



**SPP**

*Southwest  
Power Pool*

*System Facilities Study  
For Transmission Service Requests  
263443 & 263444*

*Requested By  
Western Resources Generation Services*

*From Western Resources  
To Ameren*

*For The Reserved Amount Of 100MW*

*From January 1, 2002  
To January 1, 2003*

*SPP Transmission Planning  
(#SPP-2001-227-2)  
Revised November 16, 2001*

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**Southwest Power Pool**  
**Transmission Service Request #263443 & 263444**  
**SPP System Facilities Study SPP-2001-227-2**

**Executive Summary**

At the request of Western Resources Generation Services (WRGS), the Southwest Power Pool developed this Facilities Study for the purpose of evaluating the financial characteristics of Transmission Service Requests 263443 and 263444. These requests are for 50MW each of Firm Point-To-Point Transmission Service from Western Resources (WR) to Ameren (AMRN). The requested term of this Transmission Service is from January 1, 2002 to January 1, 2003.

Given the results of SPP's base case analysis pursuant to the requests for Transmission Service, the available transfer capability (ATC) listed in Table 8 is insufficient to provide the Transmission Customer with reliable service for a significant portion of the requested reservation period without impairing or degrading reliability to existing firm services. Therefore, redispatch options to accommodate these requests for Transmission Service as provided for in section 19.3 of SPP's Open Access Transmission Tariff (OATT) were deemed applicable by SPP for the purpose of curtailing other service. Per Attachment K, SPP determined WRGS' firm transmission reservations that if curtailed would affect or relieve the constraint and the amount of transmission capacity available through such curtailment.

SPP OASIS reservations 260470 and 260471 were previously confirmed for 50MW each totaling 100MW by WRGS. These 2 reservations may be curtailed 75MW, on an as-needed and pre-contingency basis from 100MW to 25MW, to relieve the WR Hoyt HTI Switching Junction to Circleville 115kV constraint from April 1 to June 1, 2002. With reservations 260470 and 260471 curtailed to a total usage of 25MW from April 1 to June 1, this requested Transmission Service may be provided at the capacity level requested of 100MW. Otherwise, there is only 12MW of ATC for Transmission Service Requests

263443 and 263444. Given the results of this analysis, the requested Transmission Service may be started January 1, 2002 at the capacity level requested.

The projected base rate transmission service charges (excluding charges for ancillary services) are \$828,000 during the applicable portion of the reservation period based on the available transfer capability (ATC) of the existing transmission system with Network Upgrades. The Transmission Customer is required to pay the higher of either the base rate transmission service charges or the revenue requirements associated with the Network Upgrades. The estimated levelized revenue requirements for providing the necessary Network Upgrades to accommodate the Transmission Service request are \$776,112. As the estimated base rate transmission service charges are greater than the estimated revenue requirements for Network Upgrades, WRGS shall pay the base rate transmission service charges.

Annual ATC allocated to the Transmission Customer is determined by the least amount of seasonal ATC on an annual basis. Allocated ATC and associated revenue requirements are based on items received by December 1, 2001 including 1) an executed Service Agreement and letter of credit received by SPP, and 2) authorization to proceed with engineering and construction received by Transmission Owners from SPP. In the event that the Transmission Customer does not provide SPP with an executed Service Agreement and letter of credit by December 1, 2001, then the ATC of the existing transmission system with Network Upgrades will have to be reevaluated due to subsequent delays in scheduling engineering and construction for the required Network Upgrades.

SPP as the Transmission Provider must receive an unconditional and irrevocable letter of credit, in the amount of \$742,000, before the Transmission Owners incur initial engineering and construction costs. 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 requested 100MW.

The Transmission Customer is responsible for the cost of upgrading all identified third-party facilities that are overloaded due to the requested service. In this case, no third-party facilities were identified. Not all third-party facilities were monitored during the development of the corresponding Impact Study. Therefore, additional third-party facilities upgrades may be required to accommodate the requested Transmission Service.

WR's Hoyt HTI Switching Junction to Circleville 115kV Network Upgrade was previously assigned to SPP OASIS reservation 212202 in Facilities Study SPP-2000-108 which has yet to be confirmed. Therefore, this upgrade was assigned to these requests for Transmission Service. In the event that reservation 212202 is confirmed at a later date with the assignment of WR's Hoyt HTI Switching Junction to Circleville 115kV Network Upgrade, then only the costs associated with expediting this upgrade to accommodate reservations 263443 and 263444 will be assigned to these requests. The cost of expediting the upgrade is less than the fully assigned cost. Since the base rate transmission service charges for reservations 263443 and 263444 are greater than the cost of the fully assigned upgrade, assigning only the expediting costs at a later date will have no effect on the cost of Transmission Service for reservations 263443 and 263444. However, in this case with only expediting costs assigned at a later date, the required letter of credit will be returned to the Transmission Customer.

### **Introduction**

The principal objective of this Facilities 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.

Another objective is to estimate the levelized revenue requirement for all identified Network Upgrades by Transmission Owner. The levelized revenue requirement is based on cost components of each upgrade including depreciation, weighted cost of capital, composite income tax, other tax, and deferred income tax credit. This information will be used to allocate revenue to Transmission Owners even if it is not the basis for billing the Transmission Customer pursuant to “or” pricing.

