



SPP

*Southwest
Power Pool*

*System Impact Study SPP-2002-189-
1*

*For Transmission Service
Requested By
Xcel Energy*

From OKGE to SPS

*For a Reserved Amount Of 100MW
From 10/1/02
To 1/1/03*

SPP Transmission Planning

Table of Contents

1. EXECUTIVE SUMMARY	3
2. INTRODUCTION.....	3
3. STUDY METHODOLOGY	5
A. DESCRIPTION.....	5
B. MODEL UPDATES.....	5
C. TRANSFER ANALYSIS.....	5
4. STUDY RESULTS	6
5. CONCLUSION.....	7

1. Executive Summary

Xcel Energy has requested a system impact study for Monthly Firm transmission service from OKGE to SPS. The period of the transaction is from 10/1/02 to 1/1/03. The request is for reservations 417204 and 417205 for the amount of 100MW.

The 100MW transaction from OKGE to SPS has a positive response on the following flowgates:

?? DRAXFRDRAXFR

?? LACSTILACWGR

To provide the ATC that is necessary for this transfer, the impact on these flowgates must be relieved.

It has been determined that there is not sufficient time available to complete any upgrades to the system that would relieve these flowgates.

The Owner of existing firm transmission reservations 381154 and 381165 (both SPS to AMRN) agrees to a pre-TLR 5a curtailment in order to allow this new request for monthly service to flow. Therefore the requests for monthly service from OKGE to SPS will be accepted with this limitation for the transaction period of 10/1-12/1/02 (December not available due to DRAXFRDRAXFR).

2. Introduction

Xcel Energy has requested an impact study for transmission service from OKGE to SPS.

An option available to relieve the impact on these flowgates caused by the 100MW OKGE to SPS transfer is curtailment of existing service. In this method, the impact of curtailed service on a particular flowgate can be allotted to the new service requested. Both the new request and curtailment request can be allowed to flow until reaching a TLR level of 5a. At this point, either the new request or the curtailment request must be curtailed up to the maximum determined by this study.

The Draper Transformer flowgate has been identified as a limiting constraint for the OKGE to SPS transfer. For this flowgate, each winding is monitored for the loss of the other. It has been determined that the 100MW transfer from OKGE to SPS will cause the Draper Transformer to overload should the loss of the one of the two windings occur.

The La Cygne to Stillwell, La Cygne to West Gardner flowgate has been identified as a limiting constraint for the OKGE to SPS transfer. For this flowgate, the La Cygne to Stillwell, 345kV line is monitored during the loss of the La Cygne to West Gardner, 345kV line. It has been determined that the 100MW transfer from OKGE to SPS will cause the La Cygne to Stillwell line to overload should the loss of the La Cygne to West Gardner line occur.

There are no facility upgrades available to relieve these flowgates that can be completed in the time period available. This impact study reviews curtailment as an option to relieving the transmission constraints.

3. Study Methodology

A. Description

Southwest Power Pool determined the firm transmission reservations that if curtailed would affect or relieve the transmission constraint and the amount of transmission capacity available through such curtailment.

B. Model Updates

The 2001 Southwest Power Pool Summer Peak, Fall, and Winter Peak models were used for the study. These models were updated to reflect the most current information available.

C. Transfer Analysis

Using the short-term calculator, the limiting constraint for the transfer is identified. The response factor of the transfer on that constraint is also determined.

The product of the transfer amount and the response factor is the impact of the transfer on a limiting flowgate that must be relieved. With multiple flowgates affected by a transfer, relief of the largest impact will also provide relief of smaller impacts.

4. Study Results

Curtailement of existing firm transmission reservations can provide for affect or relief on the concerning flowgates.

The n-1 overload caused by this transaction on the Draper Transformer cannot be relieved by the chosen Attachment K requests (381154, 381165). The original requests do not have an impact on this flowgate either. This flowgate is only a limitation for the month of December 2002 (not October or November 2002).

The distribution factor of the La Cygne to Stillwell, La Cygne to West Gardner flowgate for the OKGE to SPS transfer is 6.5% for the transaction period. The 6.5MW impact can be relieved by curtailement of existing firm transmission reservations 381154 and 381165 (SPS to AMRN) which offers an 8.1% response factor for the transaction period. The impact of the 100MW OKGE to SPS transfer is relieved by curtailement of 80MW of 381154 and 381165. The remaining 20MW is available for curtailement for other requests.

5. Conclusion

Southwest Power Pool determined the amount of new transmission capacity available through curtailment of existing firm transmission reservations. The Owner of existing firm transmission reservations 381154 and 381165 (SPS to AMRN) agrees to curtail said service prior to reaching TLR 5a on the impacted flowgates. These curtailable reservations have no relieving impact on the Draper Transformer flowgate, so this service is not available for the month of December 2002. Therefore, the request for monthly service from OKGE to SPS will be counteroffered with a transaction period of 10/1-12/1/02 with the limitation of pre-TLR 5a curtailment of 80MW of existing firm transmission reservations 381154 and 381165.