



**SPP** *Southwest  
Power Pool*

*System Facilities Study  
For Transmission Service*

*Requested By  
Western Resources Generation Services*

*From Western Resources  
To Eddy Co. \_ WSCC*

*For The Reserved Amount Of 50MW  
From January 1, 2001  
To January 1, 2002*

*SPP Transmission Planning  
SPP-2000-049*

**Created December 18, 2000**

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**Southwest Power Pool  
Transmission Service Request #198010  
SPP System Facilities Study SPP-2000-049**

**Executive Summary**

At the request of the Western Resources Generation Services (WRGS), the Southwest Power Pool developed this Facility Study for the purpose of documenting the system impact and evaluating the financial characteristics of Transmission Service Request 198010. The request is for 50MW of firm transmission service from WR control area to Eddy Co. DC Tie. The requested Point-To-Point Service is from January 1, 2001 to January 1, 2002.

The SPP's evaluation of the requested transmission service determined that the Available Transfer Capability (ATC) was zero for the month of December due to the loading on the Philips to South Philips Jct. 115kV line for the outage of the Summit to East McPherson 230kV line, NERC Flowgate PhiSphSumEmc 5045. The Network Facility Upgrade required to eliminate the constraint cannot be completed within the reservation period. Therefore, the requested transmission service, reinstated as reservation 225794, will be refused.

**Introduction**

Western Resources Generation Services requested long-term firm point-to-point Transmission Service from Western Resources (WR) to Eddy Co. DC Tie. Based on the results of the evaluation, a constraint was identified that will limit the transfer capability of the existing transmission system to zero.

The principal objective of this Facility Study is to document the Southwest Power Pools system impact of the requested transmission service and identify the costs of Network Upgrades that must be added or modified to provide the requested Transmission Service while maintaining a reliable transmission system. This study includes estimated engineering and construction costs for the required Network Upgrades and the time required to complete such construction. No Direct Assignment facilities are included in this study as none were identified to provide the requested Transmission Service.

The staff of SPP completed the evaluation of SPP OASIS Reservation 198010 that identified system limitations and required modifications to the SPP system necessary to provide the requested Transmission Service. Two system limitations were identified in the evaluation of the request. First, the Eddy Co. DC Tie total capacity is 200MW. SPP has reserved 183MW of capacity for higher priority reservations, leaving 17MW of capacity for reservation 198010. Second, the Western Resources' Philips to South Philips 115kV line for the outage of the Summit to East McPherson 230kV line, NERC Flowgate 5045, was identified as limiting the ATC in the month of December to zero. SPP contacted the affected transmission owner, Western Resources, and it was determined that to remove the constraint the underlying 25.95 mile double circuit South Philips Jct. to West McPherson 115kV line would need one of the circuit's conductors upgraded to a larger conductor, and the replacement of a wave trap and resetting of CT's would be required at Philips. The Network Upgrades required would increase the Flowgate's rating, which is sufficient to remove the constraint. The estimated total cost to engineer and construct the upgrades in year 2000 dollars is \$2,000,000. The lead-time required to complete the upgrades is 12 months with an estimated in service date of 2/1/02.

Given the estimated in service date of the Network Upgrades, the ATC of the existing transmission system cannot be increased within the reservation period. Therefore, reservation 198010, reinstated as 225794, will be refused.

### **Conclusion**

SPP's evaluation of SPP OASIS reservation 198010 identified constraints that limit the requested transmission service. The NERC Flowgate PhiSphSumEmc limits the Available Transfer Capability to zero due to the inability to upgrade the constraint within the reservation period. Engineering and construction cost in addition to the required lead-time for construction of the required Network Upgrade are provided.