Facilities identified as limiting the requested Transmission Service have been reviewed to determine the required in-service date of each Network Upgrade. The year that each Network Upgrade is required to accommodate a request is determined by interpolating between the applicable model years given the respective loading data. Both previously assigned facilities and the facilities assigned to this request for Transmission Service were evaluated.

In some instances due to lead times for engineering and construction, Network Upgrades may not be available when required to accommodate a request for Transmission Service. When this occurs, the ATC with available Network Upgrades will be less than the capacity requested during either a portion of or all of the requested reservation period. As a result, the lowest seasonal ATC within each annual period will be offered to the Transmission Customer on an applicable annual basis within the reservation period.

The staff of SPP completed System Impact Study SPP-2001-227 that identified system limitations and required modifications to the SPP system necessary to provide the requested Transmission Service. The Network Upgrades that were not assigned to a previous request and are required to provide the requested Transmission Service are listed in Table 1. One Network Upgrades will be required on SPP transmission systems as the Hoyt HTI Switching Junction to Circleville 115kV line may be upgraded before the summer peak from June 1 to October 1. Due to the in-service date of this Network Upgrade, a limit during the spring season and no delay of the requested Transmission

Service is expected. The ATC values associated with only transfer-limiting upgrades are listed in Table 7.

As only 12MW is available from April 1 to June 1, 2002, other reservations of WRGS may be curtailed, on an as-needed and pre-contingency basis, during this period in order to accommodate these requests for Transmission Service. SPP OASIS reservations 260470 and 260471 were previously confirmed for 50MW each by WRGS. These 2 reservations may be curtailed 75MW to eliminate overloading WR's Hoyt HTI Switching Junction to Circleville 115kV from April 1 to June 1. With reservations 260470 and 260471 curtailed to 25MW from April 1 to June 1, this requested Transmission Service may be provided at the capacity level requested of 100MW. Given the results of this analysis, the requested Transmission Service may be started January 1, 2002.

All Network Upgrades assigned to previous Transmission Service requests that have not been constructed were monitored to determine whether the previously assigned upgrades are adequate to support this additional request. To accommodate a new request for Transmission Service, a previously assigned Network Upgrade may require capacity in addition to that previously specified. A previously assigned Network Upgrade may be required to be in service at an earlier date than previously indicated to accommodate a new request. With regard to the capacity and in-service date of a previously assigned Network Upgrade, an upgrade may require both additional capacity and an earlier in-service date to accommodate this request for Transmission Service.

Network Upgrades that were previously assigned and will require only additional capacity to accommodate this request for Transmission Service are listed in Table 2. To accommodate this request, no previously assigned Network Upgrades will require capacity in addition to that previously specified. Due to the in-service dates of these Network Upgrades, some may limit and delay the requested Transmission Service. The ATC values associated with only transfer-limiting upgrades are listed in Table 6.

Network Upgrades that were previously assigned and will require only accelerated in-service dates to accommodate this request for Transmission Service are listed in Table 3. To accommodate this request, no previously assigned Network Upgrade will require an earlier in-service date than previously indicated. Due to the in-service dates of these Network Upgrades, some may limit and delay the requested Transmission Service. The ATC values associated with only transfer-limiting upgrades are listed in Table 6.

Network Upgrades that were previously assigned and will require both additional capacity and accelerated in-service dates to accommodate this request for Transmission Service are listed in Table 4. To accommodate this request, no previously assigned Network Upgrades will require both capacity in addition to that previously specified and an earlier in-service date than previously indicated. Due to the in-service dates of these Network Upgrades, some may limit and delay the requested Transmission Service. The ATC values associated with only transfer-limiting upgrades are listed in Table 6.

Some constraints identified in the Impact Study are not addressed in this Facilities Study as the Transmission Owners determined that upgrades are not required due to various reasons. WR's Golden Plains Junction to Hesston 69kV overload is considered a local area problem and the line is to be rebuilt prior to the 2005 summer peak period. The overloads to both the West Junction City (East) to West Junction City 115kV and the 43RD & Lorraine To Hutchinson Energy Center 69KV lines may be eliminated using Transmission Operating Directives 402 and 1205 respectively. Also, an overload of the Gill Energy Center East To Oatville 69kV line may be eliminated using Transmission Operating Directive 620. An upgrade to the Craig Junction To Timberlane 115KV line is not required as a transformer in the Spring Hill 161/115kV Substation will be replaced prior to the 2002 summer peak.

Given the estimated dates when Network Upgrades will be required for the requested Transmission Service to be provided, there are facility limits that will either delay the start date of the service or limit the ATC to less than that requested. Transfer-limiting



facilities are listed in Tables 6 and 7. Seasonal and annual transfer limits given engineering and construction lead times are listed in Table 5. A summary of ATC throughout the reservation period is included in Table 8. The estimated time required to complete the engineering and construction of the most transfer-limiting facility in the spring peak period of 2002 is 6 months after WR's receipt of authorization to proceed from SPP.

