



SPP *Southwest
Power Pool*

**FCS-2012-002 Shared Facility Study
For
Transmission Facilities in SPS**
(TUCO Interchange 345/230/13kV Autotransformer circuit #3)

***SPP Generation
Interconnection***

(#FCS-2012-002)

August 2013

Revision History

Date	Author	Change Description
08/20/2012	SPP	Facility Study Report Issued

Summary

Xcel Energy Inc. (Xcel), a subsidiary of Southwestern Public Service Company (SPS), performed a detailed Facility Study at the request of Southwest Power Pool (SPP) for facility requests in DISIS-2012-002. 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. The SPP request consists of Shared Network Upgrades of adding a third 345/230/13kV autotransformer at TUCO Interchange. The addition will consist of new 345kV and 230kV terminals and associated breakers along with any substation terminal equipment associated with the new autotransformer. The total estimated cost for the Shared Network Upgrades is \$9,274,171.00.

Pursuant to the tariff, SPS was requested to provide a Facility Study grade estimate for required network upgrades to satisfy the Facility Study Agreement executed by the requesting customers and SPP.

Generation Interconnection Customers

The generation interconnection requests covered in this document are as follows:

Table 1: Generation Interconnection Customers

Customers	Point of Interconnection (POI)	Capacity (MW)
ASGI-2012-002	FE-Clovis Interchange 115kV	18.2
GEN-2012-020	TUCO Interchange 230kV	478.0
GEN-2012-034	Mustang 230kV	7.0
GEN 2012-035	Mustang 230kV	7.0
GEN 2012-036	Mustang 230kV	7.0
GEN-2012-037	TUCO Interchange 345kV	196.0/203.0 (SP/WP)

These Interconnection Customers are included in the DISIS-2012-002 Impact Study which identified the required Network Upgrades for each customer in order to interconnect to the transmission system.

Shared Network Upgrade Facilities Costs

The Interconnection Customers were studied within the DISIS-2012-002 Impact Study. At this time, the Interconnection Customers are allocated an estimate of \$9,274,171.00 for Shared Network Upgrades Facilities Costs.

Table 2: Shared Network Upgrade Facility Costs

Upgrade Description	Total Cost
TUCO Interchange 345/230/13kV Autotransformer circuit #3, Build a new third 345/230/13kV autotransformer at TUCO Interchange, construct new 345kV and 230kV terminals and breakers at TUCO along with any associated terminal equipment needed for the installation of the third autotransformer	\$9,274,171.00
Total	\$9,274,171.00

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.

Shared Network Upgrade Cost Allocation by Customer

The Interconnection Customers listed in the cost allocation below are included in the DISIS-2012-002 Impact Study which identified the required network upgrades for each customer in order to interconnect to the transmission system.

Table 3: Shared Network Upgrade Cost Allocation by Customer

Network Upgrade	Allocated Cost by Customer						Total Upgrade Cost
	ASGI-2012-002	GEN-2012-020	GEN-2012-034	GEN-2012-035	GEN-2012-036	GEN-2012-037	
TUCO Interchange 345/230/13kV Autotransformer circuit #3	\$186,880.58	\$6,637,560.22	\$80,410.48	\$80,410.48	\$80,410.48	\$2,208,498.76	\$9,274,171.00
Customer Total	\$186,880.58	\$6,637,560.22	\$80,410.48	\$80,410.48	\$80,410.48	\$2,208,498.76	\$9,274,171.00

Conclusion

The Interconnection Customers listed in Table 1 are cost allocated \$9,274,171.00 for Shared Network Upgrades for a third 345/230/13kV autotransformer at TUCO Interchange.

1. Introduction

The Southwest Power Pool has requested a Facility Study for the purpose of adding a new third 345/230/13.2kV autotransformer at the TUCO Interchange Substation in Hale County, Texas. This Facility Study is for the cost of adding two (2) new 3000 amp 345kV breakers , one (1) new 3000 amp 115kV breaker, two (2) new terminals to the 345kV and 230kV buses at the TUCO Interchange Substation, and any additional associated terminal equipment and work needed to install the third autotransformer. The cost for a third 345/230/13.2kV autotransformer, adding new breakers, terminal construction, and associated terminal equipment to the TUCO Interchange Substation is currently estimated at \$9,274,171.00.

2. Interconnection Facilities and Network Upgrades

The cost for the Interconnection Facilities and Network Upgrades is listed below in Table 1.

Table 1: Required Interconnection Facilities and Shared Network Upgrades

Project	Description	Estimated Cost
1	TUCO Interchange 345/230/13kV Autotransformer circuit #3, Build a new third 345/230/13kV autotransformer at TUCO Interchange, construct new 345kV and 230kV terminals and breakers at TUCO along with any associated terminal equipment needed for the installation of the third autotransformer	\$9,274,171.00
	Total:	\$9,274,171.00

3. **Conclusion**

The total estimated cost for a third TUCO Interchange 345/230/13.2kV transformer, adding new breakers, terminal construction and associated terminal equipment to the TUCO Interchange Substation is estimated at \$9,274,171.00.