11G | G07_011N6 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21288 | 115.7916 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 09G06_044N | 11G | G07_011N6 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21288 | 115.7468 | LN-1163 |
| 09G06_044N | 11G | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57366 | 115.6647 | LN-1163 |
| 09G06_044N | 11G | G07_011N6 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21288 | 115.648 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|------------|--------|-----------|-----------|--|-------|---------|------------|---|
| 09G06_044N | 11G | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57366 | 115.6035 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 09G06_044N | 11G | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57366 | 115.4257 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57576 | 115.2468 | LN-1163 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57576 | 115.0131 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 09G06_044N | 11G | G07_011N6 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21288 | 114.1732 | BATTLE CREEK - NORTH NORFOLK 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57576 | 113.8673 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 09G06_044N | 11G | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57366 | 113.5994 | BATTLE CREEK - NORTH NORFOLK 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.40411 | 110.8512 | LOUP CITY - NORTH LOUP 115KV CKT 1 |
| 9 | 11G | G07_011N6 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.25372 | 109.8134 | ALBION - PETERSBURG 115KV CKT 1 |
| 09G06_044N | 11G | G07_011N6 | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.72341 | 109.474 | ALBION - GENOA 115KV CKT 1 |
| 9 | 11G | G07_011N6 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21319 | 109.0832 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 109.0677 | CREIGHTON 115/69KV TRANSFORMER CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.46089 | 109.0418 | GRAND ISLAND - ST LIBORY 115KV CKT 1 |
| 9 | 11G | G07_011N6 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21319 | 109.0362 | LN-1163 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.40359 | 108.9595 | LOUP CITY - NORTH LOUP 115KV CKT 1 |
| 9 | 11G | G07_011N6 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21319 | 108.9378 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47836 | 108.3819 | FT THOMPSON - GRAND ISLAND 345KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 108.2063 | NELIGH 115/69KV TRANSFORMER CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47506 | 108.094 | CALLAWAY - MAXWELL 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47764 | 107.9362 | KELLY - MADISONCO 230.00 230KV CKT 1 |
| 00G06_044N | 11WP | G07_011N6 | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.72309 | 107.9279 | COLUMBUS - GENOA 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 107.7058 | GEN640010 1-GERALD GENTLEMAN STATION UNIT 1 |
| 9 | 11G | G07_011N6 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.21319 | 107.4585 | BATTLE CREEK - NORTH NORFOLK 115KV CKT 1 |
| 00G06_044N | 16WP | G07_011N6 | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.71894 | 107.3804 | ALBION - GENOA 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 107.3066 | GEN640011 2-GERALD GENTLEMAN STATION UNIT 2 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47875 | 107.2679 | NEB02WAPAB2 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.4636 | 107.2368 | BROKEN BOW - LOUP CITY 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47767 | 107.0405 | FT RANDAL - MADISONCO 230.00 230KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 106.7898 | NELIGH 115/34.5KV TRANSFORMER CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.46089 | 106.7445 | LOUP CITY - ST LIBORY 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 106.6696 | BATTLE CREEK 115/69KV TRANSFORMER CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.46089 | 106.6668 | LN-1169 |
| 09G06_044N | 11G | G07_011N6 | TO->FROM | NELIGH - PETERSBURG 115KV CKT 1 | 113 | 0.72341 | 106.4764 | COLUMBUS - GENOA 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.48516 | 106.4511 | GAVINS POINT - YANKON JCT 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57629 | 106.2237 | LN-1163 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57629 | 106.0428 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.27507 | 105.2898 | COLUMBUS - GENOA 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57629 | 104.871 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 103.8577 | BASE CASE |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 103.7803 | CREIGHTON 115/69KV TRANSFORMER CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47952 | 103.1458 | FT THOMPSON - GRAND ISLAND 345KV CKT 1 |
| 09G06_044N | 11G | G07_011N6 | TO->FROM | COUNTY LINE - NELIGH 115KV CKT 1 | 120 | 0.31075 | 103.1428 | BLOOMFIELD - GAVINS POINT 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 102.74 | ERICSON7 115.00 - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 102.6398 | NELIGH 115/69KV TRANSFORMER CKT 1 |
| 00G06_044N | 11WP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57443 | 102.5957 | LN-1163 |
| 09G06_044N | 11G | G07_011N6 | TO->FROM | BATTLE CREEK - COUNTY LINE 115KV CKT 1 | 120 | 0.31075 | 102.5579 | BLOOMFIELD - GAVINS POINT 115KV CKT 1 |
| 00G06_044N | 11WP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57443 | 102.5372 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 102.3709 | ERICSON7 115.00 115/6.9KV TRANSFORMER CKT 1 |
| 00G06_044N | 11WP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57443 | 102.3218 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47877 | 102.2162 | KELLY - MADISONCO 230.00 230KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 102.1655 | GEN640010 1-GERALD GENTLEMAN STATION UNIT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.4604 | 102.0886 | LOUP CITY - ST LIBORY 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.4604 | 101.9828 | LN-1169 |
| 00G06_044N | 11WP | G07_011N6 | FROM->TO | ALBION - GENOA 115KV CKT 1 | 113 | 0.67066 | 101.9657 | NELIGH - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47656 | 101.9315 | CALLAWAY - MAXWELL 115KV CKT 1 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|-------------|--------|-----------|-----------|---------------------------------------|-------|---------|------------|---|
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47991 | 101.5847 | NEB02WAPAB2 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 101.4967 | GEN640011 2-GERALD GENTLEMAN STATION UNIT 2 |
| 9 | 11G | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.51457 | 101.4562 | BLOOMFIELD - GAVINS POINT 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.46694 | 101.4036 | BROKEN BOW - LOUP CITY 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.4788 | 101.371 | FT RANDAL - MADISONCO 230.00 230KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.48047 | 101.2857 | LN-1090 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.48047 | 101.2672 | CALAMUS - THEDFORD 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 101.2209 | NELIGH 115/34.5KV TRANSFORMER CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47889 | 101.0425 | BATTLE CREEK 115/69KV TRANSFORMER CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.48047 | 100.9411 | MAXWELL - THEDFORD 115KV CKT 1 |
| 00G06_044N | 16SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47991 | 100.623 | GAVINS POINT - HARTINGTON 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47769 | 100.5679 | SPALDING 115/34.5KV TRANSFORMER CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47803 | 100.3204 | TRF-STEGALL |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.47803 | 100.3202 | NEB01WAPAB3 |
| 09G06_044N | 11G | G07_011N6 | TO->FROM | COUNTY LINE - NELIGH 115KV CKT 1 | 120 | 0.48766 | 100.1901 | ALBION - PETERSBURG 115KV CKT 1 |
| 00G06_044N | 11SP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.48305 | 100 | TRF-HOSKINS |
| 00G06_044N | 11WP | G07_011N6 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.57443 | 100 | BATTLE CREEK - NORTH NORFOLK 115KV CKT 1 |
| 00G07_011N9 | 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43551 | 148.0526 | NEB02WAPAB2 |
| 00G07_011N9 | 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43551 | 147.6557 | GAVINS POINT - HARTINGTON 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43425 | 143.0508 | NEB02WAPAB2 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43425 | 142.8054 | GAVINS POINT - HARTINGTON 115KV CKT 1 |
| 00G07_011N9 | 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38854 | 139.2606 | MANNING - SPIRIT MOUND 115KV CKT 1 |
| 00G07_011N9 | 16WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43528 | 138.4793 | NEB02WAPAB2 |
| 00G07_011N9 | 16WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43528 | 138.0339 | GAVINS POINT - HARTINGTON 115KV CKT 1 |
| 00G07_011N9 | 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.32253 | 135.5899 | FT RANDAL - UTICA JCT 230KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.99361 | 134.0497 | BLOOMFIELD - CREIGHTON 115KV CKT 1 |
| 9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43449 | 133.9638 | NEB02WAPAB2 |
| 9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43449 | 133.7081 | GAVINS POINT - HARTINGTON 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38735 | 132.9614 | GAVINS POINT - YANKTON 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38735 | 132.9572 | SPIRIT MOUND - YANKTON 115KV CKT 1 |
| 00G07_011N9 | 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38854 | 131.6062 | BERSFORD - MANNING 115KV CKT 1 |
| 00G07_011N9 | 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.48884 | 126.4514 | BLOOMFIELD - CREIGHTON 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.32148 | 125.3805 | FT RANDAL - UTICA JCT 230KV CKT 1 |
| 9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38757 | 124.9323 | GAVINS POINT - YANKTON 115KV CKT 1 |
| 9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38757 | 124.9279 | SPIRIT MOUND - YANKTON 115KV CKT 1 |
