



**GENERATOR INTERCONNECTION
LIMITED OPERATION
IMPACT STUDY REPORT**

GEN-2015-014

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By SPP Generator Interconnections Dept.

REVISION HISTORY

Date	Author	Change Description
09/06/2017	SPP	Impact Study of Limited Operation for Generator Interconnection GEN-2015-014 Report Issued
10/4/2017	SPP	Impact Study of Limited Operation for Generator Interconnection GEN-2015-014 Report Revision 1 Issued for GEN-2015-014 MW correction in Table 1A.

EXECUTIVE SUMMARY

Customer; GEN-2015-014 has requested a Limited Operation System Impact Study under the Southwest Power Pool Open Access Transmission Tariff (OATT) for 150 MW of wind generation to be interconnected with Energy Resource Interconnection Service (ERIS) into the Transmission System of Southwestern Public Service Company in Cochran County, Texas. GEN-2015-014, under GIA Section 5.9, has requested this Limited Operation Interconnection Study (LOIS) to determine the impacts of interconnecting to the transmission system before all required Network Upgrades identified in the DISIS-2015-001-3 (or most recent iteration) Impact Study can be placed into service.

This LOIS addresses the effects of interconnecting the generators to the rest of the transmission system for the system topology and conditions as expected for year-end 2019. GEN-2015-014 consists of seventy-five (75) Vestas V110 2.0 MW wind turbine generators and associated facilities at SPS's new substation approximately 9.5 miles from Cochran substation, on the Lea County Plains to Cochran 115 kV transmission line.

For this LOIS, power flow analysis was conducted. The LOIS assumes that only the higher queued projects listed within **Table 1A** and **Table 1B** of this study might go into service before the completion of all Network Upgrades identified within **Table 2** of this report. If additional generation projects, listed within **Table 3**, with queue priority equal to or higher than the study project request rights to go into commercial operation before all Network Upgrades identified within **Table 2** of this report are completed, this LOIS may need to be restudied to ensure that interconnection service remains for the customer's request.

Power flow analysis from this LOIS has determined that the GEN-2015-014 request can interconnect **150 MW** of generation with Energy Resource on an interim basis prior to the completion of the required Network Upgrades, listed within **Table 2** of this report. Should any other projects, other than those listed within of this report, come into service an additional study may be required to determine if any limited operation service is available. It should be noted that although this LOIS analyzed many of the most probable contingencies, it is not an all-inclusive list that can account for every operational situation. Additionally, the generator may not be able to inject any power onto the Transmission System due to constraints that fall below the threshold of mitigation for a Generator Interconnection request. Because of this, it is likely that the Customers may be required to reduce their generation output to **0 MW** under certain system conditions to allow system operators to maintain the reliability of the transmission network.

Transient stability analysis was not performed for this LOIS study. The DISIS-2015-001-3 transient stability analysis results as part of the DISIS-2015-001-3 report are posted to account for the GEN-2014-074 with impacts¹. Nothing in this study should be construed as a guarantee of delivery or transmission service. If the customer wishes to sell power from the facility, a separate request for transmission service must be requested on Southwest Power Pool's OASIS by the Customer.

¹ DISIS-2015-001-3 Report Link: http://sppoasis.spp.org/documents/swpp/transmission/studies/files/2015_Generation_Studies/DISIS-2015-001-3_FINAL.pdf

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PURPOSE

GEN-2015-014 has requested a Limited Operation System Impact Study (LOIS) under the Southwest Power Pool (SPP) Open Access Transmission Tariff (OATT) for interconnection requests into the Transmission System of NPPD.

The purpose of this study is to reevaluate the impacts of interconnecting GEN-2015-014 request of 150 MW comprised seventy-five (75) Vestas V110 2.0 MW wind turbines generators and associated facilities at SPS's new Lost Draw Substation approximately 9.5 miles from Cochran substation, on the Cochran – Lehman 115kV transmission line. The Customer has requested this amount to be studied with ERIS and has a commercial operation date on or around December 2018 prior to higher queued request, GEN-2012-020, being placed into commercial operation.

Only power flow analysis was conducted for this Limited Operation Interconnection Service. Limited Operation Studies are conducted under GIA Section 5.9.

The LOIS considers the Base Case as well as all Generating Facilities (and with respect to any identified Network Upgrades associated with such higher queued interconnection) that, on the date the LOIS is commenced:

- a) are directly interconnected to the Transmission System;
- b) are interconnected to Affected Systems and may have an impact on the Interconnection Request;
- c) have a pending higher queued Interconnection Request or projects to interconnect to the Transmission System listed in Table 1A and Table 1B; or
- d) have no Queue Position but have executed an LGIA or requested that an unexecuted LGIA be filed with FERC.

