



**Definitive Interconnection
System Impact Study for
Generation Interconnection
Requests
(DISIS-2010-002-6)**

**November 2013
Generator Interconnection**

Revision History

Date or Version Number	Author	Change Description
01/31/2011	SPP	Report Issued (DISIS-2010-002)
07/26/2011	SPP	Account for Withdrawn Projects, Report Re-Posted (DISIS-2010-002-1)
11/08/2011	SPP	Account for Withdrawn Projects, Report Re-Posted (DISIS-2010-002-2)
03/25/2012	SPP	Account for Withdrawn Projects, Report Re-Posted (DISIS-2010-002-3)
2/8/2013	SPP	Account for Withdrawn Projects, Report Re-Posted (DISIS-2010-002-4)
6/18/2013	SPP	Sensitivity for Withdrawal of GEN-2006-032 on Group 4 only; No Posting (DISIS-2010-002-5)
11/26/2013	SPP	Account for Withdrawn Projects, Report Re-Posted (DISIS-2010-002-6)

Executive Summary

Generation Interconnection customers have requested a Definitive Interconnection System Impact Study (DISIS) under the Generation Interconnection Procedures (GIP) in the Southwest Power Pool Open Access Transmission Tariff (OATT). The Interconnection Customers' requests have been clustered together for the following System Impact Cluster Study window which closed September 30, 2010. The customers will be referred to in this study as the DISIS-2010-002 Interconnection Customers. This System Impact Study analyzes the interconnecting of multiple generation interconnection requests associated with new generation totaling approximately 1,212.7 MW of new generation which would be located within the transmission systems of Midwest Energy Inc. (MIDW), Oklahoma Gas and Electric (OKGE), Omaha Public Power District (OPPD), Sunflower Electric Power Corporation/Mid-Kansas Electric Power LLC (SUNC)/(MKEC), Southwestern Public Service (SPS), and Westar Energy (WERE). The various generation interconnection requests have differing proposed in-service dates¹. The generation interconnection requests included in this System Impact Cluster Study are listed in Appendix A by their queue number, amount, requested interconnection service, area, requested interconnection point, proposed interconnection point, and the requested in-service date. This restudy was performed to account for withdrawals within the DISIS-2010-002 study and/or higher queued projects withdrawing.

Power flow analysis has indicated that for the power flow cases studied, 1,212.7 MW of nameplate generation may be interconnected with transmission system reinforcements within the SPP transmission system. Dynamic stability and power factor analysis has determined the need for reactive compensation in accordance with Order No. 661-A for wind farm interconnection requests and those requirements are listed for each interconnection request within the contents of this report. Dynamic stability analysis has determined that the transmission system will remain stable with the assigned Network Upgrades and necessary reactive compensation requirements.

The total estimated minimum cost for interconnecting the DISIS-2010-002 interconnection customers is \$26,460,000. These costs are shown in Appendix E and F. Interconnection Service to DISIS-2010-002 interconnection customers is also contingent upon higher queued customers paying for certain required network upgrades. **The in service date for the DISIS customers will be deferred until the construction of these network upgrades can be completed.**

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

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 Facility Study's time for completion of the Network Upgrades necessary.

Network Constraints listed in Appendix H are in the local area of the new generation when this generation is injected throughout the SPP footprint for the Energy Resource (ERIS) Interconnection Request. Certain Interconnection Requests were also studied for Network Resource Interconnection Service (NRIS). Those constraints are also listed in Appendix H. Additional Network constraints will have to be verified with a Transmission Service Request (TSR) and associated studies. With a defined source and sink in a TSR, this list of Network Constraints will be refined and expanded to account for all Network Upgrade requirements.

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

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Introduction

Pursuant to the Southwest Power Pool (SPP) Open Access Transmission Tariff (OATT), SPP has conducted this Definitive Interconnection System Impact Study (DISIS) for certain generation interconnection requests in the SPP Generation Interconnection Queue. These interconnection requests have been clustered together for the following System Impact Study window which closed September 30, 2010. The customers will be referred to in this study as the DISIS-2010-002 Interconnection Customers. This System Impact Study analyzes the interconnecting of multiple generation interconnection requests associated with new generation totaling 1,212.7 MW of new generation which would be located within the transmission systems of Midwest Energy Inc. (MIDW), Oklahoma Gas and Electric (OKGE), Omaha Public Power District (OPPD), Sunflower Electric Power Corporation/Mid-Kansas Electric Power LLC (SUNC)/(MKEC), Southwestern Public Service (SPS), and Westar Energy (WERE). The various generation interconnection requests have differing proposed in-service dates². The generation interconnection requests included in this System Impact Study are listed in Appendix A by their queue number, amount, requested interconnection service, area, requested interconnection point, proposed interconnection point, and the requested in-service date. This restudy was performed to account for withdrawals within the DISIS-2010-002 cluster study and/or higher queued projects withdrawing.

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

Model Development

Interconnection Requests Included in the Cluster

SPP has included all interconnection requests that submitted a Definitive Interconnection System Impact Study Agreement no later than September 30, 2010 and were subsequently accepted by Southwest Power Pool under the terms of the Generator Interconnection Procedures (GIP) that became effective March 30, 2010. 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 competition of the Facility Study.

Affected System Interconnection Requests

Also included in this Definitive Impact Study are three Affected System Studies, all located on the Lea County Electric Cooperative (LCEC) system, which is located in Lea County, New Mexico, and shares connections to the SPS system. The Affected System Study Requests has been given the designations: ASGI-2010-020 (30 MW, POI is a tap on LCEC-Tatum – LCEC-Crossroads 69kV), ASGI-2010-021 (15 MW, POI is a tap on LCEC-Saunders – LCEC-Anderson 69kV), and ASGI-2011-001 (28.8 MW, POI is at LCEC-Lovington 115kV).

Previously Queued Interconnection Requests

The previous queued requests included in this study are listed in Appendix B. In addition to the Base Case Upgrades, the previous queued requests and associated upgrades were assumed to be in-service and added to the Base Case models. These projects were dispatched as Energy Resources with equal distribution across the SPP footprint.

Development of Base Cases

Power Flow

The 2013 series Transmission Service Request (TSR) Models 2014 spring, 2014 summer and winter peak, and the 2019 summer and winter peak, and 2024 summer peak scenario 0 cases were used for this study. After the cases were developed, each of the control areas' resources were then re-dispatched to account for the new generation requests using current dispatch orders.

Dynamic Stability

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

Base Case Upgrades

The following facilities are part of the SPP Transmission Expansion Plan or the Balanced Portfolio or recently approved Priority Projects. These facilities, have an approved Notice to Construct (NTC), or are in construction stages and were assumed to be in-service at the time of dispatch and added to the base case models. The DISIS-2010-002 Customers have not been assigned acceleration costs for the below listed projects. The DISIS-2010-002 Customers Generation Facilities in service dates may need to be delayed until the completion of the following upgrades. If for some reason, construction on these projects is discontinued, additional restudies will be needed to determine the interconnection needs of the DISIS customers.

- Balanced Portfolio Projects³:
 - Woodward – Border – TUCO 345kV project, scheduled for 5/19/2014 in-service
 - Woodward 345/138kV circuit #2 autotransformer
 - TUCO 345/138kV circuit #2 autotransformer
 - Reactors at Woodward and Border
 - Iatan– Nashua 345kV, scheduled for 6/1/2015 in-service

³ Notice to Construct (NTC) issued June 2009.

- Nashua 345/161kV autotransformer
 - Muskogee– Seminole 345kV, scheduled for 12/31/2013 in-service
 - Tap Stillwell – Swissvale 345kV line at West Gardner, scheduled for 12/31/2012 in-service
- Priority Projects⁴:
 - Hitchland – Woodward double circuit 345kV, scheduled for 6/30/2014 in-service
 - Hitchland 345/230kV autotransformer
 - Woodward – Thistle double circuit 345kV, scheduled for 12/31/2014 in-service
 - Spearville – Clark double circuit 345kV, scheduled for 12/31/2014 in-service
 - Clark – Thistle double circuit 345kV, scheduled for 12/31/2014 in-service
 - Thistle – Wichita double circuit 345kV, scheduled for 12/31/2014 in-service
 - Thistle 345/138kV autotransformer, scheduled for 12/31/2014 in-service
 - Thistle – Flat Ridge 138kV, scheduled for 12/31/2014 in-service
- Various MKEC Transmission System Upgrades⁵
 - Harper – Flat Ridge 138kV rebuild, scheduled for 12/31/2013 in-service
 - Flat Ridge – Medicine Lodge 138kV rebuild, scheduled for 12/31/2013 in-service
 - Pratt – Medicine Lodge 115kV rebuild, scheduled for 6/1/2013 in-service
 - Medicine Lodge 138/115kV autotransformer replacement, scheduled for 6/1/2013 in-service

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-2010-002 study and are assumed to be in service. This list may not be all inclusive. The DISIS-2010-002 Customers at this time do not have responsibility for these facilities but may later be assigned the cost of these facilities if higher queued customers terminate their GIA or withdraw from the interconnection queue. The DISIS-2010-002 Customer Generation Facilities in service dates may need to be delayed until the completion of the following upgrades.

- Upgrades assigned to 1st Cluster (ICS-2008-001) Interconnection Customers:
 - Amarillo - Swisher 230kV CKT 1 Rerate replace line traps
 - Clinton Jct - GEN-2007-032 Tap - Clinton 138kV Rerate
- Upgrades assigned to DISIS-2009-001 Interconnection Customers:
 - Fort Dodge – North Fort Dodge – Spearville 115kV circuit #2
 - Albion – Petersburg – Neligh 115kV rerate (placed in service 2011)
 - Fort Randall – Madison County – Kelly 230kV rerate (320MVA)
 - Spearville 345/115kV autotransformer
- Upgrades assigned to DISIS-2010-001 Interconnection Customers:
 - Build Beaver County Substation
 - Switch 2749 – Wildorado 69kV rebuild

⁴ Notice to Construct (NTC) issued June 2010.

⁵ SPP Transmission Service Projects identified in SPP-2007-AG3-AFS-9.

- Washita – Gracemont 138kV circuit #2 (placed in service 2012)

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 section.

Regional Groupings

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

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

Power Flow

For each interconnection request, the generator was dispatched at 100% of nameplate in each season. In light load seasons (2012 spring), within each group, all other wind generating plants were dispatched at 80% nameplate of maximum generation. In the groups the generator was not a part, the wind generating plants were dispatched at 20% nameplate of maximum generation. This process created multiple scenarios with each interconnection request being studied at 100% nameplate while other request being studied at 80% nameplate rating. These projects were dispatched as Energy Resources with equal distribution across the SPP footprint. Certain projects that requested Network Resource Interconnection Service were dispatched in an additional analysis into the balancing authority of the interconnecting transmission owner. This method allowed for the identification of network constraints that were common to the regional groupings that could then in turn have the mitigating upgrade cost allocated throughout the entire cluster.

Peaking units were not dispatched in the 2013 spring model. To study peaking units' impacts, the 2013 summer and winter, 2018 summer and winter, and 2023 summer peak seasonal models were chosen and peaking units were modeled at 100% of the nameplate rating and wind generating facilities were modeled at 10% of the nameplate rating. Each interconnection request was also modeled separately at 100% nameplate for certain analyses.

Dynamic Stability

For each group, all interconnection requests were studied at 100% nameplate output while the other groups were dispatched at 20% output for wind requests and 100% output for fossil requests.

Identification of Network Constraints

The initial set of network constraints were found by using PTI MUST First Contingency Incremental Transfer Capability (FCITC) analysis on the entire cluster grouping dispatched at the various levels mentioned above. These constraints were then screened to determine if any of the generation interconnection requests had at least a 20% Distribution Factor (DF) upon the constraint. Constraints that measured at least a 20% DF from at least one interconnection request were considered for mitigation. Interconnection Requests that were being studied for Network Resource Interconnection Service (NRIS) were studied in the additional NRIS analysis to determine if any constraint had at least a 3% DF. If so, these constraints were considered for mitigation.

Determination of Cost Allocated Network Upgrades

Cost Allocated Network Upgrades of wind generation interconnection requests were determined using the 2013 spring model. Cost Allocated Network Upgrades of peaking units was determined using the 2018 summer peak model. A MUST sensitivity analysis was performed to determine the Distribution Factors (DF), a distribution factor with no contingency that each generation interconnection request had on each new upgrade. The impact each generation interconnection request had on each upgrade project was weighted by the size of each request. Finally the costs due by each request for a particular project were then determined by allocating the portion of each request's impact over the impact of all affecting requests.