| 00G07_011N9 | 16WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.32279 | 123.496 | FT RANDAL - UTICA JCT 230KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.99361 | 123.0873 | CREIGHTON - NELIGH 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38735 | 123.0308 | MANNING - SPIRIT MOUND 115KV CKT 1 |
| 00G07_011N9 | 16WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38891 | 122.2695 | MANNING - SPIRIT MOUND 115KV CKT 1 |
| 9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.99416 | 122.2315 | BLOOMFIELD - CREIGHTON 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43425 | 121.8465 | BELDEN - HARTINGTON 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.48785 | 118.9203 | BLOOMFIELD - CREIGHTON 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.70779 | 118.6675 | ALBION - PETERSBURG 115KV CKT 1 |
| 9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.32166 | 118.6301 | FT RANDAL - UTICA JCT 230KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.7259 | 117.8618 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.7259 | 117.8152 | LN-1163 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.7259 | 117.7155 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 00G07_011N9 | 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43551 | 117.5836 | BELDEN - HARTINGTON 115KV CKT 1 |
| 00G07_011N9 | 16WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.48931 | 117.3481 | BLOOMFIELD - CREIGHTON 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.7259 | 116.2388 | BATTLE CREEK - NORTH NORFOLK 115KV CKT 1 |
| 9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38757 | 115.0068 | MANNING - SPIRIT MOUND 115KV CKT 1 |
| 00G07_011N9 | 16WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38891 | 114.4416 | BERSFORD - MANNING 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38735 | 113.2613 | BERSFORD - MANNING 115KV CKT 1 |
| 00G07_011N9 | 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.48884 | 113.016 | CREIGHTON - NELIGH 115KV CKT 1 |
| 9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43449 | 112.767 | BELDEN - HARTINGTON 115KV CKT 1 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|-------------|--------|-----------|-----------|--|-------|---------|------------|---|
| | 9 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.99416 | 111.2448 | CREIGHTON - NELIGH 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.48785 | 110.1806 | CREIGHTON - NELIGH 115KV CKT 1 |
| | 9 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.70818 | 109.8134 | ALBION - PETERSBURG 115KV CKT 1 |
| | 9 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.7263 | 109.0832 | COUNTY LINE - NELIGH 115KV CKT 1 |
| | 9 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.48812 | 109.0595 | BLOOMFIELD - CREIGHTON 115KV CKT 1 |
| | 9 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.7263 | 109.0362 | LN-1163 |
| | 9 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.7263 | 108.9378 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.35613 | 108.2434 | ALBION - PETERSBURG 115KV CKT 1 |
| | 9 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.7263 | 107.4585 | BATTLE CREEK - NORTH NORFOLK 115KV CKT 1 |
| 00G07_011N9 | 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38854 | 106.9227 | BERSFORD - SIOUX FALLS 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | CREIGHTON - NELIGH 115KV CKT 1 | 143 | 0.99361 | 106.7539 | BLOOMFIELD - GAVINS POINT 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.69171 | 106.5351 | ALBION - GENOA 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.69171 | 105.8154 | COLUMBUS - GENOA 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.68108 | 105.6449 | CREIGHTON 115/69KV TRANSFORMER CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.29922 | 105.393 | BLOOMFIELD - GAVINS POINT 115KV CKT 1 |
| | 9 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38757 | 105.2453 | BERSFORD - MANNING 115KV CKT 1 |
| 00G07_011N9 | 16WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43528 | 105.1002 | BELDEN - HARTINGTON 115KV CKT 1 |
| | 0 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43655 | 105.0267 | NEB02WAPAB2 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.69795 | 104.8855 | CLEARWATER - NELIGH 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.69795 | 104.8598 | LN-1164 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.6771 | 104.6839 | FT RANDAL - UTICA JCT 230KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.35983 | 104.6424 | LN-1163 |
| | 0 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.43655 | 104.5888 | GAVINS POINT - HARTINGTON 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.69795 | 104.5562 | CLEARWATER - ONEILL 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.35983 | 104.4354 | COUNTY LINE - NELIGH 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.68108 | 104.3975 | BLOOMFIELD 115/69KV TRANSFORMER CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - CREIGHTON 115KV CKT 1 | 159 | 0.99361 | 104.3567 | BLOOMFIELD - GAVINS POINT 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.35983 | 104.3276 | BATTLE CREEK - COUNTY LINE 115KV CKT 1 |
| | 0 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.3233 | 103.6971 | FT RANDAL - UTICA JCT 230KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.35983 | 103.3269 | BATTLE CREEK - NORTH NORFOLK 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.6794 | 103.1796 | RAUN - SIOUX CITY 345KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.68108 | 103.0408 | GAVINS POINT 115/13.8KV TRANSFORMER CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.68108 | 103.0408 | GAVINS POINT 115/13.8KV TRANSFORMER CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.68108 | 102.9742 | GAVINS POINT 115/13.8KV TRANSFORMER CKT 1 |
| 00G07_011N9 | 16WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.48931 | 102.1939 | CREIGHTON - NELIGH 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.34135 | 102.0709 | HARTINGTON 115/69KV TRANSFORMER CKT 1 |
| | 0 11WP | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.38947 | 101.5993 | MANNING - SPIRIT MOUND 115KV CKT 1 |
| | 9 11G | G07_011N9 | TO->FROM | ALBION - PETERSBURG 115KV CKT 1 | 113 | 0.29939 | 101.4562 | BLOOMFIELD - GAVINS POINT 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.34135 | 101.1503 | BASE CASE |
| | 9 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.35633 | 100.9012 | ALBION - PETERSBURG 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.35949 | 100.6362 | BELDEN - TWIN CHURCH 115KV CKT 1 |
| 09G07_011N9 | 11G | G07_011N9 | FROM->TO | BLOOMFIELD - GAVINS POINT 115KV CKT 1 | 120 | 0.68108 | 100.4838 | BASE CASE |
| 09G07_011N9 | 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.34135 | 100.4286 | TYNDALL 115/69KV TRANSFORMER CKT 1 |
| | 9 11G | G07_011N9 | TO->FROM | UTICA - YANKON JCT 115KV CKT 1 | 66 | 0.48812 | 100.256 | CREIGHTON - NELIGH 115KV CKT 1 |
| 07G08_023 | 11G | G08_023 | TO->FROM | CARNEGIE - HOBART JUNCTION 138KV CKT 1 | 143 | 0.44864 | 104.6587 | HOBART JUNCTION - OMPA-ALTUS TAMARACK 138KV CKT 1 |
| 07G08_023 | 11G | G08_023 | TO->FROM | CARNEGIE - HOBART JUNCTION 138KV CKT 1 | 143 | 0.44864 | 101.3335 | OMPA-ALTUS TAMARACK - OMPVET-4 138.00 138KV CKT 1 |
| 04G08_025 | 11G | G08_025 | TO->FROM | CITIES SERVICE TAP - CNTRLPL3 115.00 115KV CKT 1 | 143 | 0.19247 | 107.9194 | CNTRLPL3 115.00 - SETAB 115KV CKT 1 |
| 04G08_025 | 11G | G08_025 | FROM->TO | CNTRLPL3 115.00 - SETAB 115KV CKT 1 | 143 | 0.19247 | 107.8909 | CITIES SERVICE TAP - CNTRLPL3 115.00 115KV CKT 1 |
| 04G08_025 | 11G | G08_025 | FROM->TO | CNTRLPL3 115.00 - SETAB 115KV CKT 1 | 143 | 0.19247 | 107.5177 | SPP-SUNC-12 |
| | 4 11G | G08_025 | TO->FROM | CITIES SERVICE TAP - CNTRLPL3 115.00 115KV CKT 1 | 143 | 0.19262 | 105.2398 | CNTRLPL3 115.00 - SETAB 115KV CKT 1 |
| | 4 11G | G08_025 | FROM->TO | CNTRLPL3 115.00 - SETAB 115KV CKT 1 | 143 | 0.19262 | 105.2113 | CITIES SERVICE TAP - CNTRLPL3 115.00 115KV CKT 1 |
| | 4 11G | G08_025 | FROM->TO | CNTRLPL3 115.00 - SETAB 115KV CKT 1 | 143 | 0.19262 | 104.838 | SPP-SUNC-12 |
| 04G08_025 | 11G | G08_025 | FROM->TO | CNTRLPL3 115.00 - SETAB 115KV CKT 1 | 143 | 0.19247 | 104.586 | CITIES SERVICE TAP - SETAB 115KV CKT 1 |
| 04G08_025 | 11G | G08_025 | FROM->TO | CITIES SERVICE TAP - SETAB 115KV CKT 1 | 143 | 0.19247 | 104.1862 | CNTRLPL3 115.00 - SETAB 115KV CKT 1 |
| | 4 11G | G08_025 | FROM->TO | CNTRLPL3 115.00 - SETAB 115KV CKT 1 | 143 | 0.19262 | 101.9129 | CITIES SERVICE TAP - SETAB 115KV CKT 1 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|-----------|--------|---------|-----------|--|-------|---------|------------|--|
| | 4 11G | G08_025 | FROM->TO | CITIES SERVICE TAP - SETAB 115KV CKT 1 | 143 | 0.19262 | 101.5092 | CNTRLPL3 115.00 - SETAB 115KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | FAIRFAX 138/69KV TRANSFORMER CKT 1 | 56 | 0.2147 | 196.7872 | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | FAIRFAX 138/69KV TRANSFORMER CKT 1 | 56 | 0.2147 | 190.1557 | OSAGE - WEBB CITY TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.77979 | 188.7845 | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | FAIRFAX 138/69KV TRANSFORMER CKT 1 | 56 | 0.21494 | 184.8826 | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.77979 | 181.296 | OSAGE - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | FAIRFAX 138/69KV TRANSFORMER CKT 1 | 56 | 0.21494 | 178.0347 | OSAGE - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.78066 | 172.123 | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.78066 | 164.6938 | OSAGE - WEBB CITY TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.82427 | 159.8028 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.82427 | 159.3558 | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.82427 | 155.4954 | DOMES - PAWHUSKA TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.82427 | 154.1579 | DOMES - MOUND ROAD 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.82427 | 148.7054 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.82427 | 148.3083 | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 |