Any changes to these assumptions (for example, one or more of the previously queued requests not included within this study execute an interconnection agreement and commencing commercial operation) may require a re-study of this LOIS at the expense of the Customer.

Nothing within this System Impact Study constitutes a request for transmission service or confers upon the Interconnection Customer any right to receive transmission service rights. Should the Customer require transmission service, those rights should be requested through SPP's Open Access Same-Time Information System (OASIS).

This LOIS study included prior queued generation interconnection requests and projects. Those listed within **Table 1A** are the generation interconnection requests that are assumed to have rights to either full or partial interconnection service prior to the requested December 2018 in-service of GEN-2015-014 for this LOIS. Also listed in **Table 1A** are both the amount of MWs of interconnection service expected at the effective time of this study and the total MWs requested of interconnection service, the fuel type, the point of interconnection (POI), and the current status of each particular prior queued request. **Table 1B** lists the prior queued projects included within the study and currently status.

Table 1A: Generation Requests Included within LOIS

Project	MW	Total MW	Fuel Source	POI	Status
ASGI-2010-010	42.15	42.15	Gas	Lovington 115kV	COMMERCIAL OPERATION
ASGI-2010-020	30	30	Wind	Tap LE Tatum – LE Crossroads 69kV	AFFECTED SYSTEM STUDY
ASGI-2010-021	15	15	Wind	Tap LE – Saunders Tap – LE Anderson 69kV	AFFECTED SYSTEM STUDY
ASGI-2011-001	27.30	27.30	Wind	Lovington 115kV	COMMERCIAL OPERATION
ASGI-2011-003	10	10	Wind	Hendricks 69kV	COMMERCIAL OPERATION
ASGI-2011-004	19.8	19.8	Wind	Pleasant Hill 69kV	COMMERCIAL OPERATION
ASGI-2012-002	18.15	18.15	Wind	FE – Clovis Interchange 115kV	AFFECTED SYSTEM STUDY
ASGI-2013-002	18.4	18.4	Wind	FE Tucumcari 115kV	AFFECTED SYSTEM STUDY
ASGI-2013-003	18.4	18.4	Wind	FE Clovis 115kV	AFFECTED SYSTEM STUDY
ASGI-2013-005	1.65	1.65	Wind	FE Clovis 115kV	AFFECTED SYSTEM STUDY
ASGI-2013-006	2.00	2.00	Wind	SP-Erskine 115IV	AFFECTED SYSTEM STUDY
ASGI-2014-001	2.5	2.5	Wind	SP – Erskine 115kV	AFFECTED SYSTEM STUDY
ASGI-2015-002	2.5	2.5	Wind	SP – Yuma 69kV	AFFECTED SYSTEM FACILITY STUDY STAGE
GEN-2001-033	180	180	Wind	San Juan Tap 230kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2001-036	80	80	Wind	Norton 115kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2006-018	170	170	CT	TUCO Interchange 230kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2006-026	502	502	Gas	Hobbs 230kV & Hobbs 115kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2008-022	300	300	Wind	Crossroads 345kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2010-006	205	205	Gas	Jones 230kV	IA FULLY EXECUTED/COMMERCIAL OPERATION

Table 1A: Generation Requests Included within LOIS

Project	MW	Total MW	Fuel Source	POI	Status
GEN-2010-046	56	56	Gas	Tuco Interchange 230kV	IA FULLY EXECUTED/ON SCHEDULE FOR 2017
GEN-2011-025	80	80	Wind	Tap Floyd County – Crosby County 115kV	IA FULLY EXECUTED/ON SCHEDULE FOR 2018
GEN-2011-045	205	205	NG CT	Jones 230kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2011-046	27	27	CT	Lopez 115kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2011-048	175	175	CT	Mustang 230kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2012-001	61.2	61.2	Wind	Cirrus Tap 230kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2012-034	7	7	CT	Mustang 230kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2012-035	7	7	CT	Mustang 230kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2012-036	7	7	CT	Mustang 230kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2012-037	203	203	CT	Tuco 345kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2013-016	203	203	CT	Tuco 345kV	IA FULLY EXECUTED/ON SCHEDULE FOR 2017
GEN-2013-022	25	25	Solar	Norton 115kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2013-027	150	150	Wind	Tap Tolk – Yoakum 230kV	IA FULLY EXECUTED/ON SCHEDULE FOR 2018
GEN-2014-012	225	225	Gas	Tap Hobbs Interchange – Andrews 230kV	IA FULLY EXECUTED/ON SUSPENSION
GEN-2014-033	70	70	Solar	Chaves County 115kV	IA FULLY EXECUTED/COMMERCIAL OPERATION

