



*System Facilities Study
For Transmission Service*

*Requested By
Southwestern Public Service Co.*

*From Southwestern Public Service
To Oklahoma Gas & Electric Co.*

*For Reserved Amounts Totaling 112MW
From January 1, 2001
To January 1, 2002*

*SPP Transmission Planning
(#SPP-1999-023)*

Created September 1, 2000

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Southwest Power Pool
Transmission Service Requests #142429, 142431, 142519
SPP System Facilities Study SPP-1999-023

Executive Summary

At the request of Southwestern Public Service Co., the Southwest Power Pool developed this Facility Study for the purpose of evaluating the financial characteristics of Transmission Service Requests 142429, 142431 and 142519. These requests are for a total of 112 MW of firm transmission service from Southwestern Public Service's control area to Oklahoma Gas & Electric's control area in the amounts of 50MW, 50MW and 12MW respectively. The requested Point-To-Point Service is from January 1, 2001 to January 1, 2002.

Given the transfer limits of the existing transmission system, the maximum projected base revenues for the requested transmission service 142429, 142431 and 142519 are \$621,443, \$422,803 and \$79,900 respectively throughout the entire reservation period totaling \$1,124,146. The maximum monthly base rate revenue requirements are \$55,486 for each of the reservations. However, Southwestern Public Service (SPS) as the Transmission Customer is required to pay the higher of either the base revenues or the costs associated with the Network Upgrades.

Given the currently defined limits of both SPS's interface with SPP and the transfer capability of SPP's existing transmission system in addition to the lead times associated with Network Upgrades, the Available Transfer Capability (ATC) of the existing transmission system cannot be increased within the reservation period. Therefore, Network Upgrades will not be required and SPS shall pay only the base rate revenue requirements. The maximum available transmission service is 112MW except during April 1 to October 1 and the month of December. The maximum effective available transfer capability of the existing transmission system is 106MW during April and May, 40MW from June 1 to October 1, and 81MW during December.

As a Network Upgrade is not required, an irrevocable letter of credit is not required for initial engineering and construction costs to be incurred by the transmission owners. Also, this study provides

no assurance of the availability of Transmission Capacity or the adequacy of existing or planned transmission facilities for Transmission Service in excess of the actual available amount to be determined at a later time.

Given the reservations with a higher priority and the first right of refusal under Section 2.2, the minimum available capacity is 0MW for all months during the reservation period. In the event that additional capacity, from January 1, 2001 to January 1, 2002, becomes available before the start-date of the requested service, SPS will be obligated to pay for additional capacity pursuant to Section 2.2 of SPP's Open Access Transmission Tariff in the amount of the lesser of either 1) the requested amount, 2) the available transfer capability, or 3) the SPS interface limit.

SPP will accept a request of 0MW of Transmission Service from January 1, 2001 to January 1, 2002, or greater if determined available at a later time up to the amounts of 112MW from January 1, 2001 to April 1, 106MW from April 1 to June 1, 40MW from June 1 to October 1, 112MW from October 1 to December 1, and 81MW from December 1 to January 1, 2002 if these amounts of effective available capacity are acceptable to SPS. Given the specified limitations across SPS's interface and SPS's confirmation of the request, SPP will notify SPS of the available capacity across SPS's interface approximately sixty (60) days prior to the start-date of the reservation or approximately November 1, 2000. At that time, SPP will submit a Service Agreement for execution.

Introduction

Southwestern Public Service previously requested an Impact Study for Transmission Service from SPS to Oklahoma Gas & Electric Co. (OKGE). Based on the results of the completed Impact Study, constraints were identified that will limit the transfer capability of the existing transmission system to levels below those requested.

The principal objective of this Facility Study is to 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 a good faith estimate of the Transmission Customer's assigned cost for the required Network Upgrades and the time required to complete such construction and to initiate the requested service. No Direct Assignment facilities are included in this study as none were identified to provide the requested Transmission Service. The evaluation of all Transmission Service Requests is not based on the confirmation of any one of 142429, 142431 and 142519. Therefore, the results of this analysis are valid if any one or all of the Transmission Service Requests are confirmed.

The staff of SPP completed the System Impact Study SPP-1999-023 that identified system limitations and required modifications to the SPP system necessary to provide the requested Transmission Service. A list of these facilities is included in Table 1. Table 2 includes only those upgrades that may be completed within the reservation period. The actual effective ATC will not be known until sixty (60) days prior to the start-date of the reservation period given the requirements of Section 2.2.