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

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

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

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

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

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

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

- Repeat previous for each responsible GI request for each Project

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

Credits for Amounts Advanced for Network Upgrades

Interconnection Customer shall be entitled to credits in accordance with Attachment 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 1,212.7 MW of generation into the existing and proposed transmission systems in the affected areas of the SPP transmission footprint consist of the necessary cost allocated shared facilities listed in Appendix F by upgrade. The interconnection requirements for the cluster total \$26,460,000. Interconnection Facilities specific to each generation interconnection request are listed in Appendix E. A preliminary one-line drawing for each generation interconnection request are listed in Appendix D.

A list of constraints with greater than or equal to a 20% DF that were identified and used for mitigation are listed in Appendix G. Other Network Constraints, those between 3% and 20% DF, which were not used are shown in Appendix H. With a defined source and sink in a TSR, this list of Network Constraints will be refined and expanded to account for all Network Upgrade requirements.

Power Flow Analysis

Power Flow Analysis Methodology

The ACCC function of PSS/E was used to simulate single element and special (i.e., breaker-to-breaker, multi-element, etc) contingencies in portions or all of the modeled control areas of SPP, as well as, other control areas external to SPP and the resulting scenarios analyzed. NERC Category “B” and “C” contingencies were evaluated.

Power Flow Analysis

A power flow analysis was conducted for each Interconnection Customer’s facility using modified versions of the 2013 spring peak, 2013 summer and winter peak, and the 2018 summer and winter peak, and 2023 summer peak models. The output of the Interconnection Customer’s facility was offset in each model by a reduction in output of existing online SPP generation. This method allows the request to be studied as an Energy Resource (ER) Interconnection Request. Certain requests that requested Network Resource Interconnection Service (NRIS) had an additional analysis conducted for displacing resources in the interconnecting Transmission Owner’s balancing authority.

This analysis was conducted assuming that previous queued requests in the immediate area of these interconnect requests were in-service. The analysis of each Customer’s project indicates that criteria violations will occur on the NPPD, OKGE, and SPS transmission systems under steady state and contingency conditions in the peak seasons.

Cluster Group 1 (Woodward Area)

In addition to the 3,001.6 MW of previously queued generation in the area, 300.0 MW of new interconnection service was studied. With Base Case and previously allocated network upgrades in service, no new upgrades are necessary for interconnection of the generators in this group. No new constraints for mitigation were found in this area.

Cluster Group 2 (Hitchland Area)

In addition to the 1,966.7 MW of previously queued generation in the area, 300.0 MW of new interconnection service was studied. No additional constraints were identified in this analysis.

Cluster Group 3 (Spearville Area)

In addition to the 2,695.6 MW of previously queued generation in the area, 197.8 MW of new interconnection service was studied. The following constraint was identified.

MONTCOMMONNAME	RATEB	TC%LOADING	CONTNAME
'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	105.2803	'FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1'

Cluster Group 4 (NW Kansas Group)

In addition to the 1,917.1 MW of previously queued generation in the area, 70.0 MW of new interconnection service was studied. The following constraint was identified.

MONTCOMMONNAME	RATEB	TC%LOADING	CONTNAME
'BEACH STATION - G10-48T 115.00 115KV CKT 1'	88	103.7848	'MINGO (MINGO) 345/115/13.8KV TRANSFORMER CKT 1'
'BEARCRK2 - JOHNSON 115KV CKT 1'	60.8	105.9107	'FLETCHER - WILLIAMSON 115KV CKT 1'

The constraint at Beach station will be mitigated with the construction necessary to build the GEN-2010-048 substation. The Bear Creek-Johnson line has been recently rerated to 80MVA.

Cluster Group 5 (Amarillo Area)

In addition to the 1,572.6 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 6 (South Texas Panhandle/New Mexico)

In addition to the 1,771.2 MW of previously queued generation in the area, 129.8 MW of new interconnection service was studied. Lowered capacity for the ASGI-2010-020 and ASGI-2010-021 requests has relieved the thermal overloading on the 69kV transmission line from the ASGI-2010-

020 Tap – LCEC-Tatum – LCEC-McDonald – LCEC-Reed – LCEC-Lovington that was previously being mitigated.

Cluster Group 7 (Southwestern Oklahoma)

In addition to the 1,669.0 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 8 (South Central Kansas/North Oklahoma)

In addition to the 1,831.4 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 9/10 (Nebraska)

In addition to the 1,261 MW of previously queued generation in the area, 210.5 MW of new interconnection service was studied. Through further investigation by the transmission owner, additional work will be required on the GEN-2010-051 Tap – Twin Church – Dixon County 230kV to accommodate the interconnection of GEN-2010-051.

MONTCOMMONNAME	RATEB	TDF	TC%LOADING	CONTNAME
'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'	192	1	104.5287	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
'G10-51T 230.00 - HOSKINS 230KV CKT 1'	192	1	104.2096	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'

Cluster Group 12 (Northwest Arkansas)

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

Cluster Group 13 (Northwest Missouri)

In addition to the 380 MW of previously queued generation in the area, 4.6 MW of new interconnection service was studied. No new constraints were found in this area.

Cluster Group 14 (South Central Oklahoma)

In addition to the 200.0 MW of previously queued generation in the area, 0.0 MW of new interconnection service was studied. No new constraints were found in this area.

Stability Analysis

The Stability Analysis was not repeated as no major transmission configuration was necessary as a result of this restudy. Previous Impact Studies for DISIS-2010-002 should be consulted for power factor requirements.

Conclusion

The minimum cost of interconnecting 1,212.7 MW of new interconnection requests included in this Definitive Interconnection System Impact Study is estimated at \$26,460,000 for the Allocated Network Upgrades and Transmission Owner Interconnection Facilities are listed in Appendix E and F. These costs do not include the cost of upgrades of other transmission facilities listed in Appendix H which are Network Constraints.

These interconnection costs do not include any cost of Network Upgrades determined to be required by short circuit analysis. These studies will be performed if the Interconnection Customer executes the appropriate Interconnection Facilities Study Agreement and provides the required data along with demonstration of Site Control and the appropriate deposit. At the time of the Interconnection Facilities Study, a better determination of the interconnection facilities may be available.

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

Appendix

A: Generation Interconnection Requests Considered for Impact Study

See next page.

A: Generation Interconnection Requests Considered for Impact Study

Request	Amount	Service	Area	Requested Point of Interconnection	Proposed Point of Interconnection	Requested In-Service Date	In Service Date Delayed Until no earlier than*
ASGI-2010-020	30.00	ER	SPS	Tap LE-Tatum - LE-Crossroads 69kV	Tap LE-Tatum - LE-Crossroads 69kV		
ASGI-2010-021	15.00	ER	SPS	Tap LE-Saunders Tap - LE-Anderson 69kV	Tap LE-Saunders Tap - LE-Anderson 69kV		
ASGI-2011-001	28.80	ER	SPS	LE-Lovington 115kV	Lovington 115kV		
GEN-2010-001	300.00	ER	OKGE	Tap Hitchland - Woodward Ckt 1 (Beaver County) 345kV	Tap Hitchland - Woodward Dbl Ckt (Beaver County) 345kV	1/1/2012	12/31/2014
GEN-2010-036	4.60	ER	WERE	6th Street 115kV	6th Street 115kV	8/1/2012	N/A
GEN-2010-040	300.00	ER/NR	OKGE	Cimarron 345kV	Cimarron 345kV	11/30/2011	N/A
GEN-2010-041	10.50	ER	OPPD	S 1399 161kV	S 1399 161kV	12/31/2011	N/A
GEN-2010-045	197.80	ER/NR	SUNCMKEC	Tap Holcomb - Spearville (Gray County) 345kV	Buckner 345kV	12/31/2012	12/31/2014
GEN-2010-046	56.00	ER	SPS	Tuco 230kV	TUCO Interchange 230kV	5/1/2013	12/31/2014
GEN-2010-048	70.00	ER/NR	MIDW	Tap Beach Station - Redline 115kV	Tap Beach Station - Redline 115kV	12/31/2011	12/31/2014
GEN-2010-051	200.00	ER	NPPD	Tap Twin Church - Hoskins 230kV	Tap Twin Church - Hoskins 230kV	12/15/2012	N/A
Total: 1,212.70							

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

B: Prior Queued Interconnection Requests

See next page.

B: Prior Queued Interconnection Requests

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
ASGI-2010-006	150.00	AECI	Tap Fairfax (AECI) - Shilder (AEPW) 138kV	AECI queue Affected Study
ASGI-2010-010	42.20	SPS	Lovington 115kV	Lea County Affected Study
GEN-2001-014	96.00	WFEC	Ft Supply 138kV	On-Line
GEN-2001-026	74.00	WFEC	Washita 138kV	On-Line
GEN-2001-033	180.00	SPS	San Juan Tap 230kV	On-Line at 120MW
GEN-2001-036	80.00	SPS	Norton 115kV	On-Line
GEN-2001-037	100.00	OKGE	FPL Moreland Tap 138kV	On-Line
GEN-2001-039A	105.00	SUNCMKEC	Tap Greensburg - Ft Dodge (Shooting Star Tap) 115kV	On-Line
GEN-2001-039M	100.00	SUNCMKEC	Central Plains Tap 115kV	On-Line
GEN-2002-004	200.00	WERE	Latham 345kV	On-Line at 150MW
GEN-2002-005	120.00	WFEC	Red Hills Tap 138kV	On-Line
GEN-2002-008	240.00	SPS	Hitchland 345kV	On-Line at 120MW
GEN-2002-009	80.00	SPS	Hansford 115kV	On-Line
GEN-2002-022	240.00	SPS	Bushland 230kV	On-Line
GEN-2002-023N	0.80	NPPD	Harmony 115kV	On-Line
GEN-2002-025A	150.00	SUNCMKEC	Spearville 230kV	On-Line
GEN-2003-004	100.00	WFEC	Washita 138kV	On-Line
GEN-2003-005	100.00	WFEC	Anadarko - Paradise (Blue Canyon) 138kV	On-Line
GEN-2003-006A	200.00	SUNCMKEC	Elm Creek 230kV	On-Line
GEN-2003-019	250.00	MIDW	Smoky Hills Tap 230kV	On-Line
GEN-2003-020	160.00	SPS	Martin 115kV	On-Line
GEN-2003-021N	75.00	NPPD	Ainsworth Wind Tap 115kV	On-Line
GEN-2003-022	120.00	AEPW	Washita 138kV	On-Line
GEN-2004-005N	30.00	NPPD	St Francis 115kV	On Suspension
GEN-2004-014	154.50	SUNCMKEC	Spearville 230kV	On-Line at 100MW
GEN-2004-020	27.00	AEPW	Washita 34.5kV	On-Line
GEN-2004-023	20.60	WFEC	Washita 138kV	On-Line
GEN-2004-023N	75.00	NPPD	Columbus Co 115kV	On-Line
GEN-2005-003	30.60	WFEC	Washita 138kV	On-Line
GEN-2005-008	120.00	OKGE	Woodward 138kV	On-Line
GEN-2005-012	250.00	SUNCMKEC	Ironwood 345kV	On-Line at 160MW
GEN-2005-013	201.00	WERE	Tap Latham - Neosho (Caney River) 345kV	On-Line
GEN-2006-002	101.00	AEPW	Sweetwater 230kV	On-Line
GEN-2006-006	205.50	SUNCMKEC	Spearville 345kV	On Schedule for 2015
GEN-2006-018	170.00	SPS	TUCO Interchange 230kV	On-Line
GEN-2006-020N	42.00	NPPD	Bloomfield 115kV	On-Line
GEN-2006-020S	18.90	SPS	DWS Frisco 115kV	On-Line
GEN-2006-021	101.00	SUNCMKEC	Flat Ridge Tap 138kV	On-Line
GEN-2006-022	150.00	SUNCMKEC	RV Road 115kV	On Schedule for 2014
GEN-2006-024S	19.80	WFEC	Buffalo Bear Tap 69kV	On-Line
GEN-2006-026	604.00	SPS	Hobbs 230kV & Hobbs 115kV	On-Line
GEN-2006-031	75.00	MIDW	Knoll 115kV	On-Line
GEN-2006-035	225.00	AEPW	Sweetwater 230kV	On-Line at 132MW
GEN-2006-037N1	75.00	NPPD	Broken Bow 115kV	On Schedule for 2014
GEN-2006-038N005	80.00	NPPD	Broken Bow 115kV	On-Line
GEN-2006-038N019	80.00	NPPD	Petersburg North 115kV	On-Line
GEN-2006-040	108.00	SUNCMKEC	Mingo 115kV	On Suspension