Table 1A: Generation Requests Included within LOIS

Project	MW	Total MW	Fuel Source	POI	Status
GEN-2014-034	70	70	Solar	Chaves County 115kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2014-035	30	30	Solar	Chaves County 115kV	IA FULLY EXECUTED/ON SCHEDULE FOR 2018
GEN-2014-040	320.41	320.41	Wind	Castro 115kV	IA FULLY EXECUTED/COMMERCIAL OPERATION
GEN-2014-047	40	40	Solar	Crossroads 345kV	IA FULLY EXECUTED/ON SUSPENSION
GEN-2015-022	112	112	Wind	Swisher 115kV	FACILITY STUDY STAGE
SPS Distributed (Hopi)	10	10	Solar	Hopi 115kV	COMMERCIAL OPERATION
SPS Distributed (Jal)	10	10	Solar	S Jal 115kV	COMMERCIAL OPERATION
SPS Distributed (Lea Road)	10	10	Solar	Lea Road 115kV	COMMERCIAL OPERATION
SPS Distributed (Monument)	10	10	Solar	Monument 115kV	COMMERCIAL OPERATION
SPS Distributed (Ocotillo)	10	10	Solar	S Jal 115kV	COMMERCIAL OPERATION
SPS Distributed (Yuma)	2.57	2.57	Solar	SP - Yuma 69kV	COMMERCIAL OPERATION
GEN-2015-014	150.0	150.0	Wind	Tap Cochran - Lehman 115kV	FACILITY STUDY STAGE

Table 1B: Upgrade Projects included within LOIS

Upgrade Project	Type	Description	Status	Study Assignment
National Enrichment Plant - Targa - Cardinal 115kV circuit #1	Rebuild	National Enrichment Plant - Targa - Cardinal 115kV circuit #1 rebuild per SPP-NTC-200360.	On Schedule for 6/2018 in-service	2015 Integrated Transmission Plan Near Term Assessment (2015 ITPNT)
Tolk - Plant X 230kV circuit #1 and circuit #2	Rebuild	Tolk - Plant X 230kV circuit #1 and circuit #2 rebuilds	On Schedule for 6/2018 in-service	DISIS-2014-002 Interconnection Customer(s)

This LOIS was required because the Customers are requesting interconnection prior to the completion of all of their required upgrades listed within the latest iteration of their Definitive Interconnection System Impact Study (DISIS). **Table 2** below lists the required upgrade projects for which these requests have cost responsibility. GEN-2015-014 was included within the latest DISIS-2015-001 restudy, DISIS-2015-001-3, that was posted 09/01/2017.

Table 2: Upgrade Projects not included but Required for Full Interconnection Service

Upgrade Project	Type	Description	Status	Study Assignment
AEP-PSO Oklaunion 345kV Capacitor Bank(s)	Reactive Power Support	Install 50Mvar Capacitor Banks at Oklaunion and associated substation equipment upgrades	Facility Study Stage	DISIS-2015-001 Interconnection Customer(s)

Any changes to these assumptions, for example, one or more of the previously queued requests not included within this study execute an interconnection agreement and commencing commercial operation, may require a re-study of this LOIS at the expense of the Customer. The higher or equally queued projects that were not included in this study are listed in **Table 3**. While this list is not all inclusive it is a list of the most probable and affecting prior queued requests that were not included within this LOIS, either because no request for an LOIS has been made or the request is on suspension, etc.

Table 3: Higher or Equally Queued GI Requests not included within LOIS

Project	MW	Total MW	Fuel Source	POI	Status
GEN-2012-020	478	478	Wind	Tuco 230kV	IA FULLY EXECUTED/ON SCHEDULE 2019

Nothing in this System Impact Study constitutes a request for transmission service or grants the Interconnection Customer any rights to transmission service.

