



**Facility Study
For
Generator Interconnection
Request
GEN-2013-019**

***SPP Generator
Interconnection Studies***

(#GEN-2013-019)

February 2014

Revision History

Date	Author	Change Description
6/13/2014	SPP	Facility Study Report Issued
11/25/2014	SPP	Facility Study Revised and Report updated for latest DISIS-2013-002-2 restudy results
2/18/2015	SPP	Facility Study Revised and Report updated for GEN-2013-002 Facility restudy results

Summary

Lincoln Electric System (LES) performed a detailed Facility Study at the request of Southwest Power Pool (SPP) for Generation Interconnection request GEN-2013-019 (73.6 MW/Wind) located in Lancaster and Gage Counties, Nebraska. In addition, Nebraska Public Power District (NPPD) has reviewed their facilities at the Sheldon Substation for the addition of this request. SPP has proposed the in-service date will be after the assigned Transmission Owner Interconnection Facilities and Non-Shared Network Upgrades that are assigned to GEN-2013-002 are completed. Full Interconnection Service will require the Network Upgrades listed in the "Other Network Upgrades" section. The request for interconnection was placed with SPP in accordance with SPP's Open Access Transmission Tariff, which covers new generation interconnections on SPP's transmission system.

Phases of Interconnection Service

It is not expected that interconnection service will require phases however, interconnection service will not be available until all interconnection facilities and network upgrades can be placed in service.

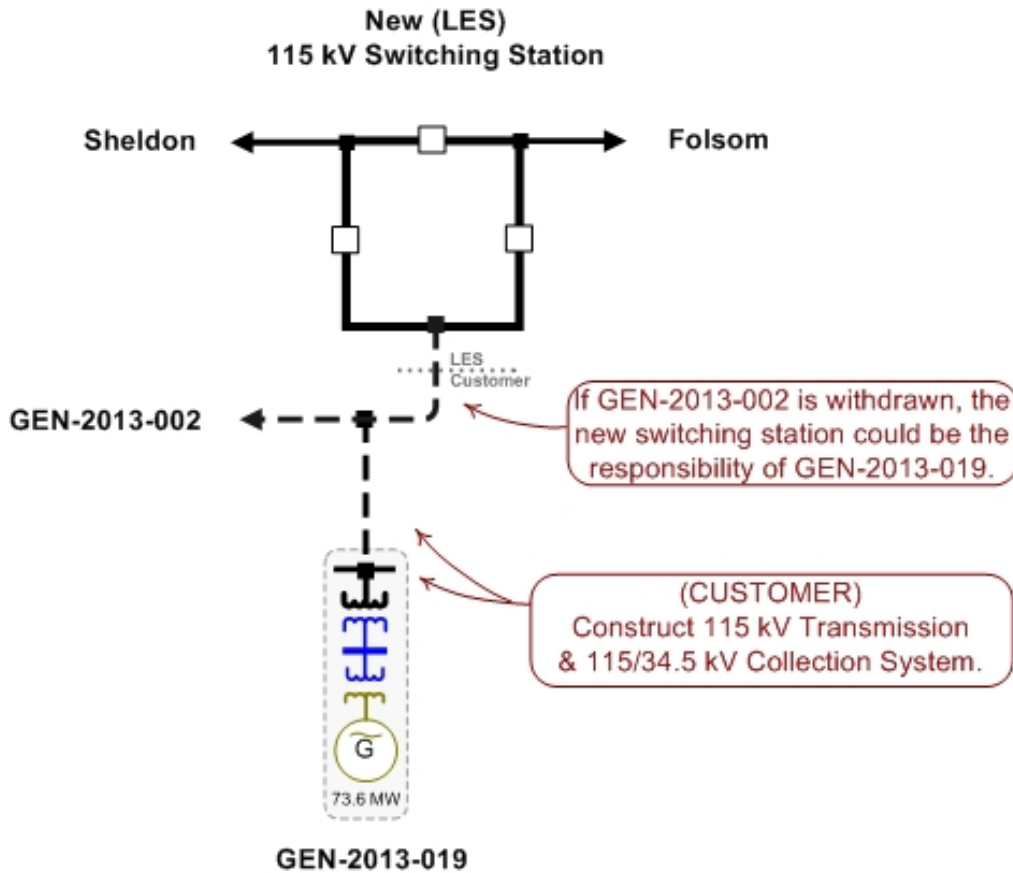
Interconnection Customer Interconnection Facilities