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2006-043	99.00	AEPW	Sweetwater 230kV	On-Line
GEN-2006-044	370.00	SPS	Hitchland 345kV	On-Line at 80MW
GEN-2006-044N	40.50	NPPD	North Petersburg 115kV	On-Line
GEN-2006-046	131.00	OKGE	Dewey 138kV	On-Line
GEN-2006-047	240.00	SPS	Tap Bushland - Deaf Smith (Buffalo) 230kV	On Suspension
GEN-2007-011	135.00	SUNCMKEC	Syracuse 115kV	On Suspension
GEN-2007-011N08	81.00	NPPD	Bloomfield 115kV	On-Line
GEN-2007-021	201.00	OKGE	Tatonga 345kV	On Schedule for 2014
GEN-2007-025	300.00	WERE	Viola 345kV	On-Line
GEN-2007-032	150.00	WFEC	Tap Clinton Junction - Clinton 138kV	On Schedule for 2013
GEN-2007-038	200.00	SUNCMKEC	Spearville 345kV	On Schedule for 2015
GEN-2007-040	200.00	SUNCMKEC	Buckner 345kV	On-Line at 132MW
GEN-2007-043	200.00	OKGE	Minco 345kV	On-Line
GEN-2007-044	300.00	OKGE	Tatonga 345kV	On Schedule for 2014
GEN-2007-046	199.50	SPS	Hitchland 115kV	On Schedule for 2014
GEN-2007-048	400.00	SPS	Tap Amarillo S - Swisher 230kV	On Schedule for 2014
GEN-2007-050	170.00	OKGE	Woodward EHV 138kV	On-Line at 150MW
GEN-2007-052	150.00	WFEC	Anadarko 138kV	On-Line
GEN-2007-062	765.00	OKGE	Woodward EHV 345kV	On Schedule for 2014
GEN-2008-003	101.00	OKGE	Woodward EHV 138kV	On-Line
GEN-2008-008	60.00	SPS	Graham 69kV	On Suspension
GEN-2008-013	300.00	OKGE	Tap Wichita - Woodring (Hunter) 345kV	On-Line at 235MW
GEN-2008-017	300.00	SUNCMKEC	Setab 345kV	On Schedule for 2015
GEN-2008-018	250.00	SPS	Finney 345kV	On Schedule for 2014
GEN-2008-019	300.00	OKGE	Tatonga 345kV	On Schedule for 2015
GEN-2008-021	42.00	WERE	Wolf Creek 345kV	On-Line
GEN-2008-022	300.00	SPS	Tap Eddy Co - Tolk (Chaves County) 345kV	On Schedule for 2015
GEN-2008-023	150.00	AEPW	Hobart Junction 138kV	On-Line
GEN-2008-029	250.50	OKGE	Woodward EHV 138kV	On Schedule for 2014
GEN-2008-037	101.00	WFEC	Tap Washita - Blue Canyon Wind 138kV	On-Line
GEN-2008-044	197.80	OKGE	Tatonga 345kV	On-Line
GEN-2008-047	300.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (Beaver County) 345kV	IA Pending
GEN-2008-051	322.00	SPS	Potter County 345kV	On-Line at 161MW
GEN-2008-079	99.20	SUNCMKEC	Tap Cudahy - Ft Dodge 115kV	On-Line
GEN-2008-086N02	200.00	NPPD	Tap Ft Randle - Columbus (Madison County) 230kV	On Schedule for 2014
GEN-2008-088	50.60	SPS	Vega 69kV	On Schedule for 2014
GEN-2008-092	201.00	MIDW	Post Rock 230kV	IA Pending
GEN-2008-098	100.80	WERE	Tap Lacygne - Wolf Creek (Anderson County) 345kV	On Schedule for 2015
GEN-2008-1190	60.00	OPPD	S1399 161kV	On-Line
GEN-2008-123N	89.70	NPPD	Tap Guide Rock - Pauline (Rosemont) 115kV	On Schedule for 2014
GEN-2008-124	200.10	SUNCMKEC	Ironwood 345kV	On Schedule for 2016
GEN-2008-129	80.00	MIPU	Pleasant Hill 161kV	On-Line
GEN-2009-008	199.50	MIDW	South Hays 230kV	On Schedule for 2015
GEN-2009-020	48.60	MIDW	Tap Nekoma - Bazine (Walnut Creek) 69kV	On Schedule for 2015
GEN-2009-025	60.00	OKGE	Nardins 69kV	On-Line
GEN-2009-040	108.00	WERE	Marshall 115kV	On Schedule for 2015
GEN-2010-003	100.80	WERE	Tap Lacygne - Wolf Creek (Anderson County) 345kV	On Schedule for 2015
GEN-2010-005	300.00	WERE	Viola 345kV	On-Line at 114MW
GEN-2010-006	205.00	SPS	Jones 230kV	On-Line

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2010-009	165.60	SUNCMKEC	Buckner 345kV	On-Line
GEN-2010-011	29.70	OKGE	Tatonga 345kV	On Line
GEN-2010-014	358.80	SPS	Hitchland 345kV	On Schedule for 2016
GEN-2010-015	200.10	SUNCMKEC	Spearville 345kV	On Schedule for 2015
Gray County Wind (Montezuma)	110.00	SUNCMKEC	Gray County Tap 115kV	On-Line
Llano Estacado (White Deer)	80.00	SPS	Llano Wind 115kV	On-Line
NPPD Distributed (Broken Bow)	8.30	NPPD	Broken Bow 115kV	On-Line
NPPD Distributed (Burt County Wind)	12.00	NPPD	Tekamah & Oakland 115kV	On-Line
NPPD Distributed (Burwell)	3.00	NPPD	Ord 115kV	On-Line
NPPD Distributed (Columbus Hydro)	45.00	NPPD	Columbus 115kV	On-Line
NPPD Distributed (Ord)	11.90	NPPD	Ord 115kV	On-Line
NPPD Distributed (Stuart)	2.10	NPPD	Ainsworth 115kV	On-Line
SPS Distributed (Dumas 19th St)	20.00	SPS	Dumas 19th Street 115kV	On-Line
SPS Distributed (Etter)	20.00	SPS	Etter 115kV	On-Line
SPS Distributed (Hopi)	10.00	SPS	Hopi 115kV	On-Line
SPS Distributed (Jal)	10.00	SPS	S Jal 115kV	On-Line
SPS Distributed (Lea Road)	10.00	SPS	Lea Road 115kV	On-Line
SPS Distributed (Monument)	10.00	SPS	Monument 115kV	On-Line
SPS Distributed (Moore E)	25.00	SPS	Moore East 115kV	On-Line
SPS Distributed (Ocotillo)	10.00	SPS	S_Jal 115kV	On-Line
SPS Distributed (Sherman)	20.00	SPS	Sherman 115kV	On-Line
SPS Distributed (Spearman)	10.00	SPS	Spearman 69kV	On-Line
SPS Distributed (TC-Texas County)	20.00	SPS	Texas County 115kV	On-Line
Total:		16,528.0		

C: Study Groupings

See next page

C. Study Groups

GROUP 1: WOODWARD AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-014	96.00	WFEC	Ft Supply 138kV
GEN-2001-037	100.00	OKGE	FPL Moreland Tap 138kV
GEN-2005-008	120.00	OKGE	Woodward 138kV
GEN-2006-024S	19.80	WFEC	Buffalo Bear Tap 69kV
GEN-2006-046	131.00	OKGE	Dewey 138kV
GEN-2007-021	201.00	OKGE	Tatonga 345kV
GEN-2007-043	200.00	OKGE	Minco 345kV
GEN-2007-044	300.00	OKGE	Tatonga 345kV
GEN-2007-050	170.00	OKGE	Woodward EHV 138kV
GEN-2007-062	765.00	OKGE	Woodward EHV 345kV
GEN-2008-003	101.00	OKGE	Woodward EHV 138kV
GEN-2008-019	300.00	OKGE	Tatonga 345kV
GEN-2008-029	250.50	OKGE	Woodward EHV 138kV
GEN-2008-044	197.80	OKGE	Tatonga 345kV
GEN-2010-011	29.70	OKGE	Tatonga 345kV
PRIOR QUEUED SUBTOTAL	2,981.80		
GEN-2010-040	300.00	OKGE	Cimarron 345kV
CURRENT CLUSTER SUBTOTAL	300.00		
AREA TOTAL	3,281.80		

GROUP 2: HITCHLAND AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2002-008	240.00	SPS	Hitchland 345kV
GEN-2002-009	80.00	SPS	Hansford 115kV
GEN-2003-020	160.00	SPS	Martin 115kV
GEN-2006-020S	18.90	SPS	DWS Frisco 115kV
GEN-2006-044	370.00	SPS	Hitchland 345kV
GEN-2007-046	199.50	SPS	Hitchland 115kV
GEN-2008-047	300.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (Beaver County) 345kV
GEN-2010-014	358.80	SPS	Hitchland 345kV
SPS Distributed (Dumas 19th St)	20.00	SPS	Dumas 19th Street 115kV
SPS Distributed (Etter)	20.00	SPS	Etter 115kV
SPS Distributed (Moore E)	25.00	SPS	Moore East 115kV
SPS Distributed (Sherman)	20.00	SPS	Sherman 115kV
SPS Distributed (Spearman)	10.00	SPS	Spearman 69kV
SPS Distributed (TC-Texas County)	20.00	SPS	Texas County 115kV
PRIOR QUEUED SUBTOTAL	1,842.20		
GEN-2010-001	300.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (Beaver County) 345kV
CURRENT CLUSTER SUBTOTAL	300.00		
AREA TOTAL	2,142.20		

GROUP 3: SPEARVILLE AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-039A	105.00	SUNCMKEC	Tap Greensburg - Ft Dodge (Shooting Star Tap) 115kV
GEN-2002-025A	150.00	SUNCMKEC	Spearville 230kV
GEN-2004-014	154.50	SUNCMKEC	Spearville 230kV
GEN-2005-012	250.00	SUNCMKEC	Ironwood 345kV
GEN-2006-006	205.50	SUNCMKEC	Spearville 345kV
GEN-2006-021	101.00	SUNCMKEC	Flat Ridge Tap 138kV
GEN-2006-022	150.00	SUNCMKEC	RV Road 115kV
GEN-2007-038	200.00	SUNCMKEC	Spearville 345kV
GEN-2007-040	200.00	SUNCMKEC	Buckner 345kV
GEN-2008-018	250.00	SPS	Finney 345kV
GEN-2008-079	99.20	SUNCMKEC	Tap Cudahy - Ft Dodge 115kV
GEN-2008-124	200.10	SUNCMKEC	Ironwood 345kV
GEN-2010-009	165.60	SUNCMKEC	Buckner 345kV
GEN-2010-015	200.10	SUNCMKEC	Spearville 345kV
Gray County Wind (Montezuma)	110.00	SUNCMKEC	Gray County Tap 115kV
PRIOR QUEUED SUBTOTAL	2,541.00		
GEN-2010-045	197.80	SUNCMKEC	Buckner 345kV
CURRENT CLUSTER SUBTOTAL	197.80		
AREA TOTAL	2,738.80		

GROUP 4/11: NW KANSAS AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-039M	100.00	SUNCMKEC	Central Plains Tap 115kV
GEN-2003-006A	200.00	SUNCMKEC	Elm Creek 230kV
GEN-2003-019	250.00	MIDW	Smoky Hills Tap 230kV
GEN-2006-031	75.00	MIDW	Knoll 115kV
GEN-2006-040	108.00	SUNCMKEC	Mingo 115kV
GEN-2007-011	135.00	SUNCMKEC	Syracuse 115kV
GEN-2008-017	300.00	SUNCMKEC	Setab 345kV
GEN-2008-092	201.00	MIDW	Post Rock 230kV
GEN-2009-008	199.50	MIDW	South Hays 230kV
GEN-2009-020	48.60	MIDW	Tap Nekoma - Bazine (Walnut Creek) 69kV
PRIOR QUEUED SUBTOTAL	1,617.10		
GEN-2010-048	70.00	MIDW	Tap Beach Station - Redline 115kV
CURRENT CLUSTER SUBTOTAL	70.00		
AREA TOTAL	1,687.10		