| 8 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.82519 | 145.6963 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 8 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.82519 | 145.2514 | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.82427 | 144.8777 | DOMES - PAWHUSKA TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.82427 | 143.6906 | DOMES - MOUND ROAD 138KV CKT 1 |
| 8 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.82519 | 141.4327 | DOMES - PAWHUSKA TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 | 192 | 0.77979 | 140.1267 | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.82519 | 140.0961 | DOMES - MOUND ROAD 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.82519 | 136.1785 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | DOMES - PAWHUSKA TAP 138KV CKT 1 | 192 | 0.77979 | 135.851 | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.82519 | 135.7836 | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 | 192 | 0.77979 | 134.5468 | OSAGE - WEBB CITY TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | DOMES - MOUND ROAD 138KV CKT 1 | 192 | 0.77979 | 134.4417 | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.82519 | 132.3946 | DOMES - PAWHUSKA TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.82519 | 131.2085 | DOMES - MOUND ROAD 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | DOMES - PAWHUSKA TAP 138KV CKT 1 | 192 | 0.77979 | 130.2856 | OSAGE - WEBB CITY TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | DOMES - MOUND ROAD 138KV CKT 1 | 192 | 0.77979 | 128.8785 | OSAGE - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | TO->FROM | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 | 192 | 0.78066 | 127.715 | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1 | 133 | 0.55163 | 124.8901 | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | TO->FROM | DOMES - PAWHUSKA TAP 138KV CKT 1 | 192 | 0.78066 | 123.4729 | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | TO->FROM | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 | 192 | 0.78066 | 122.1806 | OSAGE - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | DOMES - MOUND ROAD 138KV CKT 1 | 192 | 0.78066 | 122.0681 | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1 | 133 | 0.55163 | 119.292 | OSAGE - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | TO->FROM | DOMES - PAWHUSKA TAP 138KV CKT 1 | 192 | 0.78066 | 117.9527 | OSAGE - WEBB CITY TAP 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | DOMES - MOUND ROAD 138KV CKT 1 | 192 | 0.78066 | 116.5534 | OSAGE - WEBB CITY TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.52558 | 115.3168 | ASGI-10-06 138.00 - FAIRFAX 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.52558 | 115.3035 | FAIRFAX 138/69KV TRANSFORMER CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.46891 | 114.2439 | ASGI-10-06 138.00 - FAIRFAX 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.46891 | 114.2365 | FAIRFAX 138/69KV TRANSFORMER CKT 1 |
| 8 | 11G | G08_038 | TO->FROM | BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1 | 133 | 0.55224 | 112.4584 | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 109.6518 | GEN511839 1-NORTHEASTERN STATION #2 |
| 08G08_038 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.52558 | 109.2209 | ASGI-10-06 138.00 - FAIRFAX 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.52558 | 109.2092 | FAIRFAX 138/69KV TRANSFORMER CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.46808 | 109.0509 | GEN514805 1-SOONER UNIT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.46808 | 108.4 | SOONER 138/22.0KV TRANSFORMER CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.46808 | 107.2111 | BASE CASE |
| 8 | 11G | G08_038 | TO->FROM | BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1 | 133 | 0.55224 | 106.9303 | OSAGE - WEBB CITY TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.56472 | 106.7729 | BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1 |
| 8 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.52617 | 105.94 | ASGI-10-06 138.00 - FAIRFAX 138KV CKT 1 |
| 8 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.52617 | 105.9273 | FAIRFAX 138/69KV TRANSFORMER CKT 1 |
| 00G08_038 | 11WP | G08_038 | FROM->TO | G08-38T 138.00 - SHIDLER 138KV CKT 1 | 143 | 0.99465 | 105.4454 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|-----------|--------|---------|-----------|--|-------|---------|------------|--|
| 00G08_038 | 16WP | G08_038 | FROM->TO | G08-38T 138.00 - SHIDLER 138KV CKT 1 | 143 | 0.99513 | 105.4043 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.45609 | 105.3618 | SOONER (SOONERS) 345/138/13.8KV TRANSFORMER CKT 1 |
| 00G08_038 | 11SP | G08_038 | FROM->TO | G08-38T 138.00 - SHIDLER 138KV CKT 1 | 143 | 0.99609 | 105.3513 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 00G08_038 | 16SP | G08_038 | FROM->TO | G08-38T 138.00 - SHIDLER 138KV CKT 1 | 143 | 0.99639 | 105.3212 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 00G08_038 | 16SP | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.99639 | 105.2314 | G08-38T 138.00 - SHIDLER 138KV CKT 1 |
| 00G08_038 | 11SP | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.99609 | 105.175 | G08-38T 138.00 - SHIDLER 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - SHIDLER 138KV CKT 1 | 143 | 0.99449 | 105.1146 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 00G08_038 | 16WP | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.99513 | 105.0801 | G08-38T 138.00 - SHIDLER 138KV CKT 1 |
| 00G08_038 | 11WP | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.99465 | 105.0631 | G08-38T 138.00 - SHIDLER 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.99449 | 105.0052 | G08-38T 138.00 - SHIDLER 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.46942 | 104.7874 | ASGI-10-06 138.00 - FAIRFAX 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.46942 | 104.7805 | FAIRFAX 138/69KV TRANSFORMER CKT 1 |
| 00G08_038 | 16WP | G08_038 | FROM->TO | G08-38T 138.00 - SHIDLER 138KV CKT 1 | 143 | 0.99513 | 104.7266 | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 |
| 00G08_038 | 11WP | G08_038 | FROM->TO | G08-38T 138.00 - SHIDLER 138KV CKT 1 | 143 | 0.99465 | 104.6199 | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 |
| 00G08_038 | 16SP | G08_038 | FROM->TO | G08-38T 138.00 - SHIDLER 138KV CKT 1 | 143 | 0.99639 | 104.462 | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - SHIDLER 138KV CKT 1 | 143 | 0.99449 | 104.4229 | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 |
| 00G08_038 | 11SP | G08_038 | FROM->TO | G08-38T 138.00 - SHIDLER 138KV CKT 1 | 143 | 0.99609 | 104.3657 | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43286 | 104.0081 | CLEVELAND - SOONER 345KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.44128 | 103.9545 | KILDARE4 - NEWKIRK4 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43549 | 103.7506 | MORRISON - STILLWATER 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.46808 | 103.7342 | GEN514805 1-SOONER UNIT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.44128 | 103.5999 | NEWKIRK4 - PECKHMT4 138.00 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.44128 | 103.599 | CRESWELL - PECKHMT4 138.00 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43079 | 103.4871 | COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43079 | 103.4856 | DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.41993 | 103.3612 | NORTHEAST STATION - RICE CREEK 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43166 | 103.0062 | NEOSHO (NEOSHO1X) 345/138/13.8KV TRANSFORMER CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.41993 | 102.9083 | BARTLESVILLE SOUTHEAST - RICE CREEK 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.44696 | 102.6828 | FAIRFAX - PAWNEE 69KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.4443 | 102.6532 | FAIRFAX - NAVAL RESERVE 69KV CKT 1 |
| 00G08_038 | 11WP | G08_038 | TO->FROM | FAIRFAX TAP - SHIDLER 138KV CKT 1 | 143 | 0.99465 | 102.3775 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 102.2559 | GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2 |
| 00G08_038 | 16WP | G08_038 | TO->FROM | FAIRFAX TAP - SHIDLER 138KV CKT 1 | 143 | 0.99513 | 102.2301 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43312 | 102.2007 | G05-16T 345.00 - NEOSHO 345KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43497 | 102.1876 | MCELROY - STILLWATER 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43798 | 102.0289 | KILDARE4 - WHITE EAGLE 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.9395 | GEN336153 1-WATERFORD UNIT#3 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.4443 | 101.7929 | NAVAL RESERVE - PAWYA 69KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.42867 | 101.7754 | TULSA NORTH (TULSA N) 345/138/13.8KV TRANSFORMER CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.7724 | GEN511837 1-NORTHEASTERN STATION # 1-1A |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.7723 | GEN511838 1-NORTHEASTERN STATION # 1-1B |
| 08G08_038 | 11G | G08_038 | TO->FROM | FAIRFAX TAP - SHIDLER 138KV CKT 1 | 143 | 0.99449 | 101.7072 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43497 | 101.6976 | KINZE - MCELROY 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.663 | GEN509394 1-FLINT CREEK |
| 08G08_038 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.56472 | 101.6492 | BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1 |
| 00G08_038 | 11WP | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.99465 | 101.6258 | FAIRFAX TAP - SHIDLER 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.6253 | GEN512689 1-GRDA1 GSU1 22 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.5599 | GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1 |
| 00G08_038 | 16WP | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.99513 | 101.5563 | FAIRFAX TAP - SHIDLER 138KV CKT 1 |
| 00G08_038 | 16WP | G08_038 | TO->FROM | FAIRFAX TAP - SHIDLER 138KV CKT 1 | 143 | 0.99513 | 101.5515 | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 |