A contract date of December 1, 2000 was used in Table 1 to derive the availability date of Network Upgrades given their respective lead times for engineering and construction. Given this information, completing any one or all of the Network Upgrades will not increase the ATC within the seasons in which deficiencies occur. Therefore, no upgrades are included in this analysis. Given the constraints that were identified in the impact study, there are facility limits that will reduce the ATC below the requested amounts. Therefore, the maximum available capacity is less than the amounts requested for all reservations during some seasons.

Firm Point-To-Point Transmission Service may be provided to SPS in amounts less than requested if a significant portion of reservations with the right of first refusal under Section 2.2 do not extend their Transmission Service. Table 3 includes a summary of the maximum allocated capacity by Transmission Service Request excluding all reservations with the right of first refusal. These monthly amounts of capacity are the maximum possibly available. Table 4 includes a monthly summary of the minimum allocated capacity by Transmission Service Request including reservations with the right of first refusal.

As it would not be prudent for SPP to allocate transmission capacity at this time to SPS that may be required to accommodate reservations with the right of first refusal under Section 2.2, SPP will allocate the currently defined ATC from January 1, 2001 to January 1, 2002 in the amount of 0MW. If this limit is agreeable to SPS, then SPP will accept and approve the requested service with this limit. In the event that additional capacity is determined to be available, from January 1, 2001 to January 1, 2002, approximately sixty (60) days prior to the start-date of the reservation or about November 1, 2000, then SPP will allocate additional capacity to SPS pursuant to Section 2.2 if SPP receives confirmation of the request given the current limits of the transmission system.

Future Available Service Pursuant To Section 2.2

Included in SPP's Open Access Transmission Tariff is Section 2.2, Reservation Priority For Existing Firm Service Customers. Pursuant to this requirement, existing firm service customers with a contract term of one-year or more have the right to continue to take transmission service from SPP when the contract expires. Should a transmission customer with a higher-priority reservation not renew its transmission service contract with SPP, excess capacity of the transmission system will be available on first-come, first-served principles. Should additional interface capacity with SPS become available in the future, an amount will be made available to SPS up to the lesser of either 1) the requested amount, 2) the available transfer capability, or 3) SPS's interface limit.

As there are no Network Upgrades that will increase the ATC within the seasons in which deficiencies occur, there are no upgrades included in this analysis. As a result, the current minimum ATC allocated to SPS is tabulated in Table 4 on a monthly basis by reservation. Currently, the values of ATC are all 0MW. In the event that additional capacity becomes available to SPS due to reservations that are not extended with sufficient amounts of reserved capacity and the right of first refusal under Section 2.2, then SPP will allocate the available capacity in the amount of the lesser of either 1) the requested amount, 2) the available transfer capability, or 3) the SPS interface limit. The maximum capacity of which SPP may allocate to SPS on or about November 1, 2000 is listed in Table 3 by reservation on a monthly basis.

Financial Analysis Of Future Available Service Pursuant To Section 2.2

In the event that additional interface capacity with SPS becomes available before the start-date of the requested service, additional capacity will be allocated to SPS. The zone interfaced to the sink with the lowest rate for firm point-to-point transmission service is OKGE. The current base rate of OKGE is \$1,109.72/MW-Month. The estimate of total Revenue Requirements for the required Network Upgrades throughout the requested transaction period is \$0. The maximum projected base revenues from the requested service are estimated to be \$1,124,146. These projected revenues are based on values of available capacity included in Tables 3 and 5.

The projected base revenues from any one reservation are estimated to be more than the estimated Revenue Requirements for the required Network Upgrades over the requested transaction period. Therefore, there will be no costs assigned to the Transmission Customer for any Network Upgrade. The maximum estimated cost for the requested Transmission Service throughout the transaction period is \$1,124,146 for all three reservations. The maximum estimated costs for reservations 142429, 142431 and 142519 are \$621,443, \$422,803 and \$79,900 respectively.

Financial Analysis

A present worth analysis is conducted based on each transmission owner's annual fixed charge rates including weighted cost of capital. Each request for Transmission Service is evaluated independently as the cost associated with each Network Upgrade is assigned to a request. For new facilities, the Transmission Customer shall pay the total cost through the reservation period including engineering and construction costs and other annual operating costs. When upgrading facilities, the Transmission Customer shall, throughout the reservation period, 1) pay the total engineering and construction costs and other annual operating costs associated with the new facilities, and 2) receive credits associated with the depreciated book value of removed usable facilities, salvage value of removed non-usable

facilities, and the carrying charges, excluding depreciation, associated with all removed facilities based on their respective book values.

