



**FCS-2012-001 Shared Facility Study
for Transmission Facilities in
Sunflower Electric Power
Corporation (SUNC)**

Holcomb 345/115/13.2kV transformer
circuit #2

***SPP Generation
Interconnection
(#FCS-2012-001)***

June 2013

Revision History

Date	Author	Change Description
6/11/2013	SPP	Facility Study Report Issued

Summary

Sunflower Electric Power Corporation (SUNC) performed a detailed Facility Study at the request of Southwest Power Pool (SPP) for facility requests in DISIS-2012-001. The requests for interconnection were 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 Share Network Upgrades for a second Holcomb 345/115/13.2kV transformer. The transformer installation will consist of adding breakers and associated terminal equipment needed for each bus. Sunflower Electric Power Corporation (SUNC) has determined that an additional 50MVAR reactor will also be needed. The total estimated cost for the Shared Network Upgrades is \$12,312,009.00.

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-2012-006	Tap Hugoton - Rolla 69kV	22.5
GEN-2012-002	Tap Pile - Scott City 115kV	101.2
GEN 2012-007	Tap Hickock - Satanta Tap (Rubart) 115kV	120.0

These interconnection customers are included in the DISIS-2012-001 Impact Study which identified the required network upgrades for each customer in order to interconnect to the transmission system.

Shared Interconnection Upgrade Facilities Costs

The Interconnection Customers were studied within the DISIS-2012-001 Impact Study. At this time, the Interconnection Customers are allocated \$12,312,009.00 for the Shared Network Upgrade.

Table 2: Shared Network Upgrade Facility Costs

Upgrade Description	Total Cost
Holcomb 345/115/13.2kV transformer circuit #2, Install Holcomb 345/115/13.2kV transformer circuit #2, construct and install associated terminal equipment and install one 50MVAR reactor	\$12,312,009.00
Total:	\$12,312,009.00

If higher or equally 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-2012-001 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-2012-006	GEN-2012-002	GEN-2012-007	
Holcomb 345/115/13.2kV transformer circuit #2, Install Holcomb 345/115/13.2kV transformer circuit #2, construct and install associated terminal equipment and install one 50MVAR reactor	\$1,412,679.76	\$3,435,750.94	\$7,463,578.30	\$12,312,009.00

Conclusion

The Interconnection Customers listed in Table 1 are cost allocated \$12,312,009.00 for a second Holcomb 345/115/13.2kV transformer.

Executive Summary

Pursuant to the tariff and at the request of the Southwest Power Pool (SPP), Sunflower Electric Power Corporation (SUNC) performed the following Facility Study to satisfy a Southwest Power Pool request in conjunction with DISIS-2012-001. The requirements of the study consist of installing a second Holcomb 345/115/13.2kV transformer at the Holcomb Substation. The study cost estimates include associated terminal equipment work and upgrades needed to install the second Holcomb 345/115/13.2kV transformer. Sunflower Electric Power Corporation (SUNC) has determined that an addition 50MVAR reactor will also be needed. The total cost for SUNC to install a second Holcomb 345/115/13.2kV transformer and reactor is estimated at \$12,312,009.00¹.

¹ The SCERT provided by Sunflower Electric Power Corporation (SUNC) for a second Holcomb 345/115/13,2kV transformer at the Holcomb Substation. If higher or equally queued interconnection customers withdraw from the queue, suspend or terminate their GIA, a restudy maybe have to conducted to determine the DISIS-2012-001 Interconnection Customers' allocation of Shared Network Upgrades.

1. Introduction

The Southwest Power Pool has requested a Facility Study for the purpose of building a new second 345/115/13.2kV transformer at the Holcomb Substation in Finney County, Kansas. This facility Study is for the cost of adding one (1) new 3000 amp 345kV breaker one (1) new 2000 amp 115kV breaker, one (1) new 3000 amp 13.2kV tertiary bus breaker, two (2) new terminals to the 345kV and 115kV buses at the Holcomb Substation, and associated terminal equipment upgrades and work needed to install the second transformer.

Sunflower Electric Power Corporation (SUNC) has determined that an addition 50MVAR reactor will also be needed. The cost for a second 345/115/13.2kV transformer, adding new breakers, terminal construction and upgrades to the Holcomb Substation, and an additional reactor is estimated at \$12,312,009.00.

2. Interconnection Facilities and Network Upgrades

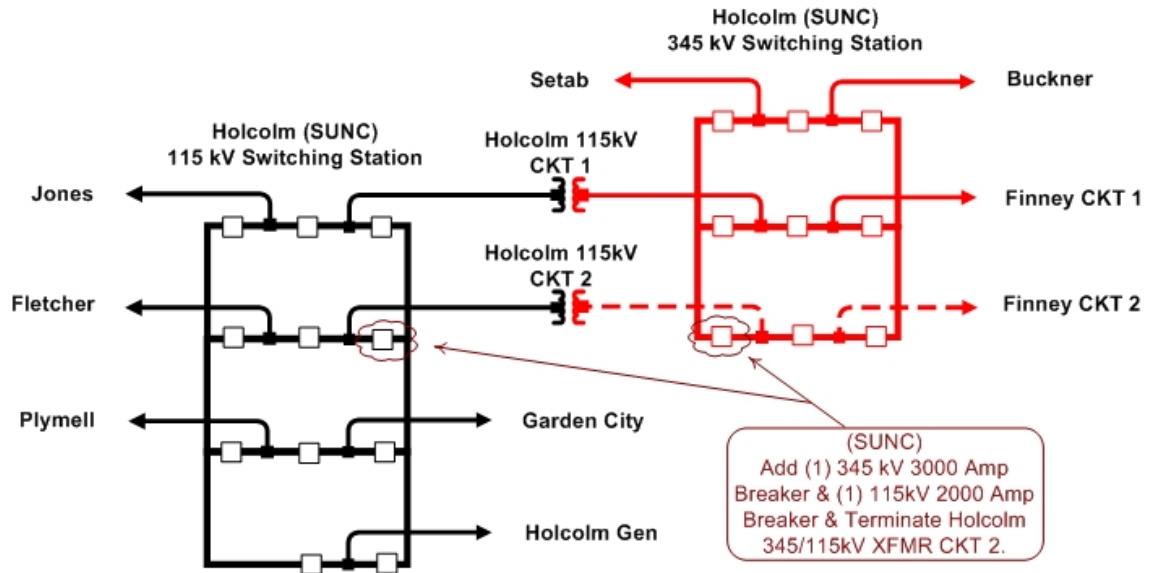
The cost for the Interconnection Facilities and Network Upgrades is listed below in Table 1. The one-line diagram is shown in Figure 1.

Table 1: Required Interconnection Facilities and Shared Network Upgrades

Project	Description	Estimated Cost
1	Holcomb 345/115/13.2kV transformer circuit #2, Install Holcomb 345/115/13.2kV transformer circuit #2, construct and install associated terminal equipment, and install one 50MVAR reactor	\$12,312,009.00
	Total:	\$12,312,009.00 ²

² See Footnote 1.

Figure 1: Holcomb 345/115/13.2kV at the Holcomb Substation



3. Conclusion

The total estimated cost for a second Holcomb 345/115/13.2kV transformer, adding new breakers, terminal construction and upgrades to the Holcomb Substation, and an additional 50MVAR reactor is estimated at \$12,312,009.00³.

³ See Footnote 1.