| 00G08_038 | 11WP | G08_038 | TO->FROM | FAIRFAX TAP - SHIDLER 138KV CKT 1 | 143 | 0.99465 | 101.5509 | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.4443 | 101.3856 | 2PRSHNGTP 69.000 - PAWYA 69KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.3704 | GEN511841 1-NORTHEASTERN STATION #4 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.3555 | GEN511836 1-NORTHEASTERN STATION #1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.3333 | GEN511840 1-NORTHEASTERN STATION #3 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|-----------|--------|---------|-----------|--|-------|---------|------------|---|
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.42592 | 101.3082 | NORTHEAST STATION - WATOVA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43259 | 101.2383 | LACYGNE - NEOSHO 345KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.4443 | 101.2024 | 2PRSHNGTP 69.000 - TALLANT 69KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.1921 | GEN512688 2-GRDA1 GSU2 22 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.1413 | GEN338143 1-INDEPENDENCE UNIT #1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.1364 | SHIDWFC4 138.00 - WEBB CITY TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 101.0982 | GEN338146 1-INDEPENDENCE UNIT #2 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.42592 | 101.0908 | NOWATA - WATOVA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.44696 | 101.0492 | HALLETT TAP - PAWNEE 69KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43412 | 101.0468 | CIMARRON - WOODRING 345KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | FAIRFAX TAP - SHIDLER 138KV CKT 1 | 143 | 0.99449 | 101.0142 | PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 100.986 | GEN337652 1-WHITE BLUFF UNIT #1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.44084 | 100.9402 | BILLING4 - FNTANTP4 138.00 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43454 | 100.9233 | MORRISON - SOONER 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.4339 | 100.9143 | GEN511839 1-NORTHEASTERN STATION #2 |
| 8 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.52617 | 100.9047 | ASGI-10-06 138.00 - FAIRFAX 138KV CKT 1 |
| 8 | 11G | G08_038 | FROM->TO | FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1 | 192 | 0.52617 | 100.8937 | FAIRFAX 138/69KV TRANSFORMER CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.44084 | 100.8863 | FNTANTP4 138.00 - MARLAND TAP 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.44084 | 100.8839 | MARLAND TAP - OSAGE 138KV CKT 1 |
| 8 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.46861 | 100.8432 | GEN514805 1-SOONER UNIT 1 |
| 00G08_038 | 11SP | G08_038 | TO->FROM | FAIRFAX TAP - SHIDLER 138KV CKT 1 | 143 | 0.99609 | 100.8033 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 100.7894 | GEN337653 1-WHITE BLUFF UNIT #2 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.4443 | 100.7338 | 2SFORKK 69.000 - TALLANT 69KV CKT 1 |
| 00G08_038 | 16SP | G08_038 | TO->FROM | FAIRFAX TAP - SHIDLER 138KV CKT 1 | 143 | 0.99639 | 100.6236 | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 100.6189 | GEN338189 1-LS POWER OSCEOLA UNIT G1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43442 | 100.612 | NORTHWEST - SPRING CREEK 345KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43442 | 100.6103 | SOONER - SPRING CREEK 345KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.44084 | 100.5358 | BILLING4 - BUNCH CREEK 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 100.5126 | GEN337041 1-GERALD ANDRUS |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.44084 | 100.4293 | BUNCH CREEK - NEENIDT4 138.00 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43421 | 100.4292 | CLEVELAND - TULSA NORTH 345KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.42592 | 100.4078 | BARTLESVILLE SOUTHEAST - NOWATA 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43321 | 100.3743 | G05-13T 345.00 - G05-16T 345.00 345KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 100.3568 | GEN336251 1-NINEMILE POINT UNIT#4 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 100.2854 | GEN515226 1-MUSKOGEE 6G |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43382 | 100.2775 | LACYGNE - WOLF CREEK 345KV CKT 1 |
| 08G08_038 | 11G | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.43343 | 100.1242 | GEN336831 1-BAXTER WILSON SES |
| 8 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.46861 | 100.1 | SOONER 138/22.0KV TRANSFORMER CKT 1 |
| 00G08_038 | 11SP | G08_038 | FROM->TO | G08-38T 138.00 - WEST PAWHUSKA 138KV CKT 1 | 143 | 0.99609 | 100 | FAIRFAX TAP - SHIDLER 138KV CKT 1 |
| 08G08_038 | 11G | G08_038 | TO->FROM | OSAGE - WEBB CITY TAP 138KV CKT 1 | 170 | 0.48191 | 100 | BARTLESVILLE SOUTHEAST - NORTH BARTLESVILLE 138KV CKT 1 |
| 05G08_051 | 11G | G08_051 | TO->FROM | MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV C | 351 | 0.21039 | 100.4881 | G05-17T 345.00 - Hitchland Interchange 345KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.35439 | 276.1907 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.35439 | 273.0459 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.35439 | 260.58 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.35439 | 258.0682 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| 3 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.3547 | 256.5839 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| 3 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.3547 | 253.738 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| 3 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.3547 | 244.2954 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| 3 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.3547 | 241.8633 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.35574 | 220.2489 | JUDSON LARGE - NORTH JUDSON LARGE SUB 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.35574 | 212.7006 | JUDSON LARGE - NORTH JUDSON LARGE SUB 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.19336 | 210.4526 | SPEARVILLE (SPEARVL) 345/230/13.8KV TRANSFORMER CKT 1 |
| 3 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.35604 | 204.2764 | JUDSON LARGE - NORTH JUDSON LARGE SUB 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.19336 | 203.9871 | SPEARVILLE (SPEARVL) 345/230/13.8KV TRANSFORMER CKT 1 |
| 3 | 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.19354 | 202.1828 | SPEARVILLE (SPEARVL) 345/230/13.8KV TRANSFORMER CKT 1 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|-----------|--------|---------|-----------|--|-------|---------|------------|--|
| | 3 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.35604 | 198.221 | JUDSON LARGE - NORTH JUDSON LARGE SUB 115KV CKT 1 |
| | 3 11G | G08_079 | FROM->TO | MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1 | 62 | 0.19354 | 196.3546 | SPEARVILLE (SPEARVL) 345/230/13.8KV TRANSFORMER CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CUDAHY - G08-79T 115.00 115KV CKT 1 | 129.5 | 0.54556 | 151.8929 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | G01_039AT 115.00 - GREENSBURG 115KV CKT 1 | 129.5 | 0.43985 | 150.7806 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CUDAHY - G08-79T 115.00 115KV CKT 1 | 129.5 | 0.54556 | 149.6108 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | G01_039AT 115.00 - GREENSBURG 115KV CKT 1 | 129.5 | 0.43985 | 148.562 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | CUDAHY - KISMET 3 115.00 115KV CKT 1 | 129.5 | 0.54556 | 146.6845 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CIMARRON RIVER TAP - KISMET 3 115.00 115KV CKT 1 | 129.5 | 0.54556 | 145.1997 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | GREENSBURG - SUN CITY 115KV CKT 1 | 129.5 | 0.43985 | 144.5417 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | CUDAHY - KISMET 3 115.00 115KV CKT 1 | 129.5 | 0.54556 | 144.4362 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CIMARRON RIVER TAP - KISMET 3 115.00 115KV CKT 1 | 129.5 | 0.54556 | 142.9571 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | GREENSBURG - SUN CITY 115KV CKT 1 | 129.5 | 0.43985 | 142.3236 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CIMARRON RIVER PLANT - CIMARRON RIVER TAP 115KV CKT 1 | 89.6 | 0.46029 | 142.2111 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | MEDICINE LODGE - SUN CITY 115KV CKT 1 | 129.5 | 0.43985 | 141.6258 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CIMARRON RIVER PLANT - CIMARRON RIVER TAP 115KV CKT 1 | 89.6 | 0.46029 | 139.7385 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | MEDICINE LODGE - SUN CITY 115KV CKT 1 | 129.5 | 0.43985 | 139.4502 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| | 3 11G | G08_079 | FROM->TO | G01_039AT 115.00 - GREENSBURG 115KV CKT 1 | 129.5 | 0.44022 | 138.0043 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| | 3 11G | G08_079 | FROM->TO | G01_039AT 115.00 - GREENSBURG 115KV CKT 1 | 129.5 | 0.44022 | 136.1167 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| | 3 11G | G08_079 | TO->FROM | CUDAHY - G08-79T 115.00 115KV CKT 1 | 129.5 | 0.546 | 135.5257 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| | 3 11G | G08_079 | TO->FROM | CUDAHY - G08-79T 115.00 115KV CKT 1 | 129.5 | 0.546 | 133.6873 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| | 3 11G | G08_079 | FROM->TO | GREENSBURG - SUN CITY 115KV CKT 1 | 129.5 | 0.44022 | 131.7259 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| | 3 11G | G08_079 | FROM->TO | CUDAHY - KISMET 3 115.00 115KV CKT 1 | 129.5 | 0.546 | 130.421 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| | 3 11G | G08_079 | FROM->TO | GREENSBURG - SUN CITY 115KV CKT 1 | 129.5 | 0.44022 | 129.8697 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| | 3 11G | G08_079 | TO->FROM | CIMARRON RIVER TAP - KISMET 3 115.00 115KV CKT 1 | 129.5 | 0.546 | 128.9385 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| | 3 11G | G08_079 | TO->FROM | MEDICINE LODGE - SUN CITY 115KV CKT 1 | 129.5 | 0.44022 | 128.9088 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| | 3 11G | G08_079 | FROM->TO | CUDAHY - KISMET 3 115.00 115KV CKT 1 | 129.5 | 0.546 | 128.5959 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| | 3 11G | G08_079 | TO->FROM | CIMARRON RIVER TAP - KISMET 3 115.00 115KV CKT 1 | 129.5 | 0.546 | 127.1153 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| | 3 11G | G08_079 | TO->FROM | MEDICINE LODGE - SUN CITY 115KV CKT 1 | 129.5 | 0.44022 | 127.0453 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| | 3 11G | G08_079 | TO->FROM | CIMARRON RIVER PLANT - CIMARRON RIVER TAP 115KV CKT 1 | 89.6 | 0.46066 | 123.4486 | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.76907 | 121.519 | CUDAHY - G08-79T 115.00 115KV CKT 1 |
