FCS-2010-001 Shared Facility Study for Transmission Facilities in SPS

(Hitchland-Border Network Upgrades)

SPP Generation Interconnection

(#FCS-2010-001)

Revised October 2011

Summary

Southwestern Public Service Company (SPS) provided upgrade costs at the request of the Southwest Power Pool (SPP) for generation interconnection requests included in FCS-2010-001 Facilities Clustered Study. The requests for interconnection were placed with SPP in accordance with SPP's Open Access Transmission Tariff, which covers new generation interconnections on the SPP transmission system.

This report is a revision of the one posted in April 2011 and accounts for the withdrawing of GEN-2008-110.

Pursuant to the tariff, Southwestern Public Service Company was asked to provide costs for required network upgrades to satisfy the Facility Study Agreement executed by the requesting customer and SPP.

Generation Interconnection Customers

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

ASGI-2010-011
GEN-2008-047
GEN-2008-088
GEN-2010-007
GEN-2010-014

These interconnection customers are included in the DISIS-2010-001 Impact Study which identified the required network upgrades for each customer in order to interconnect to the SPS transmission system.

Shared Interconnection Upgrade Facilities Costs

The Interconnection Customers' total shared upgrade costs are broken down as follows for each project:

Project	Shared Upgrade Cost
ASGI-2010-011	**$6,188,997**
GEN-2008-047	**$19,153,285**
GEN-2008-088	**$2,875,367**
GEN-2010-007	**$6,112,120**
GEN-2010-014	**$55,573,985**
TOTAL	**$89,903,754**

The individual customer shared facilities costs are shown in the following tables:

ASGI-2010-011

Upgrade Type	Allocated Costs
Build 53 miles of single circuit 345 kV transmission line from Hitchland to mid-point of TUCO to Woodward 345 kV line. Includes substation work at Hitchland.	$6,188,997
TOTAL	**$6,188,997**

GEN-2008-047

Upgrade Type	Allocated Costs
Build 53 miles of single circuit 345 kV transmission line from Hitchland to mid-point of TUCO to Woodward 345 kV line. Includes substation work at Hitchland.	$19,153,285
TOTAL	**$19,153,285**

GEN-2008-088

Upgrade Type	Allocated Costs
Build 53 miles of single circuit 345 kV transmission line from Hitchland to mid-point of TUCO to Woodward 345 kV line. Includes substation work at Hitchland.	$2,875,367
TOTAL	**$2,875,367**

GEN-2010-007

Upgrade Type	Allocated Costs
Build 53 miles of single circuit 345 kV transmission line from Hitchland to mid-point of TUCO to Woodward 345 kV line. Includes substation work at Hitchland.	$6,112,120
TOTAL	**$6,112,120**

GEN-2010-014

Upgrade Type	Allocated Costs
Build 53 miles of single circuit 345 kV transmission line from Hitchland to mid-point of TUCO to Woodward 345 kV line. Includes substation work at Hitchland.	$55,573,985
TOTAL	**$55,573,985**

This cost allocation is subject to change for restudies conducted by the Transmission Provider in response to the higher queued customers or other customers in the DISIS-2010-001 Impact Study that withdraw their interconnection request or suspend, terminate, or request unexecuted filings of their LGIAs.

SHARED FACILITIES STUDY of
SPS TRANSMISSION FACILITIES

for

Facility Request FCS-2010-001

Introduction

The Southwest Power Pool has determined the need for a Facility Study for a number of network upgrades for the purpose of interconnecting certain customers to the Southwestern Public Service Company (SPS) transmission system. The customers and upgrades are identified in the SPP DISIS-2010-001 Impact Study.

Power flow analysis has indicated that for the power flow cases studied, it is possible to interconnect the transmission line with transmission system reinforcements within the local transmission system.

Network Upgrades

The primary objective of this study is to identify certain Network Upgrades required for the interconnection of generation customers to the SPS transmission system. The network upgrades shall be constructed and maintained by SPS (unless specified different at a later time). Preferred routes will be determined once the projects have been approved. The required network upgrade facilities and its associated costs are shown in Table 1.

Table 1: Required Interconnection Network Upgrade Facilities

PROJECT	Right of Way Cost	Substation Cost	Transmission Cost	Total Cost
Build 53 miles of single circuit 345 kV transmission line from Hitchland to mid-point of TUCO to Woodward 345 kV line. (This represents 50% of the estimated distance – remainder estimated by OG&E). Includes work at Hitchland substation.	$4,202,485	$6,803,565	$78,897,704	$89,903,754
			Grand Total	**$89,903,754**

Short Circuit Fault Duty Evaluation

It is standard practice to recommend replacing a circuit breaker when the current through the breaker for a fault exceeds 100% of its interrupting rating with recloser de-rating applied, as determined by the ANSI/IEEE C37.5-1979, C37.010-1979 & C37.04-1979 breaker rating methods.

For this interconnection, no breakers in the SPS area were found to exceed their interrupting capability after the addition of the related facilities.