



SPP

*Southwest
Power Pool*

***System Impact Study
SPP-2015-002
For Transmission Service
Requested By:
CHAN***

From DOGWOOD.KELSON to SEG

***For a Reserved Amount Of
12 MW
For 6/1/2015 – 10/1/2015***

1. Executive Summary

CHAN has requested a system impact study for monthly firm transmission service from DOGWOOD.KELSON to SEG. The period of the transaction is from 6/1/2015 00:00 CDT to 10/1/2015 00:00 CDT. The request is for reservation 80850153.

The 12 MW transaction from MPS has an impact on the following flowgates with no AFC: LACNEOEMPWIC. To provide the AFC necessary for this transfer, the impact on these flowgates must be relieved.

After studying many scenarios using generation redispatch, there are several feasible scenarios that will relieve the flowgate(s) in question.

2. Introduction

CHAN has requested a system impact study for transmission service from DOGWOOD.KELSON to SEG.

There is 1 constrained flowgate that require relief in order for this reservation to be accepted. The flowgates and the explanations are as follows:

- LACNEOEMPWIC: Lacygne - Neosho 345 kV line for the loss of the Emporia – Wichita 345 kV line

3. Study Methodology

A. Description

Southwest Power Pool used Transmission Adequacy & Reliability Assessment (TARA) to obtain possible unit pairings that would relieve the constraint. TARA calculates impacts on monitored facilities for all units within the Southwest Power Pool Footprint. The SPP ATC Calculator is used to determine response factors for the time period of the reservation.

B. Model Updates

The 2015 Southwest Power Pool model was used for the study. This model was updated to reflect the most current information available.

C. Transfer Analysis

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

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

Using Transmission Adequacy & Reliability Assessment (TARA), specific generator pairs are chosen to reflect the units available for redispatch. The quotient of the amount of impact that must be relieved and the generation sensitivity factor calculated by TARA is the amount of redispatch necessary to relieve the impact on the affected flowgate.

4. Study Results

After studying the impacts of the request, five flowgates require relief. The flowgates and associated amount of relief are as follows:

Table 1

Flowgate	Duration	Sensitivity %	Impact MW
5022 : LACNEOEMPWIC	6/1/2015 - 10/1/2015	4.7%	1

Table 2 displays a list of generator pairs that are possible relief options for each flowgates in question and the amount of redispatch capacity needed.

Table 2

5022 : LACNEOEMPWIC			
Increment	Decrement	Sensitivity	Redispatch
Riverton	Lacygne	34.3%	3
NE Station	Lacygne	34.3%	3
Stateline	Lacygne	33.8%	3
GRDA 17	Lacygne	33.0%	3
Riverton	West Gardner	25.1%	4
NE Station	West Gardner	25.0%	4
Stateline	West Gardner	24.6%	4
GRDA 17	West Gardner	23.8%	4
Riverton	South Harper	23.7%	4
NE Station	South Harper	23.6%	4
Stateline	South Harper	23.2%	4
GRDA 17	South Harper	22.4%	4

5. Conclusion

Generation redispatch options were studied in order to relieve the necessary constraints. The results of this study shows that the constraints on the flowgates in question could be relieved by executing one or more of the options described in the Study Results section of this document. Before the Transmission Provider accepts the reservations, agreement to the redispatch costs must be presented to Southwest Power Pool. Noncompliance with this guideline will result in the refusal of the reservation.