| | 3 11G | G08_079 | TO->FROM | CIMARRON RIVER PLANT - CIMARRON RIVER TAP 115KV CKT 1 | 89.6 | 0.46066 | 121.2855 | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.66715 | 119.7644 | G01_039AT 115.00 - GREENSBURG 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.76907 | 117.9965 | CUDAHY - KISMET 3 115.00 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.76907 | 117.0984 | CIMARRON RIVER TAP - KISMET 3 115.00 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.66715 | 115.971 | GREENSBURG - SUN CITY 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | G01_039AT 115.00 - GREENSBURG 115KV CKT 1 | 129.5 | 0.44154 | 114.6763 | JUDSON LARGE - NORTH JUDSON LARGE SUB 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.66715 | 114.5469 | MEDICINE LODGE - SUN CITY 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CUDAHY - G08-79T 115.00 115KV CKT 1 | 129.5 | 0.54709 | 114.1485 | JUDSON LARGE - NORTH JUDSON LARGE SUB 115KV CKT 1 |
| | 3 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.76971 | 111.1085 | CUDAHY - G08-79T 115.00 115KV CKT 1 |
| | 3 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.66771 | 110.8249 | G01_039AT 115.00 - GREENSBURG 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | CUDAHY - KISMET 3 115.00 115KV CKT 1 | 129.5 | 0.54709 | 109.132 | JUDSON LARGE - NORTH JUDSON LARGE SUB 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | GREENSBURG - SUN CITY 115KV CKT 1 | 129.5 | 0.44154 | 108.4522 | JUDSON LARGE - NORTH JUDSON LARGE SUB 115KV CKT 1 |
| | 3 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.76971 | 107.8012 | CUDAHY - KISMET 3 115.00 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CIMARRON RIVER TAP - KISMET 3 115.00 115KV CKT 1 | 129.5 | 0.54709 | 107.6618 | JUDSON LARGE - NORTH JUDSON LARGE SUB 115KV CKT 1 |
| | 4 11G | G08_079 | FROM->TO | HOLCOMB (HOLCOMB) 345/115/13.8KV TRANSFORMER CKT 1 | 336 | 0.20799 | 107.1 | G08-17 345.00 - SETAB 345KV CKT 1 |
| | 4 11G | G08_079 | FROM->TO | HOLCOMB (HOLCOMB) 345/115/13.8KV TRANSFORMER CKT 1 | 336 | 0.20799 | 107.1 | G08-17 345.00 345/34.5KV TRANSFORMER CKT 1 |
| | 3 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.66771 | 107.0889 | GREENSBURG - SUN CITY 115KV CKT 1 |
| | 3 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.76971 | 106.9182 | CIMARRON RIVER TAP - KISMET 3 115.00 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 | 205 | 0.54191 | 105.8 | G04_014 230.00 - SPEARVILLE 230KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 | 205 | 0.54191 | 105.8 | G04_014 230.00 230/34.5KV TRANSFORMER CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CIMARRON RIVER PLANT - CIMARRON RIVER TAP 115KV CKT 1 | 89.6 | 0.28641 | 105.7636 | CIMARRON RIVER TAP - EAST LIBERAL 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | MEDICINE LODGE - SUN CITY 115KV CKT 1 | 129.5 | 0.44154 | 105.7297 | JUDSON LARGE - NORTH JUDSON LARGE SUB 115KV CKT 1 |
| | 3 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.66771 | 105.6921 | MEDICINE LODGE - SUN CITY 115KV CKT 1 |
| | 3 11G | G08_079 | FROM->TO | G01_039AT 115.00 - GREENSBURG 115KV CKT 1 | 129.5 | 0.44191 | 105.0675 | JUDSON LARGE - NORTH JUDSON LARGE SUB 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | SPEARVILLE (SPEARVL) 345/230/13.8KV TRANSFORMER CKT 1 | 336 | 0.52744 | 105.0348 | MULLERGREEN - SPEARVILLE 230KV CKT 1 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|-------------|--------|-----------|-----------|--|-------|---------|------------|---|
| 03G08_079 | 11G | G08_079 | FROM->TO | SPEARVILLE (SPEARVL) 345/230/13.8KV TRANSFORMER CKT 1 | 336 | 0.52744 | 104.7447 | MULLERGREN - SPEARVILLE 230KV CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CUDAHY - G08-79T 115.00 115KV CKT 1 | 129.5 | 0.23614 | 103.8173 | HOLCOMB - PLYMELL 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 | 205 | 0.76907 | 103.7731 | CUDAHY - G08-79T 115.00 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 | 205 | 0.66715 | 102.2022 | G01_039AT 115.00 - GREENSBURG 115KV CKT 1 |
| 3 | 11G | G08_079 | TO->FROM | CUDAHY - G08-79T 115.00 115KV CKT 1 | 129.5 | 0.54753 | 102.0493 | JUDSON LARGE - NORTH JUDSON LARGE SUB 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | NORTH JUDSON LARGE SUB - SPEARVILLE 115KV CKT 1 | 177.7 | 0.54236 | 102.0199 | SPP-MKEC-08 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CUDAHY - G08-79T 115.00 115KV CKT 1 | 129.5 | 0.23614 | 101.7482 | PIONEER TAP - PLYMELL 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CUDAHY - G08-79T 115.00 115KV CKT 1 | 129.5 | 0.23614 | 101.7448 | SPP-SUNC-14 |
| 03G08_079 | 11G | G08_079 | FROM->TO | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 | 205 | 0.76907 | 101.5763 | CUDAHY - G08-79T 115.00 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | TO->FROM | CUDAHY - G08-79T 115.00 115KV CKT 1 | 129.5 | 0.34162 | 101.546 | SPEARVILLE (SPEARVL) 345/230/13.8KV TRANSFORMER CKT 1 |
| 3 | 11G | G08_079 | FROM->TO | SPEARVILLE (SPEARVL) 345/230/13.8KV TRANSFORMER CKT 1 | 336 | 0.52789 | 101.4778 | MULLERGREN - SPEARVILLE 230KV CKT 1 |
| 3 | 11G | G08_079 | FROM->TO | SPEARVILLE (SPEARVL) 345/230/13.8KV TRANSFORMER CKT 1 | 336 | 0.52789 | 101.2253 | MULLERGREN - SPEARVILLE 230KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 | 205 | 0.76907 | 100.7703 | CUDAHY - KISMET 3 115.00 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | G01_039AT 115.00 - GREENSBURG 115KV CKT 1 | 129.5 | 0.20951 | 100.0589 | SPEARVILLE (SPEARVL) 345/230/13.8KV TRANSFORMER CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 | 205 | 0.76907 | 100.0063 | CIMARRON RIVER TAP - KISMET 3 115.00 115KV CKT 1 |
| 03G08_079 | 11G | G08_079 | FROM->TO | SPEARVILLE (SPEARVL6) 230/115/13.8KV TRANSFORMER CKT 1 | 205 | 0.66715 | 100 | G01_039AT 115.00 - GREENSBURG 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.78038 | 143.8781 | FT RANDAL - UTICA JCT 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.78069 | 143.8418 | DAK02WAPAB2 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.78173 | 141.143 | DAK02WAPAB2 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7814 | 141.1092 | FT RANDAL - UTICA JCT 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77317 | 140.9925 | FT THOMPSON - GRAND ISLAND 345KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77792 | 138.1612 | FT RANDAL - SIOUX CITY 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7745 | 137.9251 | FT THOMPSON - GRAND ISLAND 345KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76173 | 136.1957 | HOSKINS - RAUN 345KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77905 | 135.8358 | FT RANDAL - SIOUX CITY 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77219 | 135.5017 | LN-WAPA6 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77219 | 135.5017 | NEB001NPPB2 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77219 | 135.4597 | FT RANDAL - SPENCER 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77219 | 135.1676 | ONEILL - SPENCER 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76086 | 134.477 | TRF-HOSKINS |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 133.9 | COUNCIL BLUFFS 345/26.0KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 133.4 | COUNCIL BLUFFS 345/24.0KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7627 | 133.0322 | HOSKINS - RAUN 345KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.75532 | 132.0489 | COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77316 | 132.0299 | LN-WAPA6 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77316 | 132.0299 | NEB001NPPB2 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77316 | 131.9744 | FT RANDAL - SPENCER 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 131.8 | COUNCIL BLUFFS 345/26.0KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77316 | 131.6925 | ONEILL - SPENCER 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76959 | 131.5151 | SIOUX CITY - TWIN CHURCH 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76185 | 131.4439 | TRF-HOSKINS |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77343 | 131.4006 | RASMUSN - UTICA JCT 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 131.3 | COUNCIL BLUFFS 345/24.0KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7712 | 131.2463 | NEB02WAPAB2 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7712 | 131.052 | GAVINS POINT - HARTINGTON 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.74764 | 130.8092 | COLUMWEST - GRAND ISLAND 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77171 | 130.808 | ATC_B2_8E2_G |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77008 | 130.8028 | 103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7717 | 130.7791 | 050_1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77184 | 130.726 | FT RANDAL - WHITE SWAN 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 130.7232 | GEN640028 1-COLUMCOGENERATION |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77169 | 130.7207 | ATC_B2_8E2 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77169 | 130.72 | 050_2 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77184 | 130.6954 | TYNDALL - WHITE SWAN 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 130.677 | GEN640009 1-COOPER NUCLEAR STATION |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|-------------|--------|-----------|-----------|--|-------|---------|------------|---|