FACILITIES

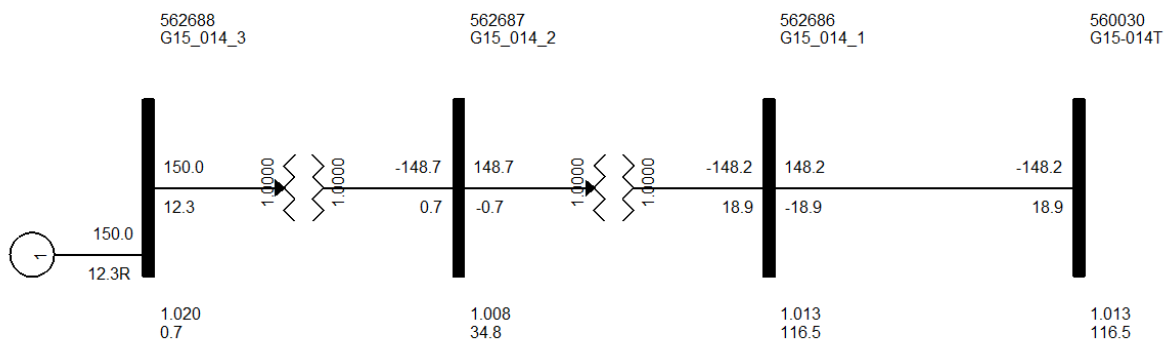
GENERATING FACILITY

Interconnection Customer’s request, GEN-2015-014, totals 150 MW; it consists of seventy-five (75) Vestas V110 2.0 MW wind turbines generators and associated facilities at SPS’s new Lost Draw Substation approximately 9.5 miles from Cochran substation, on the Lea County Plains to Cochran 115 kV transmission line.

INTERCONNECTION FACILITIES

Figure 1 depicts the one-line diagram of the local transmission system including the POI as and the power flow model representing the requests.

Figure 1: Proposed POI Configuration and Request Power Flow Model



BASE CASE NETWORK UPGRADES

The Network Upgrades included within the cases used for this LOIS study are those facilities that are a part of the SPP Transmission Expansion Plan or the Balanced Portfolio projects that have in-service dates prior to the GEN-2015-014 LOIS requested in-service date of December 2018. These facilities have an approved Notification to Construct (NTC), or are in construction stages and expected to be in-service at the effective time of this study. No other upgrades were included for this LOIS. If for some reason, construction on these projects is delayed or discontinued, a restudy may be needed to determine the interconnection service availability of the Customer.

Power flow analysis is used to determine if the transmission system can accommodate the injection from the request without violating thermal or voltage transmission planning criteria.

POWER FLOW ANALYSIS

Power flow analysis is used to determine if the transmission system can accommodate the injection from the request without violating thermal or voltage transmission planning criteria.

MODEL PREPARATION

Power flow analysis was performed using modified versions of the 2015 series of 2016 ITP Near-Term study models including these seasonal models:

- Year 1 (2016) Winter Peak (16WP)
- Year 2 (2017) Spring (17G)
- Year 2 (2017) Summer Peak (17SP)
- Year 5 (2020) Light (20L)
- Year 5 (2020) Summer (20SP)
- Year 5 (2020) Winter (20WP) peak
- Year 10 (2025) Summer (25SP) peak

To incorporate the Interconnection Customers' request, a re-dispatch of existing generation within SPP was performed with respect to the amount of the Customers' injection.

For Variable Energy Resources (VER) (solar/wind) in each power flow case, ERIS, is evaluated for the generating plants within a geographical area of the interconnection request(s) for the VERs dispatched at 100% nameplate of maximum generation. The VERs in the remote areas is dispatched at 20% nameplate of maximum generation. SPP projects are dispatched across the SPP footprint using load factor ratios.

Peaking units are not dispatched in the Year 2 spring and Year 5 light, or in the "High VER" summer and winter peaks. To study peaking units' impacts, the Year 1 winter peak, Year 2 summer peak, and Year 5 summer and winter peaks, and Year 10 summer peak models are developed with peaking units dispatched at 100% of the nameplate rating and VERs dispatched at 20% of the nameplate rating. Each interconnection request is also modeled separately at 100% nameplate for certain analyses.

All generators (VER and peaking) that requested NRIS are dispatched in an additional analysis into the interconnecting Transmission Owner's (T.O.) area at 100% nameplate with ERIS only requests at 80% nameplate. This method allows for identification of network constraints that are common between regional groupings to have affecting requests share the mitigating upgrade costs throughout the cluster.

For this LOIS, only the previous queued requests listed in Table 1 were assumed to be in-service at 100% dispatch.