GROUP 5: AMARILLO AREA

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

GROUP 6: S-TX PANHANDLE/W-TX AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2010-010	42.20	SPS	Lovington 115kV
GEN-2001-033	180.00	SPS	San Juan Tap 230kV
GEN-2001-036	80.00	SPS	Norton 115kV
GEN-2006-018	170.00	SPS	TUCO Interchange 230kV
GEN-2006-026	604.00	SPS	Hobbs 230kV & Hobbs 115kV
GEN-2008-008	60.00	SPS	Graham 69kV
GEN-2008-022	300.00	SPS	Tap Eddy Co - Tolk (Chaves County) 345kV
GEN-2010-006	205.00	SPS	Jones 230kV
SPS Distributed (Hopi)	10.00	SPS	Hopi 115kV
SPS Distributed (Jal)	10.00	SPS	S_Jal 115kV
SPS Distributed (Lea Road)	10.00	SPS	Lea Road 115kV
SPS Distributed (Monument)	10.00	SPS	Monument 115kV
SPS Distributed (Ocotillo)	10.00	SPS	S_Jal 115kV
PRIOR QUEUED SUBTOTAL	1,691.20		
ASGI-2010-020	30.00	SPS	Tap LE-Tatum - LE-Crossroads 69kV
ASGI-2010-021	15.00	SPS	Tap LE-Saunders Tap - LE-Anderson 69kV
ASGI-2011-001	28.80	SPS	Lovington 115kV
GEN-2010-046	56.00	SPS	TUCO Interchange 230kV
CURRENT CLUSTER SUBTOTAL	129.80		
AREA TOTAL	1,821.00		

GROUP 7: SW-OKLAHOMA AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-026	74.00	WFEC	Washita 138kV
GEN-2002-005	120.00	WFEC	Red Hills Tap 138kV
GEN-2003-004	100.00	WFEC	Washita 138kV
GEN-2003-005	100.00	WFEC	Anadarko - Paradise (Blue Canyon) 138kV
GEN-2003-022	120.00	AEPW	Washita 138kV
GEN-2004-020	27.00	AEPW	Washita 34.5kV
GEN-2004-023	20.60	WFEC	Washita 138kV
GEN-2005-003	30.60	WFEC	Washita 138kV
GEN-2006-002	101.00	AEPW	Sweetwater 230kV
GEN-2006-035	225.00	AEPW	Sweetwater 230kV
GEN-2006-043	99.00	AEPW	Sweetwater 230kV
GEN-2007-032	150.00	WFEC	Tap Clinton Junction - Clinton 138kV
GEN-2007-052	150.00	WFEC	Anadarko 138kV
GEN-2008-023	150.00	AEPW	Hobart Junction 138kV
GEN-2008-037	101.00	WFEC	Tap Washita - Blue Canyon Wind 138kV
PRIOR QUEUED SUBTOTAL	1,568.20		
AREA TOTAL	1,568.20		

GROUP 8: N-OK/S-KS AREA

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2010-006	150.00	AECI	Tap Fairfax (AECI) - Schilder (AEPW) 138kV
GEN-2002-004	200.00	WERE	Latham 345kV
GEN-2005-013	201.00	WERE	Tap Latham - Neosho (Caney River) 345kV
GEN-2007-025	300.00	WERE	Viola 345kV
GEN-2008-013	300.00	OKGE	Tap Wichita - Woodring (Hunter) 345kV
GEN-2008-021	42.00	WERE	Wolf Creek 345kV
GEN-2008-098	100.80	WERE	Tap Lacygne - Wolf Creek (Anderson County) 345kV
GEN-2009-025	60.00	OKGE	Nardins 69kV
GEN-2010-003	100.80	WERE	Tap Lacygne - Wolf Creek (Anderson County) 345kV
GEN-2010-005	300.00	WERE	Viola 345kV
PRIOR QUEUED SUBTOTAL	1,754.60		
AREA TOTAL	1,754.60		

GROUP 9/10: NEBRASKA AREA			
Request	Capacity	Area	Proposed Point of Interconnection
GEN-2002-023N	0.80	NPPD	Harmony 115kV
GEN-2003-021N	75.00	NPPD	Ainsworth Wind Tap 115kV
GEN-2004-005N	30.00	NPPD	St Francis 115kV
GEN-2004-023N	75.00	NPPD	Columbus Co 115kV
GEN-2006-020N	42.00	NPPD	Bloomfield 115kV
GEN-2006-037N1	75.00	NPPD	Broken Bow 115kV
GEN-2006-038N005	80.00	NPPD	Broken Bow 115kV
GEN-2006-038N019	80.00	NPPD	Petersburg North 115kV
GEN-2006-044N	40.50	NPPD	North Petersburg 115kV
GEN-2007-011N08	81.00	NPPD	Bloomfield 115kV
GEN-2008-086N02	200.00	NPPD	Tap Ft Randle - Columbus (Madison County) 230kV
GEN-2008-1190	60.00	OPPD	S1399 161kV
GEN-2008-123N	89.70	NPPD	Tap Guide Rock - Pauline (Rosemont) 115kV
GEN-2009-040	108.00	WERE	Marshall 115kV
NPPD Distributed (Broken Bow)	8.30	NPPD	Broken Bow 115kV
NPPD Distributed (Burt County Wind)	12.00	NPPD	Tekamah & Oakland 115kV
NPPD Distributed (Burwell)	3.00	NPPD	Ord 115kV
NPPD Distributed (Columbus Hydro)	45.00	NPPD	Columbus 115kV
NPPD Distributed (Ord)	11.90	NPPD	Ord 115kV
NPPD Distributed (Stuart)	2.10	NPPD	Ainsworth 115kV
PRIOR QUEUED SUBTOTAL	1,119.30		
GEN-2010-041	10.50	OPPD	S 1399 161kV
GEN-2010-051	200.00	NPPD	Tap Twin Church - Hoskins 230kV
CURRENT CLUSTER SUBTOTAL	210.50		
AREA TOTAL	1,329.80		

GROUP 12: NW-AR AREA

Request	Capacity	Area	Proposed Point of Interconnection
AREA TOTAL	0.00		

GROUP 13: NW MISSOURI AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2008-129	80.00	MIPU	Pleasant Hill 161kV
PRIOR QUEUED SUBTOTAL	80.00		
GEN-2010-036	4.60	WERE	6th Street 115kV
CURRENT CLUSTER SUBTOTAL	4.60		
AREA TOTAL	84.60		

GROUP 14: S-OKLAHOMA AREA

Request	Capacity	Area	Proposed Point of Interconnection
AREA TOTAL	0.00		

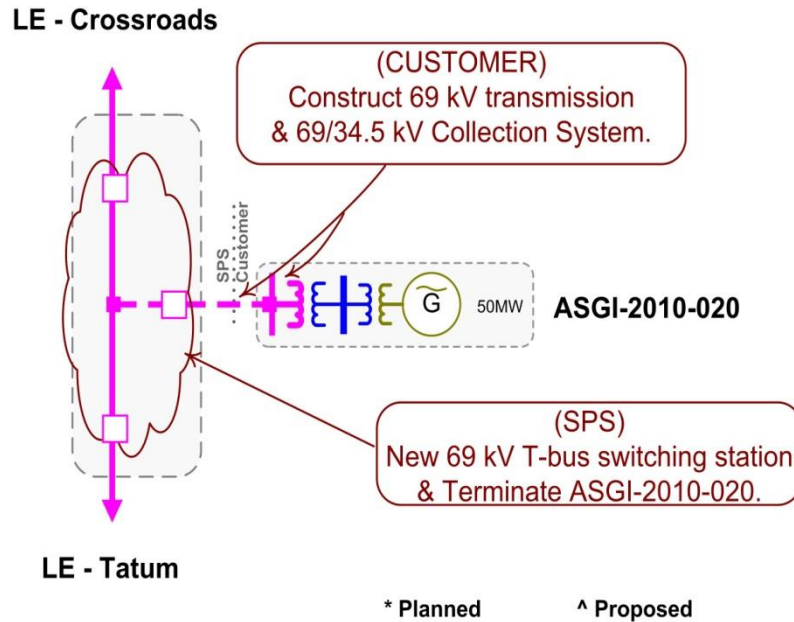
CLUSTER TOTAL (CURRENT STUDY)	1,212.7	MW
PQ TOTAL (PRIOR QUEUED)	16,528.0	MW
CLUSTER TOTAL (INCLUDING PRIOR QUEUED)	17,740.7	MW

D: Proposed Point of Interconnection One line Diagrams

Refer to most recent Facility study for each request for an updated one-line.

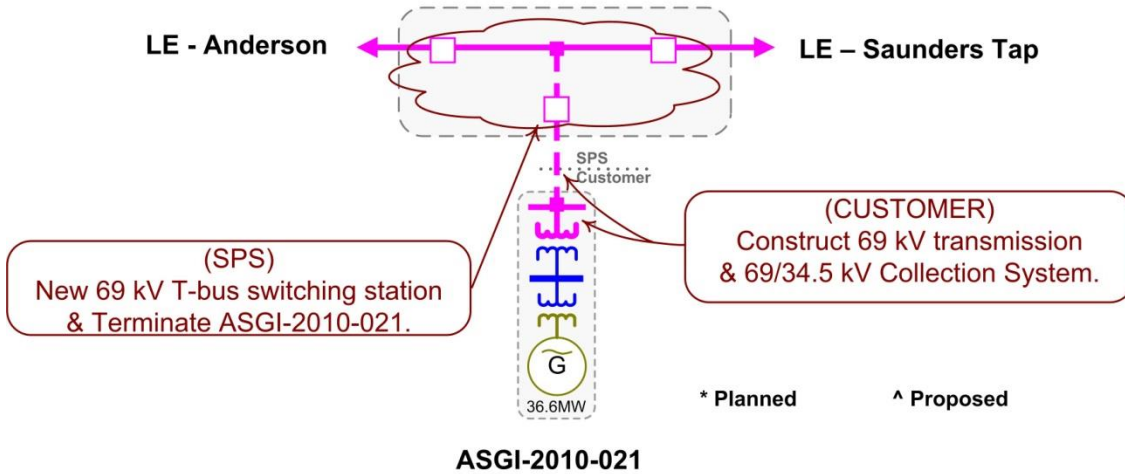
ASGI-2010-020

**New (SPS)
69 kV SWITCHING STATION**

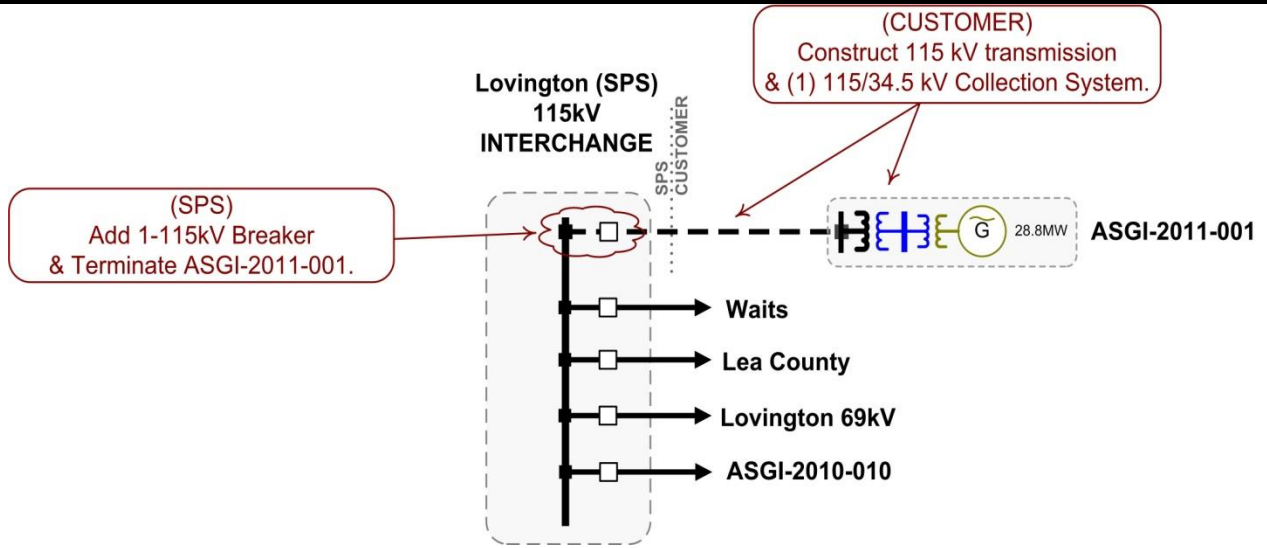


ASGI-2010-021

**New (SPS)
69 kV SWITCHING STATION**



ASGI-2011-001



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

Important Note:

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

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

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

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

The required interconnection costs listed do not include all costs associated with the deliverability of the energy to final customers. These costs are determined by separate studies if the Customer submits a Transmission Service Request through SPP's Open Access Same Time Information System (OASIS) as required by Attachment Z1 of the SPP OATT. In addition, costs associated with a short circuit analysis will be allocated should the Interconnection Request Customer choose to execute a Facility Study Agreement.