The amortization period of Network Upgrades and Direct Assignment facilities shall be the lesser of either 1) the reservation period, or 2) the period between the completion of construction within the reservation period and the end of the reservation period. The annual carrying charge rate (fixed charge rates in per-unit) for each transmission owner shall be based on the sum of expenses for the previous calendar year, including weighted cost of capital, composite income tax, other tax, administrative & general, operation & maintenance, allocation of general plant, and deferred income tax adjustment, divided by the plant investment for the same year.

Categories of costs and credits associated with Network Upgrades and Direct Assignment facilities shall include those specified below. The costs allocated to the Transmission Customer over the reservation period shall be the sum of the levelized present worth of each of the identified cost and credit components based on each transmission owner's weighted cost of capital.

1. Amortized engineering and construction costs associated with the new facilities.
2. Annual carrying charges, excluding depreciation, based on the product of 1) total engineering and construction costs associated with the new facilities, and 2) annual carrying charge rate (per-unit).
3. Amortized existing facility credit associated with the replaced facilities including the sum of the depreciated book values of only the reusable facilities within the lesser of either 1) the respective remaining depreciation periods, or 2) the reservation period.
4. The salvage value credit of non-usable facilities.
5. Annual carrying charge credits, excluding depreciation, based on the product of 1) book values associated with all replaced facilities, and 2) annual carrying charge rate (per-unit).

As there are no Network Upgrades required as any upgrade will not increase levels of ATC , the revenue requirements from the Transmission Customer are the projected base revenues from the reservations. Also, no letter of credit is required in accordance with section 19.4 of the SPP Open Access Transmission Service Tariff given that there are no Network Upgrades. This does not offset other letters of credit or deposits as may be required under the tariff.

The zone interfaced to the sink with the lowest rate for firm point-to-point transmission service is OKGE. The current base rate of OKGE is \$1,109.72/MW-Month. The maximum estimated cost for the requested Transmission Service throughout the transaction period is \$1,124,146 for all three reservations. The maximum estimated costs for reservations 142429, 142431 and 142519 are \$621,443, \$422,803 and \$79,900 respectively. The base revenues associated with these reservations are based on the projected maximum ATC values listed in Tables 3 and 5.

Conclusion

Given the constraints identified in the System Impact Study SPP-1999-023, estimated engineering and construction costs in addition to lead times for construction of Network Upgrades are provided. These estimated costs are for only those facilities required to provide the requested service. The lead times do not include any allowances for possible delays due to outage conflicts during construction, conflicts with construction during the summer peak, engineering and construction manpower constraints, etc. The lead times are based on engineering starting when SPP provides the transmission owners approval to start on the projects. No Direct Assignment facilities are included in this study that may be required to complete the requested service.

Based on the results of the Impact Study SPP-1999-023, there are no applicable Network Upgrades that were identified as required to provide the requested transmission service as noted in Tables 1 and 2 below. The requested transmission service of 112MW may be available during 2001 except during April through September and December in which the maximum effective available transfer capability of the existing transmission system on a monthly basis is listed in Tables 3 and 5. As the minimum ATC

available to SPS is 0MW, SPP may notify SPS of available capacity on or about November 1, 2000 in accordance with Section 2.2.

Throughout the transaction period of the requested Transmission Service, the estimate of maximum base revenues for reservations 142429, 142431 and 142519 are \$621,443, \$422,803 and \$79,900 respectively totaling \$1,124,146. As there are no Revenue Requirements for Network Upgrades, the revenue requirements from the Transmission Customer are the base rate revenues. In the event that additional interface capacity with SPS becomes available before the start-date of the requested service, SPS will be obligated to pay for additional capacity in the amount of the lesser of 1) the requested amount, 2) the available transfer capability, or 3) the SPS interface limit.

Table 1
Transfer Limits Given Engineering
And Construction Lead Times

Contract Date: 12/1/00

Only Network Elements That Limit The Requested Transfer Amount	Trans. Owner	Lead Time (Months)	Date Facility Required	Date Available	Delay (Months)	ATC	
						(MW)	(Model)
None 1/1 - 4/1, 2001							00/01WP
Elk City 230/138kV (Invalid Contingency, ATC = 31MW) (Included In SPP-1999-016)	CSWS	18	4/1/01	1/1/02	N/A	N/A	01AP
Grapevine-Elk City 230kV: Repl. 2 Wavetraps	(1) CSWS	6	4/1/01	6/1/01	2.0	106	01AP
Lehigh Tap - Owl Creek 69kV (N/A per WR)	WR	N/A	4/1/01	N/A	N/A	N/A	01SR
Elk City 230/138kV (Invalid Contingency, ATC = 23MW) (Included In SPP-1999-016)	CSWS	18	4/1/01	1/1/02	N/A	N/A	01SR
Net Spring 4/1 - 6/1, 2001						106	
Gray Co. 115/69kV (N/A w/ 69kV line open, ATC=17MW)	(1) SPS	18	6/1/01	6/1/02	12.0	N/A	01SP
Elk City 230/138kV (Included In SPP-1999-016)	(1) CSWS	18	6/1/01	1/1/02	7.0	40	01SP
Prattville-Bluebell 138: Repl. Wavetraps & BCTs.	(1) OKGE	6	6/1/01	6/1/01	0.0	55	01SP
Net Summer 6/1 - 10/1, 2001						40	
None 10/1 - 12/1, 2001							01FA
None 12/1, 2001 - 1/1, 2002							01/02WP