STUDY METHODOLOGY AND CRITERIA

THERMAL OVERLOADS

Network constraints are found by using PSS/E AC Contingency Calculation (ACCC) analysis with PSS/E MUST First Contingency Incremental Transfer Capability (FCITC) analysis on the entire cluster grouping dispatched at the various levels previously mentioned.

For Energy Resource Interconnection Service (ERIS), thermal overloads are determined for system intact (n-0) (greater than or equal to 100% of Rate A - normal) and for contingency (n-1) (greater than or equal to 100% of Rate B – emergency) conditions.

The overloads are then screened to determine which of generator interconnection requests have at least

- 3% Distribution Factor (DF) for system intact conditions (n-0),
- 20% DF upon outage based conditions (n-1),
- or 3% DF on contingent elements that resulted in a non-converged solution.

Interconnection Requests that requested Network Resource Interconnection Service (NRIS) are also studied in a separate NRIS analysis to determine if any constraint measured greater than or equal to a 3% DF. If so, these constraints are also considered for transmission reinforcement under NRIS.

The contingency set includes all SPP control area branches and ties 69kV and above, first tier Non-SPP control area branches and ties 115 kV and above, any defined contingencies for these control areas, and generation unit outages for the SPP control areas with SPP reserve share program redispatch.

The monitored elements include all SPP control area branches, ties, and buses 69 kV and above, and all first tier Non-SPP control area branches and ties 69 kV and above. NERC Power Transfer Distribution Flowgates for SPP and first tier Non-SPP control area are monitored. Additional NERC Flowgates are monitored in second tier or greater Non-SPP control areas. Voltage monitoring was performed for SPP control area buses 69 kV and above.

VOLTAGE

For non-converged power flow solutions that are determined to be caused by lack of voltage support, appropriate transmission support will be determined to mitigate the constraint.

After all thermal overload and voltage support mitigations are determined; a full ACCC analysis is then performed to determine voltage constraints. The following voltage performance guidelines are used in accordance with the Transmission Owner local planning criteria.

SPP Areas (69kV+):

Transmission Owner	Voltage Criteria (System Intact)	Voltage Criteria (Contingency)
AEPW	0.95 – 1.05 pu	0.92 – 1.05 pu
GRDA	0.95 – 1.05 pu	0.90 – 1.05 pu
SWPA	0.95 – 1.05 pu	0.90 – 1.05 pu
OKGE	0.95 – 1.05 pu	0.90 – 1.05 pu
OMPA	0.95 – 1.05 pu	0.90 – 1.05 pu
WFEC	0.95 – 1.05 pu	0.90 – 1.05 pu

SWPS	0.95 – 1.05 pu	0.90 – 1.05 pu
MIDW	0.95 – 1.05 pu	0.90 – 1.05 pu
SUNC	0.95 – 1.05 pu	0.90 – 1.05 pu
KCPL	0.95 – 1.05 pu	0.90 – 1.05 pu
INDN	0.95 – 1.05 pu	0.90 – 1.05 pu
SPRM	0.95 – 1.05 pu	0.90 – 1.05 pu
NPPD	0.95 – 1.05 pu	0.90 – 1.05 pu
WAPA	0.95 – 1.05 pu	0.90 – 1.05 pu
WERE L-V	0.95 – 1.05 pu	0.93 – 1.05 pu
WERE H-V	0.95 – 1.05 pu	0.95 – 1.05 pu
EMDE L-V	0.95 – 1.05 pu	0.90 – 1.05 pu
EMDE H-V	0.95 – 1.05 pu	0.92 – 1.05 pu
LES	0.95 – 1.05 pu	0.90 – 1.05 pu
OPPD	0.95 – 1.05 pu	0.90 – 1.05 pu

SPP Buses with more stringent voltage criteria:

Bus Name/Number	Voltage Criteria (System Intact)	Voltage Criteria (Contingency)
TUCO 230kV 525830	0.925 – 1.05 pu	0.925 – 1.05 pu
Wolf Creek 345kV 532797	0.985 – 1.03 pu	0.985 – 1.03 pu
FCS 646251	1.001 – 1.047 pu	1.001 – 1.047 pu

Affected System Areas (115kV+):