Appendix E. Cost Allocation Per Request

(Including Previously Allocated Network Upgrades*)

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
ASGI 2010-020			
ASGI-2010-020 Interconnection Costs See Online Diagram.	Current Study	\$0.00	\$0.00
Beaver County - Woodward 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Hitchland - Beaver County 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Hitchland - Woodward 345kV CKT 2 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Nichols - Harrington Mid 230kV CKT 1 Per GEN-2008-051 LOIS: Rebuild approximately 1 mile of 230kV @ 1825 amps	Previously Allocated		\$869,251.00
Thistle - Flat Ridge 138kV CKT 1 Priority Project: Thistle - Flat Ridge 138kV CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$4,004,423.00
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$166,598,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Thistle 345/138KV Transformer CKT 1 Priority Project: Thistle 345/138kV Transformer CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$8,627,726.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	Current Study Total	\$0.00	

ASGI 2010-021

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
ASGI-2010-021 Interconnection Costs See Online Diagram.	Current Study	\$0.00	\$0.00
Beaver County - Woodward 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Hitchland - Beaver County 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Hitchland - Woodward 345kV CKT 2 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Nichols - Harrington Mid 230kV CKT 1 Per GEN-2008-051 LOIS: Rebuild approximately 1 mile of 230kV @ 1825 amps	Previously Allocated		\$869,251.00
Thistle - Flat Ridge 138kV CKT 1 Priority Project: Thistle - Flat Ridge 138kV CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$4,004,423.00
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$166,598,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Thistle 345/138KV Transformer CKT 1 Priority Project: Thistle 345/138kV Transformer CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$8,627,726.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	Current Study Total	\$0.00	

ASGI 2011-001

ASGI-2011-001 Interconnection Costs See Online Diagram.	Current Study	\$0.00	\$0.00
Beaver County - Woodward 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Hitchland - Beaver County 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Hitchland - Woodward 345kV CKT 2 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Nichols - Harrington Mid 230kV CKT 1 Per GEN-2008-051 LOIS: Rebuild approximately 1 mile of 230kV @ 1825 amps	Previously Allocated		\$869,251.00
Thistle - Flat Ridge 138kV CKT 1 Priority Project: Thistle - Flat Ridge 138kV CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$4,004,423.00
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$166,598,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Thistle 345/138KV Transformer CKT 1 Priority Project: Thistle 345/138kV Transformer CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$8,627,726.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	Current Study Total		\$0.00

GEN-2010-001

GEN-2010-001 Interconnection Costs See Online Diagram.	Current Study	\$3,566,677.00	\$3,566,677.00
Beaver County - Woodward 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Beaver County Substation Build Beaver County Substation	Previously Allocated		\$16,000,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Hitchland - Woodward 345kV CKT 2 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Hitchland 345/230kV Autotransformer CKT 2 Priority Project: Hitchland 345/230kV Autotransformer CKT 2 (Total Project E&C Cost Shown).	Previously Allocated		\$8,883,760.00
Nichols - Harrington Mid 230kV CKT 1 Per GEN-2008-051 LOIS: Rebuild approximately 1 mile of 230kV @ 1825 amps	Previously Allocated		\$869,251.00
Thistle - Flat Ridge 138kV CKT 1 Priority Project: Thistle - Flat Ridge 138kV CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$4,004,423.00
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$166,598,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Thistle 345/138KV Transformer CKT 1 Priority Project: Thistle 345/138kV Transformer CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$8,627,726.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	Current Study Total	\$3,566,677.00	

GEN-2010-036

GEN-2010-036 Interconnection Costs See Oneline Diagram.	Current Study	\$204,600.00	\$204,600.00
Iatan - Nashua 345KV CKT 1 Balanced Portfolio: Iatan - Nashua 345kV CKT 1 (Total Project E&C Cost Shown).	Previously Allocated		\$60,800,000.00
	Current Study Total	\$204,600.00	

GEN-2010-040

GEN-2010-040 Interconnection Costs See Oneline Diagram.	Current Study	\$8,046,756.00	\$8,046,756.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Hitchland 345/230kV Autotransformer CKT 2 Priority Project: Hitchland 345/230kV Autotransformer CKT 2 (Total Project E&C Cost Shown).	Previously Allocated		\$8,883,760.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	Current Study Total	\$8,046,756.00	

GEN-2010-041

GEN-2010-041 Interconnection Costs See Online Diagram.	Current Study	\$0.00	\$0.00
	Current Study Total	\$0.00	

GEN-2010-045

Buckner - Spearville 345kV CKT 1 Replace Terminal equipment	Current Study	\$200,000.00	\$200,000.00
GEN-2010-045 Interconnection Costs See Online Diagram.	Current Study	\$5,000,000.00	\$5,000,000.00
Beaver County - Woodward 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Clark - Thistle 345KV Dbl CKT Priority Project: Spearville - Clark - Thistle Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$300,194,436.00
Hitchland - Beaver County 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Hitchland - Woodward 345kV CKT 2 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Hitchland 345/230kV Autotransformer CKT 2 Priority Project: Hitchland 345/230kV Autotransformer CKT 2 (Total Project E&C Cost Shown).	Previously Allocated		\$8,883,760.00

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Iatan - Nashua 345KV CKT 1 Balanced Portfolio: Iatan - Nashua 345kV CKT 1 (Total Project E&C Cost Shown).	Previously Allocated		\$60,800,000.00
Spearville -Clark 345KV Dbl CKT Priority Project: Spearville - Clark - Thistle Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$300,194,436.00
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$166,598,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	Current Study Total	\$5,200,000.00	

GEN-2010-046

GEN-2010-046 Interconnection Costs See Online Diagram.	Current Study	\$0.00	\$0.00
Beaver County - Woodward 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Hitchland - Beaver County 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Hitchland - Woodward 345kV CKT 2 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Nichols - Harrington Mid 230kV CKT 1 Per GEN-2008-051 LOIS: Rebuild approximately 1 mile of 230kV @ 1825 amps	Previously Allocated		\$869,251.00
Thistle - Flat Ridge 138kV CKT 1 Priority Project: Thistle - Flat Ridge 138kV CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$4,004,423.00
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$166,598,000.00

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
Thistle 345/138KV Transformer CKT 1 Priority Project: Thistle 345/138kV Transformer CKT 1 (Total Project E&C Cost Shown.)	Previously Allocated		\$8,627,726.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	Current Study Total		\$0.00

GEN-2010-048

GEN-2010-048 Interconnection Costs See Online Diagram.	Current Study	\$3,041,964.00	\$3,041,964.00
Beaver County - Woodward 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Clark - Thistle 345KV Dbl CKT Priority Project: Spearville - Clark - Thistle Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$300,194,436.00
Hitchland - Beaver County 345kV CKT 1 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Hitchland - Woodward 345kV CKT 2 Priority Project: Hitchland - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$226,040,727.00
Hitchland 345/230kV Autotransformer CKT 2 Priority Project: Hitchland 345/230kV Autotransformer CKT 2 (Total Project E&C Cost Shown).	Previously Allocated		\$8,883,760.00
Iatan - Nashua 345KV CKT 1 Balanced Portfolio: Iatan - Nashua 345kV CKT 1 (Total Project E&C Cost Shown).	Previously Allocated		\$60,800,000.00
Nashua 345/161/13.8KV Autotransformer CKT 1 Balanced Portfolio: Nashua/161/13.8 Autotransformer 345kV CKT 1 (Total Project E&C Cost Shown).	Previously Allocated		\$4,000,000.00
Spearville -Clark 345KV Dbl CKT Priority Project: Spearville - Clark - Thistle Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$300,194,436.00

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

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Thistle - Wichita 345KV Dbl CKT Priority Project: Thistle - Wichita Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$166,598,000.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
Woodward XFMR 345/138/13.8kV CKT 2 Balanced Portfolio: Woodward 345/138kV Transformer CKT 2 & 50 MVAR Reactor (Total Project E&C Cost Shown).	Previously Allocated		\$15,000,000.00
	Current Study Total	\$3,041,964.00	

GEN-2010-051

GEN-2010-051 Interconnection Costs See Online Diagram.	Current Study	\$6,300,000.00	\$6,300,000.00
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Current Study	\$100,000.00	\$100,000.00
Border - Tuco Interchange 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Border - Woodward 345KV CKT 1 Balanced Portfolio: Tuco - Woodward 345kV CKT 1 (Total Project E&C Cost Shown)	Previously Allocated		\$249,932,114.00
Clark - Thistle 345KV Dbl CKT Priority Project: Spearville - Clark - Thistle Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$300,194,436.00
Hitchland 345/230kV Autotransformer CKT 2 Priority Project: Hitchland 345/230kV Autotransformer CKT 2 (Total Project E&C Cost Shown).	Previously Allocated		\$8,883,760.00
Nashua 345/161/13.8KV Autotransformer CKT 1 Balanced Portfolio: Nashua/161/13.8 Autotransformer 345kV CKT 1 (Total Project E&C Cost Shown).	Previously Allocated		\$4,000,000.00
Spearville -Clark 345KV Dbl CKT Priority Project: Spearville - Clark - Thistle Dbl 345kV CKT (Total Project E&C Cost Shown.)	Previously Allocated		\$300,194,436.00
Thistle - Woodward 345KV Dbl CKT Priority Project: Thistle - Woodward Dbl 345kV CKT (Total Project E&C Cost Shown)	Previously Allocated		\$212,090,000.00
TUCO Interchange 345/230/13.2KV Autotransformer CKT 2 Balanced Portfolio: TUCO 345/230 kV Transformer CKT 2 (Total Project E&C Cost Shown)	Previously Allocated		\$14,900,907.00
	Current Study Total	\$6,400,000.00	

TOTAL CURRENT STUDY COSTS: \$26,459,997.00

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

F: Cost Allocation per Proposed Study Network Upgrade

Important Note:

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

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

The required interconnection costs listed do not include all costs associated with the deliverability of the energy to final customers. These costs are determined by separate studies if the Customer submits a Transmission Service Request through SPP's Open Access Same Time Information System (OASIS) as required by Attachment Z1 of the SPP OATT. In addition, costs associated with a short circuit analysis will be allocated should the Interconnection Request Customer choose to execute a Facility Study Agreement.

