



**FCS-2012-001 Shared Facility Study
For
Transmission Facilities in SPS**

(Denver City Interchange North - Mustang 115kV CKT 1 Rebuild)
(Denver City Interchange South - Mustang 115kV CKT 2 Rebuild)

***SPP Generation
Interconnection***

(#FCS-2012-001)

April 2013

Revision History

Date	Author	Change Description
04/08/2012	SPP	Facility Study Report Issued

Summary

Xcel Energy Inc. (Xcel) performed a detailed Facility Study at the request of Southwest Power Pool (SPP) for facility requests in DISIS-2012-001. 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 increasing capacity on the Denver City Interchange North – Mustang 115kV circuit #1 and Denver City Interchange South – Mustang 115kV circuit #2 to at least 1650 amps. Since Denver City Interchange North – Mustang 115kV circuit #1 and Denver City Interchange South – Mustang 115kV circuit #2 are both currently conductor limited, this will require a rebuild of the two transmission lines. The rebuild will consist of replacing approximately 3 miles of 954 ACSR conductor for each circuit with new 795 ACSS conductor and upgrading any limiting substation terminal equipment associated with the two circuits to new limit of 1900 amps. The total estimated cost for the Shared Network Upgrades is \$4,292,361.00.

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)
GEN-2012-008	Mustang 115kV & Mustang 230kV	40.0
GEN-2012-009	Mustang 230kV	15.0
GEN 2012-010	Mustang 230kV	15.0

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 Network Upgrade Facilities Costs

The interconnection customer was studied within the DISIS-2012-001 Impact Study. At this time, the Interconnection Customer is allocated \$4,292,361.00 for shared network upgrades.

Table 2: Shared Network Upgrade Facility Costs

Upgrade Description	Total Cost
Denver City Interchange North – Mustang 115kV circuit #1, Rebuild approximately 3 miles of 115kV from Denver City – Mustang to 1900 amps with 795 ACSS Conductor	\$2,154,989.00
Denver City Interchange South – Mustang 115kV circuit #2, Rebuild approximately 3 miles of 115kV from Denver City – Mustang to 1900 amps with 795 ACSS Conductor	\$2,137,372.00
Total	\$4,292,361.00

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-2012-001 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
	GEN-2012-008	GEN-2012-009	GEN-2012-010	
Denver City Interchange North – Mustang 115kV circuit #1, Rebuild approximately 3 miles of 115kV from Denver City – Mustang to 1900 amps.	\$1,798,280.28	\$178,354.36	\$178,354.36	\$2,154,989.00
Denver City Interchange South – Mustang 115kV circuit #2, Rebuild approximately 3 miles of 115kV from Denver City – Mustang to 1900 amps.	\$1,796,475.36	\$170,448.32	\$170,448.32	\$2,137,372.00
Customer Total	\$3,594,755.64	\$348,802.68	\$348,802.68	\$4,292,361.00

Conclusion

The Interconnection Customers listed in Table 1 are cost allocated \$4,292,361.00 for Shared Network Upgrades for rebuilding Denver City Interchange North – Mustang 115kV circuit #1 and Denver City Interchange South – Mustang 115kV circuit #2 to 1900 amps.