Transmission Owner	Voltage Criteria (System Intact)	Voltage Criteria (Contingency)
AECI	0.95 – 1.05 pu	0.90 – 1.05 pu
EES-EAI	0.95 – 1.05 pu	0.90 – 1.05 pu
LAGN	0.95 – 1.05 pu	0.90 – 1.05 pu
EES	0.95 – 1.05 pu	0.90 – 1.05 pu
AMMO	0.95 – 1.05 pu	0.90 – 1.05 pu
CLEC	0.95 – 1.05 pu	0.90 – 1.05 pu
Lafa	0.95 – 1.05 pu	0.90 – 1.05 pu
LEPA	0.95 – 1.05 pu	0.90 – 1.05 pu
XEL	0.95 – 1.05 pu	0.90 – 1.05 pu
MP	0.95 – 1.05 pu	0.90 – 1.05 pu
SMMPA	0.95 – 1.05 pu	0.90 – 1.05 pu
GRE	0.95 – 1.05 pu	0.90 – 1.10 pu
OTP	0.95 – 1.05 pu	0.90 – 1.05 pu
OTP-H (115kV+)	0.97 – 1.05 pu	0.92 – 1.10 pu
ALTW	0.95 – 1.05 pu	0.90 – 1.05 pu
MEC	0.95 – 1.05 pu	0.90 – 1.05 pu
MDU	0.95 – 1.05 pu	0.90 – 1.05 pu
SPC	0.95 – 1.05 pu	0.95 – 1.05 pu
DPC	0.95 – 1.05 pu	0.90 – 1.05 pu
ALTE	0.95 – 1.05 pu	0.90 – 1.05 pu

The constraints identified through the voltage scan are then screened for the following for each interconnection request. 1) 3% DF on the contingent element and 2) 2% change in pu voltage. In certain conditions, engineering judgement was used to determine whether or not a generator had impacts to voltage constraints.

RESULTS

The LOIS ACCC analysis indicates that the Interconnection Customer(s) can interconnect their generation into the SPP transmission system at the available MW listed in the results tables before all required upgrades listed within the DISIS-2015-001-3 studies or latest iteration can be placed into service. ACCC results for the LOIS can be found in **Table 3**, **Table 4**, and **Table 5**.

Constraints listed in **Table 5** do not require additional transmission reinforcement for Interconnection Service, but could require Interconnection Customer to reduce generation in operational conditions. These transmission constraints occur when this study's generation is dispatched into the SPP footprint for ERIS and SPS footprint for NRIS.

CURTAILMENT AND SYSTEM RELIABILITY

In no way does this study guarantee operation for all periods of time. It should be noted that although this study analyzed many of the most probable contingencies, it is not an all-inclusive list and cannot account for every operational situation. Because of this, it is likely that the Customer(s) may be required to reduce their generation output to **0 MW** under certain system conditions to allow system operators to maintain the reliability of the transmission network.

Table 4: Thermal Constraints for Transmission Reinforcement Mitigation

[Redacted]									
			N/A					N/A	

Table 5: Voltage Constraints for Transmission Reinforcement Mitigation

[Redacted]									
			N/A					N/A	

Table 6: Thermal Constraints Not Requiring Additional Transmission Reinforcement Mitigation

[Redacted]									
			N/A					N/A	

STABILITY ANALYSIS

Transient stability analysis was not performed for this LOIS study. The results from DISIS 2015-002-1 remain valid.

CONCLUSION

GEN-2015-014 has requested a Limited Operation System Impact Study under the Southwest Power Pool Open Access Transmission Tariff (OATT) for 150 MW of wind generation to be interconnected with Energy Resource Interconnection Service (ERIS) into the Transmission System of Southwestern Public Service Company in Cochran County, Texas. GEN-2015-014, under GIA Section 5.9, has requested this Limited Operation Interconnection Study (LOIS) to determine the impacts of interconnecting to the transmission system before all required Network Upgrades identified in the DISIS-2015-001-3 (or most recent iteration) Impact Study can be placed into service.

Power flow analysis from this LOIS has determined that GEN-2015-014 request can interconnect their generation as an Energy Resource prior to the completion of the required Network Upgrades, listed within Table 2 of this report. Should any other projects (other than those listed within Table 1 of this report) come into service, an additional study may be required to determine if any limited operation service is available. Refer to Table 4 and 5 for the Limited Operation Interconnection Service available due to interconnection constraints.

Transient stability analysis was not performed for this LOIS study. The results from DISIS 2015-001-1 remain valid.

Any changes to these assumptions may require a re-study of this LOIS at the expense of the Customer. (For example, one or more of the previously queued requests not included within this study executes an interconnection agreement and commences commercial operation.)

Nothing in this System Impact Study constitutes a request for transmission service or confers upon the Interconnection Customer any right to receive transmission service.