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77131 | 130.597 | FT THOMPSON - LETCHER 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77343 | 130.5053 | RASMUSN - SIOUX CITY 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 130.4939 | GEN645012 2-NEBRASKA CITY 2 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77132 | 130.4709 | ATC_B2_2221_ |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76963 | 130.4164 | COOPER - MOORE 345KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77128 | 130.4106 | HANLON - STORLA 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77126 | 130.3878 | PAHOJA - SIOUX FALLS 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 130.3875 | GEN645011 1-NEBRASKA CITY 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77131 | 130.3842 | LETCHER - SIOUX FALLS 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77094 | 130.3817 | BLOOMFIELD - CREIGHTON 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77285 | 130.3627 | UTICA JCT - VFODNES 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77163 | 130.3343 | ATC_B2_8E5_G |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77163 | 130.3054 | 050_3 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77132 | 130.2685 | KEYSTONE - SIDNEY 345KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7711 | 130.2487 | LN-1164 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77162 | 130.2469 | ARPIN - EAU CLAIRE 345KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 130.2271 | LELAND OLDS 230/22.0KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7711 | 130.2266 | CLEARWATER - ONEILL 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7715 | 130.1889 | CARPENTER - HURON 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7793 | 129.9922 | DAK02WAPAB2 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77901 | 129.6816 | FT RANDAL - UTICA JCT 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7745 | 129.2163 | RASMUSN - UTICA JCT 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.75629 | 128.9888 | COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77217 | 128.9199 | NEB02WAPAB2 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77054 | 128.714 | SIOUX CITY - TWIN CHURCH 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77217 | 128.703 | GAVINS POINT - HARTINGTON 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77265 | 128.6851 | ATC_B2_8E2_G |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77264 | 128.6629 | 050_1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 128.5621 | BASE CASE |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77261 | 128.5074 | ATC_B2_8E2 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77261 | 128.5072 | 050_2 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77232 | 128.4846 | HANLON - STORLA 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77227 | 128.4465 | KEYSTONE - SIDNEY 345KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.74854 | 128.4374 | COLUMWEST - GRAND ISLAND 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7745 | 128.3371 | RASMUSN - SIOUX CITY 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 128.3 | GEN640028 1-COLUMCOGENERATION |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7728 | 128.2681 | FT RANDAL - WHITE SWAN 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7728 | 128.2368 | TYNDALL - WHITE SWAN 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77103 | 128.2132 | 103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77275 | 128.1713 | BONESTEEL - FT RANDAL 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77226 | 128.1034 | PAHOJA - SIOUX FALLS 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77224 | 128.064 | FT THOMPSON - LETCHER 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77275 | 128.0346 | BONESTEEL - GREGORY 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 128.0215 | GEN640009 1-COOPER NUCLEAR STATION |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77224 | 127.9905 | LETCHER - SIOUX FALLS 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77371 | 127.9758 | UTICA JCT - VFODNES 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 127.9516 | GEN645012 2-NEBRASKA CITY 2 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 127.9345 | LN-1164 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 127.9234 | LELAND OLDS 230/22.0KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 127.9167 | CLEARWATER - ONEILL 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77188 | 127.8942 | BLOOMFIELD - CREIGHTON 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77238 | 127.8749 | DAK01WAPAB2 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 127.863 | GROTON - GROTON 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77256 | 127.7939 | ATC_B2_8E5_G |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77255 | 127.7814 | 050_3 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|-------------|--------|-----------|-----------|--|-------|---------|------------|---|
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7716 | 127.0348 | 908 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77181 | 127.0061 | WINNER - WITTEN 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 126.9569 | GEN336831 1-BAXTER WILSON SES |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7722 | 126.9562 | MT VERN - STORLA 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77067 | 126.8493 | HOSKINS 345/230KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 126.8245 | GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77121 | 126.8212 | BATTLE CREEK - NORTH NORFOLK 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 126.7472 | GEN337652 1-WHITE BLUFF UNIT #1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 126.7382 | GEN336251 1-NINEMILE POINT UNIT#4 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77184 | 126.7214 | AINSWORTH - AINSWORTH 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 126.689 | GEN336252 1-NINEMILE POINT UNIT#5 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 126.6764 | GEN337041 1-GERALD ANDRUS |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77137 | 126.6601 | FT THOMPSON - SELBY 3345.00 345KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77181 | 126.6355 | MAXWELL - STAPLETON 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 126.5868 | GEN338143 1-INDEPENDENCE UNIT #1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 126.5402 | GEN338146 1-INDEPENDENCE UNIT #2 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7714 | 126.5272 | ATCHSNT3 345.00 - COOPER 345KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 126.4969 | GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7714 | 126.2922 | ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 126.2373 | BASE CASE |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76953 | 126.0977 | ALBION - GENOA 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 125.9524 | GEN335831 1-RIVERBEND UNIT#1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76259 | 125.6191 | COLUMEAST - KELLY 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76259 | 125.5962 | COLUMEAST 230/115KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 125.5721 | GEN336153 1-WATERFORD UNIT#3 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76405 | 125.5288 | COLUMBUS - KELLY 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76405 | 125.5094 | KELLY (KLYT1REG) 230/115/13.2KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76405 | 125.5092 | TRF-KELLY |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 125.4018 | FT RANDAL 115/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7717 | 125.3516 | STEGALL - WAYSIDE 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 125.2411 | GEN336821 1-GRAND GULF UNIT |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76953 | 125.0892 | COLUMBUS - GENOA 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.73001 | 124.9341 | SHELL CREEK 345/230KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.73001 | 124.9296 | KELLY - SHELL CREEK 230KV CKT 1 |
| 00G08_086N2 | 16WSP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77652 | 124.7543 | FT RANDAL - SIOUX CITY 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 124.6635 | GEN337652 1-WHITE BLUFF UNIT #1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 124.6549 | GEN336251 1-NINEMILE POINT UNIT#4 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7536 | 124.6292 | HOSKINS - SHELL CREEK 345KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77161 | 124.614 | HOSKINS 345/230KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 124.6121 | GEN336252 1-NINEMILE POINT UNIT#5 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 124.6032 | GEN337041 1-GERALD ANDRUS |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 124.5185 | GEN338143 1-INDEPENDENCE UNIT #1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 124.4797 | GEN338146 1-INDEPENDENCE UNIT #2 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77231 | 124.4547 | ATCHSNT3 345.00 - COOPER 345KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 124.4508 | GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77047 | 124.2718 | ALBION - GENOA 115KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 124.2683 | FT RANDAL 230/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77231 | 124.2276 | ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 124.2176 | FT RANDAL 230/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77117 | 124.167 | FT RANDAL 230/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77288 | 124.1511 | AINSWORTH - AINSWORTH 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 123.9682 | GEN335831 1-RIVERBEND UNIT#1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7727 | 123.8402 | STEGALL - WAYSIDE 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 123.639 | GEN336153 1-WATERFORD UNIT#3 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76353 | 123.425 | COLUMEAST 230/115KV TRANSFORMER CKT 1 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|-------------|--------|-----------|-----------|--------------------------------------|-------|---------|------------|---|