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

Appendix F. Cost Allocation by Upgrade

ASGI-2010-020 Interconnection Costs		\$0.00
See Online Diagram.		
	ASGI 2010-020	\$0.00
	Total Allocated Costs	\$0.00
ASGI-2010-021 Interconnection Costs		\$0.00
See Online Diagram.		
	ASGI 2010-021	\$0.00
	Total Allocated Costs	\$0.00
ASGI-2011-001 Interconnection Costs		\$0.00
See Online Diagram.		
	ASGI 2011-001	\$0.00
	Total Allocated Costs	\$0.00
Buckner - Spearville 345kV CKT 1		\$200,000.00
Replace Terminal equipment		
	GEN-2010-045	\$200,000.00
	Total Allocated Costs	\$200,000.00
Twin Church - Dixon County 230kV		\$100,000.00
Increase conductor clearances to accommodate 320MVA facility rating		
	GEN-2010-051	\$100,000.00
	Total Allocated Costs	\$100,000.00
GEN-2010-001 Interconnection Costs		\$3,566,677.00
See Online Diagram.		
	GEN-2010-001	\$3,566,677.00
	Total Allocated Costs	\$3,566,677.00
GEN-2010-036 Interconnection Costs		\$204,600.00
See Online Diagram.		
	GEN-2010-036	\$204,600.00
	Total Allocated Costs	\$204,600.00
GEN-2010-040 Interconnection Costs		\$8,046,756.00
See Online Diagram.		
	GEN-2010-040	\$8,046,756.00

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

	Total Allocated Costs	\$8,046,756.00
GEN-2010-041 Interconnection Costs		\$0.00
See Online Diagram.		
	GEN-2010-041	\$0.00
	Total Allocated Costs	\$0.00
GEN-2010-045 Interconnection Costs		\$5,000,000.00
See Online Diagram.		
	GEN-2010-045	\$5,000,000.00
	Total Allocated Costs	\$5,000,000.00
GEN-2010-046 Interconnection Costs		\$0.00
See Online Diagram.		
	GEN-2010-046	\$0.00
	Total Allocated Costs	\$0.00
GEN-2010-048 Interconnection Costs		\$3,041,964.00
See Online Diagram.		
	GEN-2010-048	\$3,041,964.00
	Total Allocated Costs	\$3,041,964.00
GEN-2010-051 Interconnection Costs		\$6,300,000.00
See Online Diagram.		
	GEN-2010-051	\$6,300,000.00
	Total Allocated Costs	\$6,300,000.00

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

G: Power Flow Analysis (Constraints For Reinforcement)

See next page.

GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONTCOMMONNAME	RATEB	TDF	TC%LOADING	CONTNAME
00G10_045	0	14SP	G10_045	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	0.76208	105.2803	'FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1'
00G10_045	0	19SP	G10_045	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	0.756	106.9726	'FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1'
00G10_045	0	19SP	G10_045	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	0.756	96.3	'SPP-SWPS-05'
00G10_045	0	19WP	G10_045	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	0.7552	103.5912	'FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1'
00G10_045	0	19WP	G10_045	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	0.7552	101.5364	'FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1'
00G10_045	0	19WP	G10_045	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	0.7552	104.5211	'SPP-SWPS-05'
00G10_045	0	24SP	G10_045	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	0.75684	106.0972	'FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1'
00G10_045	0	24SP	G10_045	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	0.75684	96.5	'SPP-SWPS-05'
00G10_051	0	24SP	G10_051	'FROM->TO'	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'	192	1	104.6827	'G10-51T 230.00 - HOSKINS 230KV CKT 1'
00G10_051	0	24SP	G10_051	'FROM->TO'	'G10-51T 230.00 - HOSKINS 230KV CKT 1'	192	1	104.9062	'G10-51T 230.00 - TWIN CHURCH 230KV CKT 1'
2	0	14G	G10_045	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	0.63354	110.0667	'DBL-BVR-WWRD'
03ALL	0	14G	G10_045	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	1	95.7	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'
00G10_048	0	24SP	G10_048	'TO->FROM'	'BEACH STATION - G10-48T 115.00 115KV CKT 1'	88	0.41131	103.7848	'MINGO (MINGO) 345/115/13.8KV TRANSFORMER CKT 1'
00NR	0	24SP	G10_048	'TO->FROM'	'BEACH STATION - G10-48T 115.00 115KV CKT 1'	88	0.42135	103.6071	'MINGO (MINGO) 345/115/13.8KV TRANSFORMER CKT 1'

H: Power Flow Analysis (Other Constraints For Information)

See Next page

GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONTCOMMONNAME	RATEB	TDF	TC%LOADING	CONTNAME
00G10_001	0	24SP	G10_001	'FROM->TO'	'HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT	288	0.04247	103.8168	'HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1'
00G10_001	0	24SP	G10_001	'FROM->TO'	'HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT	288	0.04247	106.2853	'HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1'
00G10_001	0	24SP	G10_001	'FROM->TO'	'HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT	288	0.04247	103.9874	'OCHILTREE (H TP80219401) 230/115/13.2KV TRANSFORMER CKT 1
00G10_001	0	24SP	G10_001	'FROM->TO'	'HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT	288	0.04247	106.4947	'OCHILTREE (H TP80219401) 230/115/13.2KV TRANSFORMER CKT 1
00G10_036	0	19SP	G10_036	'TO->FROM'	'EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1	446	0.03163	101.2872	'GEARY 7 345.00 - JEFFREY ENERGY CENTER 345KV CKT 1
00G10_036	0	24SP	G10_036	'TO->FROM'	'EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1	446	0.03187	105.3135	'GEARY 7 345.00 - JEFFREY ENERGY CENTER 345KV CKT 1
00G10_046	0	14SP	G10_046	'TO->FROM'	'BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1'	160	0.03354	101.2319	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
00G10_046	0	24SP	G10_046	'FROM->TO'	'TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.05854	110.686	'TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2
00G10_046	0	24SP	G10_046	'FROM->TO'	'TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.05854	113.9198	'TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2
00G10_051	0	19SP	G10_051	'FROM->TO'	'HOSKINS (HOSKINS T1) 230/115/13.8KV TRANSFORMER CKT 1'	187	0.09979	107.3892	'HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1'
00G10_051	0	19SP	G10_051	'FROM->TO'	'HOSKINS (HOSKINS T1) 230/115/13.8KV TRANSFORMER CKT 1'	187	0.09979	105.7581	'HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1'
0	0	14SP	G10_046	'TO->FROM'	'BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1'	160	0.03351	101.991	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
0	0	14SP	ASGI_2010_02	'TO->FROM'	'BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1'	160	0.05464	101.991	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
0	0	14SP	ASGI_2010_02	'TO->FROM'	'BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1'	160	0.05463	101.991	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
0	0	14SP	ASGI_2011_00	'TO->FROM'	'BAILEY COUNTY REC-EARTH INTERCHANGE - PLANT X STATION 115KV CKT 1'	160	0.05466	101.991	'DEAF SMITH COUNTY INTERCHANGE - PLANT X STATION 230KV CKT 1'
0	0	14SP	G10_036	'FROM->TO'	'41ST & CALIFORNIA - UNDERPASS (NORTH) 115KV CKT 1'	68	0.0314	99.5	'41ST & CALIFORNIA - UNDERPASS (NORTH) 115KV CKT 2'
0	0	14SP	ASGI_2010_02	'FROM->TO'	'ROOSEVELT COUNTY INTERCHANGE (ABB LMM60042) 230/115/13.2KV TRANSFO	252	0.03072	118.4149	'OASIS INTERCHANGE (ABB LLM60041) 230/115/13.2KV TRANSFORMER CKT 1
0	0	14SP	ASGI_2010_02	'FROM->TO'	'ROOSEVELT COUNTY INTERCHANGE (ABB LMM60042) 230/115/13.2KV TRANSFO	252	0.03099	118.4149	'OASIS INTERCHANGE (ABB LLM60041) 230/115/13.2KV TRANSFORMER CKT 1
0	0	14SP	ASGI_2011_00	'FROM->TO'	'ROOSEVELT COUNTY INTERCHANGE (ABB LMM60042) 230/115/13.2KV TRANSFO	252	0.03044	118.4149	'OASIS INTERCHANGE (ABB LLM60041) 230/115/13.2KV TRANSFORMER CKT 1
0	0	14SP	ASGI_2010_02	'FROM->TO'	'ROOSEVELT COUNTY INTERCHANGE (ABB LMM60042) 230/115/13.2KV TRANSFO	252	0.03072	121.2224	'OASIS INTERCHANGE (ABB LLM60041) 230/115/13.2KV TRANSFORMER CKT 1
0	0	14SP	ASGI_2010_02	'FROM->TO'	'ROOSEVELT COUNTY INTERCHANGE (ABB LMM60042) 230/115/13.2KV TRANSFO	252	0.03099	121.2224	'OASIS INTERCHANGE (ABB LLM60041) 230/115/13.2KV TRANSFORMER CKT 1
0	0	14SP	ASGI_2011_00	'FROM->TO'	'ROOSEVELT COUNTY INTERCHANGE (ABB LMM60042) 230/115/13.2KV TRANSFO	252	0.03044	121.2224	'OASIS INTERCHANGE (ABB LLM60041) 230/115/13.2KV TRANSFORMER CKT 1
0	0	14SP	ASGI_2010_02	'FROM->TO'	'OASIS INTERCHANGE (ABB LLM60041) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03186	114.3314	'ROOSEVELT COUNTY INTERCHANGE (ABB LMM60042) 230/115/13.2KV TRANSFORMER CKT 1
0	0	14SP	ASGI_2010_02	'FROM->TO'	'OASIS INTERCHANGE (ABB LLM60041) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03219	114.3314	'ROOSEVELT COUNTY INTERCHANGE (ABB LMM60042) 230/115/13.2KV TRANSFORMER CKT 1
0	0	14SP	ASGI_2011_00	'FROM->TO'	'OASIS INTERCHANGE (ABB LLM60041) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03151	114.3314	'ROOSEVELT COUNTY INTERCHANGE (ABB LMM60042) 230/115/13.2KV TRANSFORMER CKT 1
0	0	14SP	ASGI_2010_02	'FROM->TO'	'OASIS INTERCHANGE (ABB LLM60041) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03186	117.0552	'ROOSEVELT COUNTY INTERCHANGE (ABB LMM60042) 230/115/13.2KV TRANSFORMER CKT 1
0	0	14SP	ASGI_2010_02	'FROM->TO'	'OASIS INTERCHANGE (ABB LLM60041) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03219	117.0552	'ROOSEVELT COUNTY INTERCHANGE (ABB LMM60042) 230/115/13.2KV TRANSFORMER CKT 1
0	0	14SP	ASGI_2011_00	'FROM->TO'	'OASIS INTERCHANGE (ABB LLM60041) 230/115/13.2KV TRANSFORMER CKT 1	252	0.03151	117.0552	'ROOSEVELT COUNTY INTERCHANGE (ABB LMM60042) 230/115/13.2KV TRANSFORMER CKT 1
0	0	19SP	G10_036	'TO->FROM'	'EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1	446	0.03162	101.3951	'GEARY 7 345.00 - JEFFREY ENERGY CENTER 345KV CKT 1
0	0	24SP	G10_036	'TO->FROM'	'EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1	446	0.03186	105.4289	'GEARY 7 345.00 - JEFFREY ENERGY CENTER 345KV CKT 1
0	0	24SP	G10_046	'FROM->TO'	'TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.05856	110.3835	'TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2
0	0	24SP	G10_046	'FROM->TO'	'TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1	252	0.05856	113.6109	'TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 2
01ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03413	100.4073	'BASE CASE'
01ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03114	100.4073	'BASE CASE'
01ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03114	100.4073	'BASE CASE'
01ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03114	100.4073	'BASE CASE'
01ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.0597	100.4073	'BASE CASE'
01ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04021	101.3513	'DEWEY - IODINE 138KV CKT 1'
01ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03688	101.3513	'DEWEY - IODINE 138KV CKT 1'
01ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03688	101.3513	'DEWEY - IODINE 138KV CKT 1'
01ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03688	101.3513	'DEWEY - IODINE 138KV CKT 1'
01ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.0703	101.3513	'DEWEY - IODINE 138KV CKT 1'
01ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03535	100.727	'DEWEY - TALOGA 138KV CKT 1'
01ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03184	100.727	'DEWEY - TALOGA 138KV CKT 1'
01ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03184	100.727	'DEWEY - TALOGA 138KV CKT 1'
01ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03184	100.727	'DEWEY - TALOGA 138KV CKT 1'
01ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06192	100.727	'DEWEY - TALOGA 138KV CKT 1'
01ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04021	102.9503	'IODINE - WOODWARD EHV 138KV CKT 1'
01ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03688	102.9503	'IODINE - WOODWARD EHV 138KV CKT 1'
01ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03688	102.9503	'IODINE - WOODWARD EHV 138KV CKT 1'
01ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03688	102.9503	'IODINE - WOODWARD EHV 138KV CKT 1'
01ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.0703	102.9503	'IODINE - WOODWARD EHV 138KV CKT 1'
01ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04901	172.2796	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	G10_048	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03456	172.2796	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04762	172.2796	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04763	172.2796	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04762	172.2796	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.08622	172.2796	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	G10_001	'TO->FROM'	'EL RENO - ROMAN NOSE 138KV CKT 1'	153	0.03116	105.6635	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	G10_001	'TO->FROM'	'ROMAN NOSE - SOUTHWARD 138KV CKT 1'	153	0.03116	109.9993	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	G10_045	'FROM->TO'	'FPL SWITCH - MOORELAND 138KV CKT 1'	287	0.04901	120.4343	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	G10_048	'FROM->TO'	'FPL SWITCH - MOORELAND 138KV CKT 1'	287	0.03456	120.4343	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	ASGI_2010_02	'FROM->TO'	'FPL SWITCH - MOORELAND 138KV CKT 1'	287	0.04762	120.4343	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	ASGI_2010_02	'FROM->TO'	'FPL SWITCH - MOORELAND 138KV CKT 1'	287	0.04763	120.4343	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	ASGI_2011_00	'FROM->TO'	'FPL SWITCH - MOORELAND 138KV CKT 1'	287	0.04762	120.4343	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	G10_001	'FROM->TO'	'FPL SWITCH - MOORELAND 138KV CKT 1'	287	0.08622	120.4343	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
01ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03044	103.6311	'THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONTCOMMONNAME	RATEB	TDF	TC%LOADING	CONTNAME
02ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03397	103.2322	'SPP-SWPS-01'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.0476	103.2322	'SPP-SWPS-01'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04759	103.2322	'SPP-SWPS-01'
02ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04762	103.2322	'SPP-SWPS-01'
02ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06275	103.2322	'SPP-SWPS-01'
02ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03442	105.513	'SPP-SWPS-02'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04278	105.513	'SPP-SWPS-02'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04279	105.513	'SPP-SWPS-02'
02ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04277	105.513	'SPP-SWPS-02'
02ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06448	105.513	'SPP-SWPS-02'
02ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03442	111.2539	'SPP-SWPS-02A'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04278	111.2539	'SPP-SWPS-02A'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04279	111.2539	'SPP-SWPS-02A'
02ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04277	111.2539	'SPP-SWPS-02A'
02ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06448	111.2539	'SPP-SWPS-02A'
02ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03444	115.0917	'SPP-SWPS-03'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04297	115.0917	'SPP-SWPS-03'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04298	115.0917	'SPP-SWPS-03'
02ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04295	115.0917	'SPP-SWPS-03'
02ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06456	115.0917	'SPP-SWPS-03'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03611	107.6051	'SPP-SWPS-05'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03612	107.6051	'SPP-SWPS-05'
02ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03611	107.6051	'SPP-SWPS-05'
02ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.0676	107.6051	'SPP-SWPS-05'
02ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.0334	118.3815	'GEN520997 1-MORLND2'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03041	118.3815	'GEN520997 1-MORLND2'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03041	118.3815	'GEN520997 1-MORLND2'
02ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03041	118.3815	'GEN520997 1-MORLND2'
02ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05897	118.3815	'GEN520997 1-MORLND2'
02ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.0334	111.775	'GEN520998 1-MORLND3'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03041	111.775	'GEN520998 1-MORLND3'
02ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03041	111.775	'GEN520998 1-MORLND3'
02ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03041	111.775	'GEN520998 1-MORLND3'
02ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05897	111.775	'GEN520998 1-MORLND3'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06283	101.5772	'LAWTON EASTSIDE - OKLAUNION 345KV CKT 1'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06459	101.149	'ELK CITY 230KV - SWEETWATER 230KV CKT 1'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06948	101.383	'DEWEY - IODINE 138KV CKT 1'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06948	103.102	'IODINE - WOODWARD EHV 138KV CKT 1'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.08515	133.0898	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.08515	114.916	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06459	100.2111	'GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06459	101.1539	'ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06644	107.3049	'WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.07778	118.5934	'DBL-WICH-THI'
02G10_001	0	14G	G10_001	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.04289	140.536	'DBL-WICH-THI'
02G10_001	0	14G	G10_001	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.04289	151.0458	'DBL-WICH-THI'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06467	101.1604	'SPP-SWPS-03'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05902	108.0741	'GEN520997 1-MORLND2'
02G10_001	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05902	101.5866	'GEN520998 1-MORLND3'
2	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04792	126.4121	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
2	0	14G	G10_048	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03346	126.4121	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
2	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04652	126.4121	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
2	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04653	126.4121	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
2	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04652	126.4121	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
2	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.08512	126.4121	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
2	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04792	108.3606	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1'
2	0	14G	G10_048	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03346	108.3606	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1'
2	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04652	108.3606	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1'
2	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04653	108.3606	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1'
2	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04652	108.3606	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1'
2	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.08512	108.3606	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1'
2	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03758	102.1056	'WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1'
2	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03433	102.1056	'WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1'
2	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03433	102.1056	'WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1'
2	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03433	102.1056	'WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1'
2	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06642	102.1056	'WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1'
2	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05393	112.4594	'DBL-WICH-THI'

GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONTCOMMONNAME	RATEB	TDF	TC%LOADING	CONTNAME
2	0	14G	G10_048	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03359	112.4594	'DBL-WICH-THI'
2	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04395	112.4594	'DBL-WICH-THI'
2	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04395	112.4594	'DBL-WICH-THI'
2	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04395	112.4594	'DBL-WICH-THI'
2	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.07777	112.4594	'DBL-WICH-THI'
2	0	14G	G10_045	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.04902	135.6609	'DBL-WICH-THI'
2	0	14G	ASGI_2010_02	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.03067	135.6609	'DBL-WICH-THI'
2	0	14G	ASGI_2010_02	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.03068	135.6609	'DBL-WICH-THI'
2	0	14G	ASGI_2011_00	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.03066	135.6609	'DBL-WICH-THI'
2	0	14G	G10_001	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.04291	135.6609	'DBL-WICH-THI'
2	0	14G	G10_045	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.04902	146.2139	'DBL-WICH-THI'
2	0	14G	ASGI_2010_02	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03067	146.2139	'DBL-WICH-THI'
2	0	14G	ASGI_2010_02	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03068	146.2139	'DBL-WICH-THI'
2	0	14G	ASGI_2011_00	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03066	146.2139	'DBL-WICH-THI'
2	0	14G	G10_001	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.04291	146.2139	'DBL-WICH-THI'
2	0	14G	ASGI_2010_02	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	0.12863	110.0667	'DBL-BVR-WWRD'
2	0	14G	ASGI_2010_02	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	0.12877	110.0667	'DBL-BVR-WWRD'
2	0	14G	ASGI_2011_00	'FROM->TO'	'BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1'	611.9	0.12847	110.0667	'DBL-BVR-WWRD'
2	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03344	103.4922	'GENS20997 1-MORLND2'
2	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03045	103.4922	'GENS20997 1-MORLND2'
2	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03045	103.4922	'GENS20997 1-MORLND2'
2	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03045	103.4922	'GENS20997 1-MORLND2'
2	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05901	103.4922	'GENS20997 1-MORLND2'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03169	109.221	'BASE CASE'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05726	109.221	'BASE CASE'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03278	100.675	'STLN-DEMARC6 - SWEETWATER 230KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04114	100.675	'STLN-DEMARC6 - SWEETWATER 230KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04115	100.675	'STLN-DEMARC6 - SWEETWATER 230KV CKT 1'
03ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04113	100.675	'STLN-DEMARC6 - SWEETWATER 230KV CKT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06284	100.675	'STLN-DEMARC6 - SWEETWATER 230KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03567	109.1242	'WOODWARD - WOODWARD 69KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03242	109.1242	'WOODWARD - WOODWARD 69KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03242	109.1242	'WOODWARD - WOODWARD 69KV CKT 1'
03ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03242	109.1242	'WOODWARD - WOODWARD 69KV CKT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06452	109.1242	'WOODWARD - WOODWARD 69KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.0375	116.2103	'DEWEY - IODINE 138KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03417	116.2103	'DEWEY - IODINE 138KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03417	116.2103	'DEWEY - IODINE 138KV CKT 1'
03ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03417	116.2103	'DEWEY - IODINE 138KV CKT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06759	116.2103	'DEWEY - IODINE 138KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.0375	117.9504	'IODINE - WOODWARD EHV 138KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03417	117.9504	'IODINE - WOODWARD EHV 138KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03417	117.9504	'IODINE - WOODWARD EHV 138KV CKT 1'
03ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03417	117.9504	'IODINE - WOODWARD EHV 138KV CKT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06759	117.9504	'IODINE - WOODWARD EHV 138KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04623	143.935	'NORTHWEST - TATONGA7 345.00 345KV CKT 1
03ALL	0	14G	G10_048	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03177	143.935	'NORTHWEST - TATONGA7 345.00 345KV CKT 1
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04484	143.935	'NORTHWEST - TATONGA7 345.00 345KV CKT 1
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04484	143.935	'NORTHWEST - TATONGA7 345.00 345KV CKT 1
03ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04483	143.935	'NORTHWEST - TATONGA7 345.00 345KV CKT 1
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.08344	143.935	'NORTHWEST - TATONGA7 345.00 345KV CKT 1
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04623	125.4929	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
03ALL	0	14G	G10_048	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03177	125.4929	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04484	125.4929	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04484	125.4929	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
03ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04483	125.4929	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.08344	125.4929	'TATONGA7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03488	102.9312	'BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06004	102.9312	'BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03488	102.817	'BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06004	102.817	'BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03107	103.0941	'SAND RDG 138138.00 - WAKITA 138 138.00 138KV CKT 1
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05285	103.0941	'SAND RDG 138138.00 - WAKITA 138 138.00 138KV CKT 1
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03227	106.0175	'GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03529	106.0175	'GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.0353	106.0175	'GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1'
03ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03529	106.0175	'GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1'

GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONTCOMMONNAME	RATEB	TDF	TC%LOADING	CONTNAME
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06019	106.0175	'GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03278	100.4508	'STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04114	100.4508	'STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04115	100.4508	'STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1'
03ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04113	100.4508	'STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06284	100.4508	'STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03454	102.3154	'POST ROCK - SPEARVILLE 345KV CKT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05847	102.3154	'POST ROCK - SPEARVILLE 345KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.10531	132.1946	'POST ROCK - SPEARVILLE 345KV CKT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.04057	132.1946	'POST ROCK - SPEARVILLE 345KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'CIMARRON RIVER TAP - KISMET 3 115.00 115KV CKT 1'	115.1	0.03024	111.1944	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'
03ALL	0	14G	G10_045	'FROM->TO'	'CUDAHY - KISMET 3 115.00 115KV CKT 1'	115.1	0.03024	113.0834	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.11233	103.1808	'BUCKNER7 345.00 - HOLCOMB 345KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03711	101.7075	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05889	101.7075	'VIOLA 7 345.00 - WICHITA 345KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03651	107.7479	'THISTLE7 345.00 - WICHITA 345KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03187	107.7479	'THISTLE7 345.00 - WICHITA 345KV CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03187	107.7479	'THISTLE7 345.00 - WICHITA 345KV CKT 1'
03ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03187	107.7479	'THISTLE7 345.00 - WICHITA 345KV CKT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06168	107.7479	'THISTLE7 345.00 - WICHITA 345KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03651	107.7479	'THISTLE7 345.00 - WICHITA 345KV CKT 2'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03187	107.7479	'THISTLE7 345.00 - WICHITA 345KV CKT 2'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03187	107.7479	'THISTLE7 345.00 - WICHITA 345KV CKT 2'
03ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03187	107.7479	'THISTLE7 345.00 - WICHITA 345KV CKT 2'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06168	107.7479	'THISTLE7 345.00 - WICHITA 345KV CKT 2'
03ALL	0	14G	G10_045	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.07814	102.4349	'CLARKCOUNTY7345.00 - THISTLE7 345.00 345KV CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.07814	102.4349	'CLARKCOUNTY7345.00 - THISTLE7 345.00 345KV CKT 2'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03188	100.3091	'WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05655	100.3091	'WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03567	122.685	'WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03242	122.685	'WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03242	122.685	'WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1'
03ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03242	122.685	'WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06452	122.685	'WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03479	99.5	'POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06206	99.5	'POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.0833	109.1236	'POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.04304	100.1227	'SPEARVILLE (SPEARVL) 345/230/13.8KV TRANSFORMER CKT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03278	100.6909	'SPP-SWPS-02'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04114	100.6909	'SPP-SWPS-02'
03ALL	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04115	100.6909	'SPP-SWPS-02'
03ALL	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04113	100.6909	'SPP-SWPS-02'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.06284	100.6909	'SPP-SWPS-02'
03ALL	0	14G	G10_045	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.07715	99.9	'SPP-SWPS-05'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03169	101.6938	'GEN514805 1-SOONER UNIT 1'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05726	101.6938	'GEN514805 1-SOONER UNIT 1'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03169	99.6	'GEN514806 1-SOONER UNIT 2'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05726	99.6	'GEN514806 1-SOONER UNIT 2'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03169	99.6	'GEN515787 1-OKLA WIND ENERGY CENTER'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05726	99.6	'GEN515787 1-OKLA WIND ENERGY CENTER'
03ALL	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03169	122.0799	'GEN520997 1-MORLND2'
03ALL	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05726	122.0799	'GEN520997 1-MORLND2'
03ALL	0	14G	G10_048		'DBL-WICH-THI'	0	0.12003	9999	'BASE CASE'
03ALL	0	14G	ASGI_2010_020		'DBL-WICH-THI'	0	0.16229	9999	'BASE CASE'
03ALL	0	14G	ASGI_2010_021		'DBL-WICH-THI'	0	0.16232	9999	'BASE CASE'
03ALL	0	14G	ASGI_2011_001		'DBL-WICH-THI'	0	0.16225	9999	'BASE CASE'
03G10_045	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04795	109.7739	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
03G10_045	0	14G	G10_045	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.10526	112.0998	'POST ROCK - SPEARVILLE 345KV CKT 1'
03G10_045	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05392	111.3571	'DBL-WICH-THI'
03G10_045	0	14G	G10_045	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.04889	168.2851	'DBL-WICH-THI'
03G10_045	0	14G	G10_045	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.04889	178.512	'DBL-WICH-THI'
03G10_045	0	14G	G10_045	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.08856	102.0672	'DBL-WICH-THI'
03G10_045	0	14G	G10_045	'FROM->TO'	'GREENSBURG - SUN CITY 115KV CKT 1'	115.1	0.04072	116.2454	'DBL-SPRVL-CL'
03G10_045	0	14G	G10_045	'TO->FROM'	'GREENSBURG - SSTARTP3 115.00 115KV CKT 1'	115.1	0.04072	127.1038	'DBL-SPRVL-CL'
03G10_045	0	14G	G10_045	'TO->FROM'	'MEDICINE LODGE - SUN CITY 115KV CKT 1'	115.1	0.04072	111.2012	'DBL-SPRVL-CL'
03G10_045	0	14G	G10_045	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.12755	106.5055	'DBL-SPRVL-CL'
3	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04798	105.8498	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'

GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONTCOMMONNAME	RATEB	TDF	TC%LOADING	CONTNAME
3	0	14G	G10_048	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03352	105.8498	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
3	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04659	105.8498	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
3	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04659	105.8498	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
3	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04658	105.8498	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
3	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.08519	105.8498	'NORTHWEST - TATONGA7 345.00 345KV CKT 1'
3	0	14G	G10_045	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.10537	107.2342	'POST ROCK - SPEARVILLE 345KV CKT 1'
3	0	14G	G10_001	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.04063	107.2342	'POST ROCK - SPEARVILLE 345KV CKT 1'
3	0	14G	G10_045	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.05396	106.5923	'DBL-WICH-THI'
3	0	14G	G10_048	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.03363	106.5923	'DBL-WICH-THI'
3	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04399	106.5923	'DBL-WICH-THI'
3	0	14G	ASGI_2010_02	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04399	106.5923	'DBL-WICH-THI'
3	0	14G	ASGI_2011_00	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.04398	106.5923	'DBL-WICH-THI'
3	0	14G	G10_001	'TO->FROM'	'FPL SWITCH - WOODWARD 138KV CKT 1'	153	0.07781	106.5923	'DBL-WICH-THI'
3	0	14G	G10_045	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.04895	162.2944	'DBL-WICH-THI'
3	0	14G	ASGI_2010_02	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.03059	162.2944	'DBL-WICH-THI'
3	0	14G	ASGI_2010_02	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.0306	162.2944	'DBL-WICH-THI'
3	0	14G	ASGI_2011_00	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.03058	162.2944	'DBL-WICH-THI'
3	0	14G	G10_001	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.04283	162.2944	'DBL-WICH-THI'
3	0	14G	G10_045	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.04895	172.5885	'DBL-WICH-THI'
3	0	14G	ASGI_2010_02	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03059	172.5885	'DBL-WICH-THI'
3	0	14G	ASGI_2010_02	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.0306	172.5885	'DBL-WICH-THI'
3	0	14G	ASGI_2011_00	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03058	172.5885	'DBL-WICH-THI'
3	0	14G	G10_001	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.04283	172.5885	'DBL-WICH-THI'
3	0	14G	G10_045	'FROM->TO'	'GREENSBURG - SUN CITY 115KV CKT 1'	115.1	0.0408	110.2101	'DBL-SPRVL-CL'
3	0	14G	G10_045	'TO->FROM'	'GREENSBURG - SSTARTP3 115.00 115KV CKT 1'	115.1	0.0408	120.9937	'DBL-SPRVL-CL'
3	0	14G	G10_045	'TO->FROM'	'MEDICINE LODGE - SUN CITY 115KV CKT 1'	115.1	0.0408	105.1791	'DBL-SPRVL-CL'
3	0	14G	G10_045	'TO->FROM'	'MULLERGREN - SPEARVILLE 230KV CKT 1'	318.7	0.12766	100.7298	'DBL-SPRVL-CL'
04ALL	0	14G	G10_045	'FROM->TO'	'SMOKYHL6 230.00 - SUMMIT 230KV CKT 1'	330	0.03353	103.0233	'POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1'
04ALL	0	14G	G10_045	'FROM->TO'	'SMOKYHL6 230.00 - SUMMIT 230KV CKT 1'	330	0.07349	100.9675	'DBL-WICH-THI'
04ALL	0	14G	G10_048	'FROM->TO'	'SMOKYHL6 230.00 - SUMMIT 230KV CKT 1'	330	0.12651	100.9675	'DBL-WICH-THI'
04ALL	0	14G	G10_001	'FROM->TO'	'SMOKYHL6 230.00 - SUMMIT 230KV CKT 1'	330	0.03904	100.9675	'DBL-WICH-THI'
04ALL	0	14G	G10_045	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.04923	113.3526	'DBL-WICH-THI'
04ALL	0	14G	ASGI_2010_02	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.03087	113.3526	'DBL-WICH-THI'
04ALL	0	14G	ASGI_2010_02	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.03088	113.3526	'DBL-WICH-THI'
04ALL	0	14G	ASGI_2011_00	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.03087	113.3526	'DBL-WICH-THI'
04ALL	0	14G	G10_001	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.04311	113.3526	'DBL-WICH-THI'
04ALL	0	14G	G10_045	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.04923	123.8671	'DBL-WICH-THI'
04ALL	0	14G	ASGI_2010_02	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03087	123.8671	'DBL-WICH-THI'
04ALL	0	14G	ASGI_2010_02	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03088	123.8671	'DBL-WICH-THI'
04ALL	0	14G	ASGI_2011_00	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03087	123.8671	'DBL-WICH-THI'
04ALL	0	14G	G10_001	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.04311	123.8671	'DBL-WICH-THI'
04ALL	0	14G	G10_045	'FROM->TO'	'SMOKYHL6 230.00 - SUMMIT 230KV CKT 1'	330	0.09669	108.3215	'DBL-THIS-CLR'
04ALL	0	14G	G10_048	'FROM->TO'	'SMOKYHL6 230.00 - SUMMIT 230KV CKT 1'	330	0.14448	108.3215	'DBL-THIS-CLR'
04ALL	0	14G	G10_045	'FROM->TO'	'SEWARD - ST JOHN 115KV CKT 1'	87.6	0.03275	104.4639	'DBL-THIS-CLR'
04ALL	0	14G	G10_048	'FROM->TO'	'SEWARD - ST JOHN 115KV CKT 1'	87.6	0.0434	104.4639	'DBL-THIS-CLR'
04ALL	0	14G	G10_045	'FROM->TO'	'SMOKYHL6 230.00 - SUMMIT 230KV CKT 1'	330	0.09669	103.411	'DBL-SPRVL-CL'
04ALL	0	14G	G10_048	'FROM->TO'	'SMOKYHL6 230.00 - SUMMIT 230KV CKT 1'	330	0.14448	103.411	'DBL-SPRVL-CL'
04ALL	0	14G	G10_045	'FROM->TO'	'SMOKYHL6 230.00 - SUMMIT 230KV CKT 1'	330	0.09669	108.2424	'DBL-IRON-CLR'
04ALL	0	14G	G10_048	'FROM->TO'	'SMOKYHL6 230.00 - SUMMIT 230KV CKT 1'	330	0.14448	108.2424	'DBL-IRON-CLR'
04ALL	0	14G	G10_045	'FROM->TO'	'SEWARD - ST JOHN 115KV CKT 1'	87.6	0.03275	104.2487	'DBL-IRON-CLR'
04ALL	0	14G	G10_048	'FROM->TO'	'SEWARD - ST JOHN 115KV CKT 1'	87.6	0.0434	104.2487	'DBL-IRON-CLR'
04ALL	0	14G	G10_048		'ELM CREEK - NORTHWEST MANHATTAN 230KV CKT 1'	358.5	0.07138	31.51793	'BASE CASE'
04NR	0	14G	G10_048	'FROM->TO'	'BEARCRK2 - JOHNSON 115KV CKT 1'	60.8	0.03199	105.9107	'FLETCHER - WILLIAMSON 115KV CKT 1'
04NR	0	14G	G10_048	'FROM->TO'	'BEARCRK2 - JOHNSON 115KV CKT 1'	60.8	0.03199	107.5449	'SYRACUSE - WILLIAMSON 115KV CKT 1'
4	0	14G	G10_045	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.04931	104.6111	'DBL-WICH-THI'
4	0	14G	ASGI_2010_02	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.03096	104.6111	'DBL-WICH-THI'
4	0	14G	ASGI_2010_02	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.03097	104.6111	'DBL-WICH-THI'
4	0	14G	ASGI_2011_00	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.03095	104.6111	'DBL-WICH-THI'
4	0	14G	G10_001	'TO->FROM'	'CLEARWATER - MILAN TAP 138KV CKT 1'	110	0.0432	104.6111	'DBL-WICH-THI'
4	0	14G	G10_045	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.04931	115.1658	'DBL-WICH-THI'
4	0	14G	ASGI_2010_02	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03096	115.1658	'DBL-WICH-THI'
4	0	14G	ASGI_2010_02	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03097	115.1658	'DBL-WICH-THI'
4	0	14G	ASGI_2011_00	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03095	115.1658	'DBL-WICH-THI'
4	0	14G	G10_001	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.0432	115.1658	'DBL-WICH-THI'
06ALL	0	14G	G10_040	'FROM->TO'	'LAWEASOKLUNI'	425	0.06637	124.7	'BASE CASE'
06ALL	0	14G	ASGI_2011_00	'TO->FROM'	'PLANT X STATION - TOLK STATION EAST 230KV CKT 2'	502	0.19986	99.6	'PLANT X STATION - TOLK STATION WEST 230KV CKT 1'
06ASGI_10_02	0	14G	ASGI_2010_02	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03098	104.6392	'DBL-WICH-THI'

GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONTCOMMONNAME	RATEB	TDF	TC%LOADING	CONTNAME
06ASGI_10_02	0	14G	ASGI_2010_02	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03099	104.5392	'DBL-WICH-THI'
06ASGI_11_00	0	14G	ASGI_2011_00	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03097	104.7814	'DBL-WICH-THI'
6	0	14G	G10_045	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.04934	104.437	'DBL-WICH-THI'
6	0	14G	ASGI_2011_00	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03098	104.437	'DBL-WICH-THI'
6	0	14G	ASGI_2010_02	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03099	104.437	'DBL-WICH-THI'
6	0	14G	ASGI_2010_02	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.03099	104.437	'DBL-WICH-THI'
6	0	14G	G10_001	'FROM->TO'	'HARPER - MILAN TAP 138KV CKT 1'	110	0.04323	104.437	'DBL-WICH-THI'
09ALL	0	14G	G10_051	'TO->FROM'	'UTICA - YANKON JCT 115KV CKT 1'	66	0.04419	124.752	'SIOUX CITY - TWIN CHURCH 230KV CKT 1'
09G10_051	0	14G	G10_051	'TO->FROM'	'UTICA - YANKON JCT 115KV CKT 1'	66	0.04429	107.7282	'SIOUX CITY - TWIN CHURCH 230KV CKT 1'

I: Category "C" Contingency Analysis

Available on Request