The Interconnection Customer will be responsible for all of the transmission facilities connecting the customer owned substation to the Point of Interconnection (POI), at a new Lincoln Electric System (LES) owned 115kV substation. The new LES 115kV substation will be a tap on the Sheldon Station – Folsom 115kV circuit. The new LES 115kV substation is currently the cost responsibility of GEN-2013-002. The Interconnection Customer will also be responsible for any equipment located at the Customer substation necessary to maintain a power factor of 0.95 lagging to 0.95 leading at the POI.

Transmission Owner Interconnection Facilities and Non-Shared Network Upgrades

To allow interconnection the Transmission Owner will need construct a three breaker ring bus along with associated terminal equipment that is acceptable for the addition of the Interconnection Customer's Interconnection Facilities. Currently, the three break ring bus, associated terminal equipment, and NPPD protective relay and communication equipment replacement are the cost responsibility of GEN-2013-002. If the GEN-2013-002 Interconnection Request is withdrawn or has its Generator Interconnection Agreement terminated, then the estimated \$3,230,658 cost for the three break ring bus and associated terminal equipment for the new LES 115kV substation along with NPPD protective relay and communication equipment replacement will be assigned to GEN-2013-019. At this time GEN-2013-019 is responsible for \$0 of Transmission Owner Interconnection Facilities and Non-Shared Network Upgrades. Figure 1 is a one-line diagram for the GEN-2013-019 interconnection configuration.

Figure 1: Interconnection Configuration for GEN-2013-019



Shared Network Upgrades

The Interconnection Customer was studied within the DISIS-2013-002 Impact Study. At this time, the Interconnection Customer is allocated \$0 for Shared Network Upgrades. If higher queued interconnection customers withdraw from the queue, suspend or terminate their GIA, restudies will have to be conducted to determine the Interconnection Customers' allocation of Shared Network Upgrades. All studies have been conducted on the basis of higher queued interconnection requests and the upgrades associated with those higher queued interconnection requests being placed in service. At this time, the Interconnection Customer is allocated the following cost for Shared Network Upgrade:

Share Network Upgrade Description	Allocated Cost	Total Cost
None	\$0.00	\$0.00
Total	\$0.00	

Other Network Upgrades

At this time there are no Other Network Upgrades that are currently the cost responsibility of the Customer.

Depending upon the status of higher or equally queued customers, the Interconnection Customer's in-service date is at risk of being delayed or their Interconnection Service is at risk of being reduced until the in-service date of these Other Network Upgrades.

Conclusion

Interconnection Service for GEN-2013-019 will be delayed until the Transmission Owner Interconnection Facilities and Non-Shared Network Upgrades that are assigned to GEN-2013-002 are constructed. The Interconnection Customer is responsible for \$0 of Transmission Owner Interconnection Facilities and Non-Shared Network Upgrades. If GEN-2013-002 terminates its Interconnection Service Request, then the estimated \$3,519,285 cost of Transmission Owner Interconnection Facilities and Non-Shared Network Upgrades will be assigned to GEN-2013-019. At this time, the Interconnection Customer is allocated \$0 for Shared Network Upgrades. After all Interconnection Facilities and Network Upgrades have been placed into service, Interconnection Service for 73.6 MW, as requested by GEN-2013-019, can be allowed. At this time the total allocation of costs assigned to GEN-2013-019 for Interconnection Service are estimated at \$0.