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76498 | 123.4248 | COLUMBUS - KELLY 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76498 | 123.4248 | KELLY (KLYT1REG) 230/115/13.2KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76498 | 123.4246 | TRF-KELLY |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76353 | 123.4242 | COLUMEAST - KELLY 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 123.3487 | GEN336821 1-GRAND GULF UNIT |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.78017 | 123.3265 | DAK02WAPAB2 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77047 | 123.3222 | COLUMBUS - GENOA 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 123.077 | FT RANDAL 115/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77985 | 122.9949 | FT RANDAL - UTICA JCT 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77672 | 122.9699 | FT RANDAL - LAKE PLATT 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77219 | 122.4084 | RAUN - SIOUX CITY 345KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.75461 | 122.3467 | HOSKINS - SHELL CREEK 345KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77686 | 122.1779 | FT RANDAL - FT THOMPSON 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.73099 | 122.1403 | SHELL CREEK 345/230KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.73099 | 122.1329 | KELLY - SHELL CREEK 230KV CKT 1 |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77672 | 121.9442 | FT THOMPSON - LAKE PLATT 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 121.9359 | FT RANDAL 230/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 121.8854 | FT RANDAL 230/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7721 | 121.8348 | FT RANDAL 230/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7777 | 120.9759 | FT RANDAL - LAKE PLATT 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77182 | 120.8619 | FT THOMPSON - GRAND ISLAND 345KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.74631 | 120.7459 | COLUMWEST - GRAND ISLAND 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77088 | 120.2941 | LN-WAPA6 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77088 | 120.2941 | NEB001NPPB2 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77785 | 120.2103 | FT RANDAL - FT THOMPSON 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 120.2 | COUNCIL BLUFFS 345/26.0KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.75404 | 120.1945 | COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77088 | 120.1944 | FT RANDAL - SPENCER 115KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7777 | 119.9668 | FT THOMPSON - LAKE PLATT 230KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77342 | 119.7563 | RAUN - SIOUX CITY 345KV CKT 1 |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7731 | 119.7552 | TRF-STEGALL |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7731 | 119.7532 | NEB01WAPAB3 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 119.7 | COUNCIL BLUFFS 345/24.0KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77088 | 119.6589 | ONEILL - SPENCER 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76042 | 118.8453 | HOSKINS - RAUN 345KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77748 | 118.2092 | FT RANDAL - SIOUX CITY 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77206 | 118.033 | RASMUSN - UTICA JCT 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76982 | 118.0193 | NEB02WAPAB2 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76982 | 117.8171 | GAVINS POINT - HARTINGTON 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.74631 | 117.8026 | COLUMWEST - KELLY 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77148 | 117.4555 | UTICA JCT - VFODNES 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77206 | 117.2774 | RASMUSN - SIOUX CITY 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.75955 | 117.0356 | TRF-HOSKINS |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 116.9838 | GEN640028 1-COLUMCOGENERATION |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76824 | 116.9592 | SIOUX CITY - TWIN CHURCH 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 116.8845 | GEN640009 1-COOPER NUCLEAR STATION |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76873 | 116.8229 | 103RD & ROKEYBY - SUB 3458 NEB CTY 345KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77014 | 116.734 | CARPENTER - HURON 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 116.7167 | GEN645012 2-NEBRASKA CITY 2 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76996 | 116.694 | FT THOMPSON - LETCHER 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77035 | 116.6423 | ATC_B2_8E2_G |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77034 | 116.6279 | 050 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 116.6273 | GEN645011 1-NEBRASKA CITY 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77014 | 116.6261 | HURON - WATERTOWN 230KV CKT 2 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76996 | 116.6183 | LETCHER - SIOUX FALLS 230KV CKT 1 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|-------------|--------|-----------|-----------|--|-------|---------|------------|---|
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77014 | 116.5931 | CARPENTER - WATERTOWN 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77033 | 116.5849 | ATC_B2_8E2 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77033 | 116.5823 | 050_2 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76992 | 116.556 | HANLON - STORLA 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77049 | 116.5219 | FT RANDAL - WHITE SWAN 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77049 | 116.4857 | TYNDALL - WHITE SWAN 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76829 | 116.445 | COOPER - MOORE 345KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76876 | 116.4396 | GRAND ISLAND - SWEETWATER 345KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76996 | 116.3663 | ATC_B2_2221_ |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 114.8246 | BASE CASE |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.74704 | 114.6397 | COLUMWEST - GRAND ISLAND 230KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.75484 | 114.2037 | COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 114.1 | COUNCIL BLUFFS 345/26.0KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 113.6 | COUNCIL BLUFFS 345/24.0KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 113.3 | BLOOMFIELD 115/34.5KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77046 | 113.2227 | WINNER - WITTEN 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76964 | 113.2162 | COUNCIL BLUFFS - GRIMES 345KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77044 | 113.1994 | MAXWELL - STAPLETON 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 113.0907 | GEN336251 1-NINEMILE POINT UNIT#4 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 113.0798 | GEN336252 1-NINEMILE POINT UNIT#5 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 113.0794 | GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76931 | 113.038 | HOSKINS 345/230KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 113.0104 | GEN337652 1-WHITE BLUFF UNIT #1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 112.9456 | GEN337041 1-GERALD ANDRUS |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 112.918 | COLUMWEST 230/34.5KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76804 | 112.849 | COLUMBUS - SCHUYLER 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 112.8431 | GEN338143 1-INDEPENDENCE UNIT #1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7702 | 112.8428 | GAVINS POINT - YANKON JCT 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7719 | 112.7888 | RAUN - SUB 3451 FT CAL 345KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77168 | 112.785 | LN-WAPA6 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77168 | 112.785 | NEB001NPPB2 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 112.7642 | OAHE 115/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 112.7494 | GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76925 | 112.7108 | LAKEFIELD 3 - RAUN 345KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77168 | 112.6838 | FT RANDAL - SPENCER 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77004 | 112.5766 | ATCHSNT3 345.00 - COOPER 345KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77298 | 112.3511 | FT THOMPSON - GRAND ISLAND 345KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 112.2439 | GEN335831 1-RIVERBEND UNIT#1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77004 | 112.1733 | ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77168 | 112.1599 | ONEILL - SPENCER 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77053 | 112.0336 | AINSWORTH - AINSWORTH 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7627 | 111.9708 | KELLY (KLYT1REG) 230/115/13.2KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7627 | 111.9707 | TRF-KELLY |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7627 | 111.9697 | COLUMBUS - KELLY 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76125 | 111.9594 | COLUMEAST 230/115KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76125 | 111.9551 | COLUMEAST - KELLY 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 111.8944 | GEN336153 1-WATERFORD UNIT#3 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.74704 | 111.824 | COLUMWEST - KELLY 230KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77294 | 111.675 | RASMUSN - UTICA JCT 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 111.604 | FT RANDAL 115/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77062 | 111.557 | NEB02WAPAB2 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 111.5236 | GEN336821 1-GRAND GULF UNIT |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77062 | 111.3474 | GAVINS POINT - HARTINGTON 115KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77217 | 111.2645 | UTICA JCT - VFODNES 230KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77294 | 110.9388 | RASMUSN - SIOUX CITY 230KV CKT 1 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME |
|-------------|--------|-----------|-----------|--|-------|---------|------------|---|