Notes: Contract date of 12/1/00 is 30 days prior to start of service.

(1) As the Network Upgrade will not increase ATC for this request within the specified season, this upgrade is not required.

Table 2
Estimated Network Upgrade Costs, Lead Times And Required Dates
For Transmission Service Requests 142429, 142431 & 142519
From Southwestern Public Service To Oklahoma Gas & Electric
During The Period From January 1, 2001 To January 1, 2002

NETWORK SYSTEM IMPROVEMENT	ENGINEERING & CONSTRUCTION COSTS (\$ 2000)	ENGINEERING & CONSTRUCTION LEAD TIME	REQUIRED DATE (M/D/Y)	DATE IN SERVICE (M/D/Y)
Grapevine – Elk City 230kV: Replace 2 Wavetraps By CSWS	\$42,000	Six (6) Months	4/1/01	N/A
Prattville – Bluebell 138kV: Replace Wavetrap & BCTs At Bluebell By OKGE	\$28,965	Six (6) Months	6/1/01	N/A
EFFECTIVE TOTAL	\$0	None	N/A	N/A

As the Network Upgrades will not increase ATC for this request within the required seasons, these upgrades are not required. Due to engineering and construction lead times, all upgrades specified in the Impact Study cannot be completed in time to increase ATC.

Table 3
Summary Of Maximum Possible Allocated Capacity
Excluding All Reservations With The Right Of First Refusal
For Transmission Service Requests 142429, 142431 & 142519
From Southwestern Public Service To Oklahoma Gas & Electric
During The Period From January 1, 2001 To January 1, 2002

OASIS #	Transfer Amount (MW) During 2001											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
142429	50	50	50	50	50	40	40	40	40	50	50	50
142431	50	50	50	50	50	0	0	0	0	50	50	31
142519	12	12	12	6	6	0	0	0	0	12	12	0
Total	112	112	112	106	106	40	40	40	40	112	112	81

Table 4
Summary Of Minimum Allocated Capacity
Including All Reservations With The Right Of First Refusal

OASIS #	Transfer Amount (MW) During 2001											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
142429	0	0	0	0	0	0	0	0	0	0	0	0
142431	0	0	0	0	0	0	0	0	0	0	0	0
142519	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0

Table 5
Summary Of Maximum Available Transfer Capability & Base Rate Revenues
Excluding All Reservations With The Right Of First Refusal,
The Total Revenue Requirements,
For Transmission Service Requests 142429, 142431 & 142519
From Southwestern Public Service To Oklahoma Gas & Electric
During The Period From January 1, 2001 To January 1, 2002

Operating Period (Month)	142429 ATC (MW)	142429 Base Revenues (\$)	142431 ATC (MW)	142431 Base Revenues (\$)	142519 ATC (MW)	142519 Base Revenues (\$)	Total ATC (MW)	Total Base Revenues (\$)
January	50	\$55,486	50	\$55,486	12	\$13,317	112	\$124,289
February	50	\$55,486	50	\$55,486	12	\$13,317	112	\$124,289
March	50	\$55,486	50	\$55,486	12	\$13,317	112	\$124,289
April	50	\$55,486	50	\$55,486	6	\$6,658	106	\$117,630
May	50	\$55,486	50	\$55,486	6	\$6,658	106	\$117,630
June	40	\$44,389	0	\$0	0	\$0	40	\$44,389
July	40	\$44,389	0	\$0	0	\$0	40	\$44,389
August	40	\$44,389	0	\$0	0	\$0	40	\$44,389
September	40	\$44,389	0	\$0	0	\$0	40	\$44,389
October	50	\$55,486	50	\$55,486	12	\$13,317	112	\$124,289
November	50	\$55,486	50	\$55,486	12	\$13,317	112	\$124,289
December	50	\$55,486	31	\$34,401	0	\$0	81	\$89,887
Total		\$621,443		\$422,803		\$79,900		\$1,124,146