



***FCS-2010-001 Shared Facility Study  
for  
Transmission Facilities in WFEA***

***SPP Tariff Studies***

***(#FCS-2010-001)***

***February 2011***

## Summary

The Western Farmers Electric Cooperative (WFEC) 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.

Pursuant to the tariff, the Western Farmers Electric Cooperative 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:

GEN-2008-037  
GEN-2009-030  
GEN-2009-060  
GEN-2010-008

These interconnection customers are included in the DISIS-2010-001-1 Impact Study which identified the required network upgrades for each customer in order to interconnect to the WFEC transmission system.

## Shared Interconnection Upgrade Facilities Costs

The Interconnection Customers' allocated shared upgrade costs are broken down as follows:

### GEN-2008-037

<b>Upgrade Type</b>	<b>Allocated Costs</b>
<b><u>Washita – Gracemont 138 kV CKT2</u></b> <ul style="list-style-type: none"><li>Construct approximately 11 miles of 138 kV 1590 MCM line.</li><li>Washita Switch Station work to accommodate new line.</li></ul>	<b>\$2,453,187</b>
<b><u>Lake Creek – Lone Wolf 69 kV CKT1</u></b> <ul style="list-style-type: none"><li>Reset CT or other terminal equipment to raise limit to conductor</li></ul>	<b>\$2028</b>
<b>TOTAL</b>	<b>\$2,455,215</b>

**GEN-2009-0030**

<b>Upgrade Type</b>	<b>Allocated Costs</b>
<b><u>Washita – Weatherford 138 kV CKT1</u></b>	<b>\$22,435,002</b>
<ul style="list-style-type: none"> <li>• Construct approximately 50 miles of 138 kV 1590 MCM line.</li> <li>• Washita Switch Station work to accommodate new line.</li> <li>• Construct new 3 breaker ring bus at Weatherford.</li> </ul>	
<b><u>Washita – Gracemont 138 kV CKT2</u></b>	<b>\$1,696,433</b>
<ul style="list-style-type: none"> <li>• Construct approximately 11 miles of 138 kV 1590 MCM line.</li> <li>• Washita Switch Station work to accommodate new line.</li> </ul>	
<b>TOTAL</b>	<b>\$24,131,435</b>

**GEN-2009-060**

<b>Upgrade Type</b>	<b>Allocated Costs</b>
<b><u>Washita – Weatherford 138 kV CKT1</u></b>	<b>\$64,998</b>
<ul style="list-style-type: none"> <li>• Construct approximately 50 miles of 138 kV 1590 MCM line.</li> <li>• Washita Switch Station work to accommodate new line.</li> <li>• Construct new 3 breaker ring bus at Weatherford.</li> </ul>	
<b><u>Washita – Gracemont 138 kV CKT2</u></b>	<b>\$600,380</b>
<ul style="list-style-type: none"> <li>• Construct approximately 11 miles of 138 kV 1590 MCM line.</li> <li>• Washita Switch Station work to accommodate new line.</li> </ul>	
<b><u>Lake Creek – Lone Wolf 69 kV CKT1</u></b>	<b>\$197,972</b>
<ul style="list-style-type: none"> <li>• Reset CT or other terminal equipment to raise limit to conductor</li> </ul>	
<b>TOTAL</b>	<b>\$863,350</b>

**GEN-2010-008**

<b>Upgrade Type</b>	<b>Allocated Costs</b>
<b><u>Fargo Junction – Woodward 69 kV CKT1</u></b>	<b>\$750,000</b>
<ul style="list-style-type: none"> <li>• Re-build approximately 2 miles of 69 kV to 138 kV spacing 556.6 MCM line</li> </ul>	
<b>TOTAL</b>	<b>\$750,000</b>

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  
WFEC 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 Western Farmers Electric Cooperative (WFEC) transmission system. The customers and upgrades are identified in the SPP DISIS-2010-001-1 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 WFEC transmission system. The network upgrades shall be constructed and maintained by WFEC (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.

<b>Table 1: Required Interconnection Network Upgrade Facilities</b>	
<b>PROJECT</b>	<b>Cost</b>
<b><u>Washita – Weatherford 138 kV CKT1</u></b>	
<ul style="list-style-type: none"> <li>• Construct approximately 50 miles of 138 kV 1590 MCM line.</li> <li>• Washita Switch Station work to accommodate new line.</li> <li>• Construct new 3 breaker ring bus at Weatherford.</li> </ul>	\$20,000,000 \$500,000 \$2,000,000
<b><u>Washita – Gracemont 138 kV CKT2</u></b>	
<ul style="list-style-type: none"> <li>• Construct approximately 11 miles of 138 kV 1590 MCM line.</li> <li>• Washita Switch Station work to accommodate new line.</li> </ul>	\$4,300,000 \$450,000
<b><u>Lake Creek – Lone Wolf 69 kV CKT1</u></b>	
<ul style="list-style-type: none"> <li>• Reset CT or other terminal equipment to raise limit to conductor</li> </ul>	\$200,000
<b><u>Fargo Junction – Woodward 69 kV CKT1</u></b>	
<ul style="list-style-type: none"> <li>• Re-build approximately 2 miles of 69 kV to 138 kV spacing 556.6 MCM line</li> </ul>	\$750,000
<b>Grand Total</b>	<b>\$28,200,000</b>