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76123 | 110.8733 | HOSKINS - RAUN 345KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7708 | 110.735 | HANLON - STORLA 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77036 | 110.6915 | STEGALL - WAYSIDE 230KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77111 | 110.6904 | 050 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 110.6702 | GEN640028 1-COLUMCOGENERATION |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77108 | 110.5627 | ATC_B2_8E2 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77108 | 110.5574 | 050 2 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77071 | 110.4685 | FT THOMPSON - LETCHER 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77535 | 110.4629 | FT RANDAL - LAKE PLATT 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 110.4433 | FT RANDAL 230/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7695 | 110.4385 | 103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 110.3903 | FT RANDAL 230/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77073 | 110.3896 | KEYSTONE - SIDNEY 345KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 110.3385 | GEN640009 1-COOPER NUCLEAR STATION |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76981 | 110.3334 | FT RANDAL 230/13.8KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77071 | 110.2495 | LETCHE - SIOUX FALLS 230KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 110.2452 | GEN645012 2-NEBRASKA CITY 2 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77124 | 110.1883 | BONESTEEL - FT RANDAL 115KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77128 | 110.1422 | FT RANDAL - WHITE SWAN 115KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77128 | 110.1021 | TYNDALL - WHITE SWAN 115KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7755 | 109.9154 | FT RANDAL - FT THOMPSON 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77535 | 109.7746 | FT THOMPSON - LAKE PLATT 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.72877 | 109.5615 | KELLY - SHELL CREEK 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.72877 | 109.5588 | SHELL CREEK 345/230KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 108.5416 | BASE CASE |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77083 | 108.2806 | RAUN - SIOUX CITY 345KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 107.0259 | GEN337653 1-WHITE BLUFF UNIT #2 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 107 | BLOOMFIELD 115/34.5KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 106.9712 | GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 106.9529 | GEN336251 1-NINEMILE POINT UNIT#4 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 106.9101 | GEN337652 1-WHITE BLUFF UNIT #1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 106.857 | GEN337041 1-GERALD ANDRUS |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7713 | 106.8554 | MAXWELL - THEDFORD 115KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77008 | 106.8179 | HOSKINS 345/230KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 106.7754 | COLUMWEST 230/34.5KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 106.7597 | GEN338143 1-INDEPENDENCE UNIT #1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7688 | 106.7346 | COLUMBUS - SCHUYLER 115KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 106.723 | GEN338146 1-INDEPENDENCE UNIT #2 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 106.6745 | GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77079 | 106.6282 | ATCHSNT3 345.00 - COOPER 345KV CKT 1 |
| 09G08_086N2 | 11G | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77985 | 106.4417 | DAK02WAPAB2 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 106.2369 | GEN335831 1-RIVERBEND UNIT#1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77079 | 106.2332 | ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77001 | 106.2287 | LAKEFIELD 3 - RAUN 345KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77101 | 106.0637 | GAVINS POINT - YANKON JCT 115KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76346 | 105.9316 | KELLY (KLYT1REG) 230/115/13.2KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76346 | 105.9314 | COLUMBUS - KELLY 115KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76346 | 105.9314 | TRF-KELLY |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 105.9233 | GEN336153 1-WATERFORD UNIT#3 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76202 | 105.8625 | COLUMEAST 230/115KV TRANSFORMER CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76202 | 105.8585 | COLUMEAST - KELLY 230KV CKT 1 |
| 09G08_086N2 | 11G | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77955 | 105.7378 | FT RANDAL - UTICA JCT 230KV CKT 1 |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.75228 | 105.7021 | HOSKINS - SHELL CREEK 345KV CKT 1 |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 105.5855 | GEN336821 1-GRAND GULF UNIT |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77279 | 105.5263 | RAUN - SUB 3451 FT CAL 345KV CKT 1 |

| GROUP | SEASON | SOURCE | DIRECTION | MONITORED ELEMENT COMMON NAME | RATEB | TDF | TC%LOADING | CONTINGENCY NAME | |
|-------------|--------|-----------|-----------|--|---|---------|------------|---|--|
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77141 | 105.4288 | AINSWORTH - AINSWORTH 115KV CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 105.4236 | FT RANDAL 115/13.8KV TRANSFORMER CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77616 | 104.9941 | FT RANDAL - LAKE PLATT 230KV CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77119 | 104.9463 | STEGALL - WAYSIDE 230KV CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77145 | 104.8799 | NUNDRWD - WAYSIDE 230KV CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7763 | 104.4923 | FT RANDAL - FT THOMPSON 230KV CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77616 | 104.3174 | FT THOMPSON - LAKE PLATT 230KV CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 104.1828 | FT RANDAL 230/13.8KV TRANSFORMER CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 104.1301 | FT RANDAL 230/13.8KV TRANSFORMER CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77057 | 104.076 | FT RANDAL 230/13.8KV TRANSFORMER CKT 1 | |
| 09G08_086N2 | 11G | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7771 | 103.7939 | FT RANDAL - SIOUX CITY 230KV CKT 1 | |
| 09G08_086N2 | 11G | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.99265 | 103.5197 | FT RANDAL - MADISONCO 230.00 230KV CKT 1 | |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | FT RANDAL - MADISONCO 230.00 230KV CKT 1 | 192 | 0.99478 | 103.4367 | KELLY - MADISONCO 230.00 230KV CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | FT RANDAL - MADISONCO 230.00 230KV CKT 1 | 192 | 0.99287 | 103.4367 | KELLY - MADISONCO 230.00 230KV CKT 1 | |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | FT RANDAL - MADISONCO 230.00 230KV CKT 1 | 192 | 0.99518 | 103.4367 | KELLY - MADISONCO 230.00 230KV CKT 1 | |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | FT RANDAL - MADISONCO 230.00 230KV CKT 1 | 192 | 0.9935 | 103.4367 | KELLY - MADISONCO 230.00 230KV CKT 1 | |
| 09G08_086N2 | 11G | G08_086N2 | TO->FROM | FT RANDAL - MADISONCO 230.00 230KV CKT 1 | 192 | 0.99265 | 103.4367 | KELLY - MADISONCO 230.00 230KV CKT 1 | |
| 00G08_086N2 | 11SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.99478 | 103.3987 | FT RANDAL - MADISONCO 230.00 230KV CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.99287 | 103.3863 | FT RANDAL - MADISONCO 230.00 230KV CKT 1 | |
| 00G08_086N2 | 16WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.9935 | 103.3858 | FT RANDAL - MADISONCO 230.00 230KV CKT 1 | |
| 00G08_086N2 | 16SP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.99518 | 103.3821 | FT RANDAL - MADISONCO 230.00 230KV CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7296 | 102.8445 | KELLY - SHELL CREEK 230KV CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.7296 | 102.8419 | SHELL CREEK 345/230KV TRANSFORMER CKT 1 | |
| 09G08_086N2 | 11G | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77022 | 102.1 | COUNCIL BLUFFS 345/26.0KV TRANSFORMER CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77188 | 102.0996 | RAUN - SIOUX CITY 345KV CKT 1 | |
| 09G08_086N2 | 11G | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77022 | 101.6 | COUNCIL BLUFFS 345/24.0KV TRANSFORMER CKT 1 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77159 | 100.8302 | NEB01WAPAB3 | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77159 | 100.8163 | TRF-STEGALL | |
| 00G08_086N2 | 11WP | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.77159 | 100.8045 | STEGALL - STEGALL TY 345KV CKT 1 | |
| 09G08_086N2 | 11G | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.74678 | 100.6043 | COLUMWEST - GRAND ISLAND 230KV CKT 1 | |
| 09G08_086N2 | 11G | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.75456 | 100.1939 | COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1 | |
| 09G08_086N2 | 11G | G08_086N2 | TO->FROM | KELLY - MADISONCO 230.00 230KV CKT 1 | 192 | 0.76947 | 100.0563 | ALBION - PETERSBURG 115KV CKT 1 | |
| 00G08_129 | 16SP | G08_129 | TO->FROM | KC SOUTH - LONGVIEW 161KV CKT 1 | 224 | 0.22165 | 100.1644 | BLUE SPRING SOUTH - PRAIRIE LEE 161KV CKT 1 | |
| | 0 | 16SP | G08_129 | TO->FROM | KC SOUTH - LONGVIEW 161KV CKT 1 | 224 | 0.22165 | 100.1644 | BLUE SPRING SOUTH - PRAIRIE LEE 161KV CKT 1 |
| | 5 | 11G | G09_016 | TO->FROM | CLINTON JUNCTION - ELK CITY 138KV CKT 1 | 143 | 0.31989 | 110.6354 | CLINTON AIR FORCE BASE TAP - ELK CITY 138KV CKT 1 |
| | 5 | 11G | G09_016 | TO->FROM | CLINTON JUNCTION - ELK CITY 138KV CKT 1 | 143 | 0.31989 | 109.5796 | CLINTON AIR FORCE BASE TAP - HOBART JUNCTION 138KV CKT 1 |
| | 5 | 11G | G09_016 | TO->FROM | CLINTON JUNCTION - ELK CITY 138KV CKT 1 | 143 | 0.24095 | 103.4568 | LAWTON EASTSIDE - OKLAUNION 345KV CKT 1 |
| | 5 | 11G | G09_016 | TO->FROM | CLINTON JUNCTION - ELK CITY 138KV CKT 1 | 143 | 0.2427 | 101.2584 | DBL-HITCH-WO |
| 07G09_016 | 11G | G09_016 | TO->FROM | CLINTON JUNCTION - ELK CITY 138KV CKT 1 | 143 | 0.24328 | 101.1629 | GEN560655 1-G07-32 12.00C | |
| | 5 | 11G | G09_016 | TO->FROM | CLINTON JUNCTION - ELK CITY 138KV CKT 1 | 143 | 0.24279 | 100.4744 | NORTHWEST - TATONGA7 345.00 345KV CKT 1 |

H: ACCC Analysis (No Prior Queued Upgrades)