WR's Hoyt HTI Switching Junction to Circleville 115kV transmission line has a 6-month construction lead-time and this upgrade is scheduled for completion during the requested reservation period. The constraint is due to the outage of the Iatan to St. Joe 345kV line during the 2002 spring peak period. The ATC during the 2002 spring peak, from April 1 to June 1, is 12MW. Firm Point-To-Point Transmission Service may be provided to WRGS in the amount of 12MW. If a completed Service Agreement is received by SPP on or before December 1, 2001, then Transmission Service at the requested capacity of 100MW may be provided immediately and through the requested reservation period if WRGS' reservations 260470 and 260471 are curtailed 75MW, from 100MW to 25MW on an as-needed and pre-contingency basis, from April 1 to June 1, 2002.

SPP does not accept requests for firm Transmission Service without restrictions if the design criteria specified in the corresponding Impact Study are not met. However, SPP may accept a request with a reduction of provided capacity to designated levels within the specified time frames as listed in Table 8. SPP accepts this request for Transmission Service given this allocation of capacity of which is equal to that requested through December 2002 given the curtailed reservations 260470 and 260471.

Tables 5, 8, 9 and 10 include lists of capacity of which is equal to that requested through the reservation period. Table 9 includes the ATC and the estimate of base rate transmission service charges. The ATC and the estimate of levelized revenue requirements for Network Upgrade are provided in Table 10. The Transmission Customer

shall pay the higher of the base rate transmission service charges or the levelized revenue requirements for the Network Upgrades.

### **Third-Party Facilities**

For third-party facilities listed in Table 11, the Transmission Customer is responsible for obtaining arrangements for the necessary upgrades of the facilities per Section 21.1 of the SPP OATT. If requested, SPP is willing to undertake reasonable efforts to assist the Transmission Customer in making arrangements for necessary engineering, permitting, and construction of the third-party facilities.

All facilities within SPP, of which are currently modeled, were monitored during the development of the corresponding Impact Study. Third-party facilities must be upgraded when it is determined that they are overloaded while accommodating the requested Transmission Service. Third-party facilities include those owned by members of SPP who have not placed their facilities under SPP's OATT.

### **Financial Analysis**

The revenue requirements associated with each assigned Network Upgrade is calculated using the estimated installed cost for each Network Upgrade reflected herein and the annual fixed charge rate of the constructing Transmission Owner. A present worth analysis is conducted, based on each Transmission Owner's annual fixed charge rates including weighted cost of capital, to determine the levelized revenue requirement of each Network Upgrade. The levelized revenue requirements of all applicable Network Upgrades are summed to determine the total revenue requirements for Network Upgrades associated with the Transmission Service request.

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 for Network Upgrades and Direct Assignment facilities shall be the lesser of 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 fixed charge rate for each Transmission Owner shall be based on the sum of expenses for a previous calendar year, including weighted cost of capital, composite income tax, other tax, and deferred income tax credit, 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 throughout the entire 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 fixed 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 respective remaining depreciation periods.
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 fixed charge rate (per-unit).

In the event that the engineering and construction of a previously assigned Network Upgrade may be expedited, with no additional upgrades, to accommodate a new request for Transmission Service, then the levelized present worth of only the incremental expenses through the reservation period of the new request, excluding depreciation, shall be assigned to the new request. These incremental expenses, excluding depreciation, include 1) the levelized difference in present worth of the engineering and construction expenses given the change in date to complete construction to account for additional interest expense and reduced engineering and construction expense due to inflation, 2) the levelized present worth of all expediting fees, and 3) the levelized present worth of the incremental annual carrying charges, excluding depreciation and interest, during the new reservation period taking into account both a) the reservation in which the project was originally assigned, and b) a reservation, if any, in which the project was previously expedited.

If the capacity of a previously assigned Network Upgrade is insufficient to accommodate a new request for Transmission Service, expediting the upgrade may be needed, and sufficient time is available for the Transmission Owner to accomplish necessary re-design and construction of the upgrade with additional capacity while accommodating previous requests, then the levelized present worth of only the incremental expenses through the reservation period of the new request, including depreciation, shall be assigned to the new request. These incremental expenses include 1) if expediting, the levelized difference in present worth of the previously assigned engineering and construction expenses given the change in date to complete construction to account for additional interest expense and reduced engineering and construction expense due to inflation, 2) if expediting, the levelized present worth of all expediting fees, 3) the levelized present worth of the incremental annual carrying charges associated with the previously assigned upgrade,

excluding depreciation and interest, during the new reservation period taking into account both a) the reservation in which the project was originally assigned, and b) a reservation, if any, in which the project was previously expedited, and 4) the levelized present worth of the incremental annual carrying charges, including depreciation, associated with the additional capacity through the reservation period of the new request.

The zone interfaced to the sink with the lowest zonal rate for Firm Point-To-Point Transmission Service is Southwestern Power Administration (SWPA). The current zonal rate of SWPA is \$690/MW-Month. Table 8 includes a summary of ATC values with all assigned Network Upgrades energized by the Date In Service specified in Tables 6 and 7. Given the lesser of these values of ATC and the requested capacity, corresponding base rate transmission service charges are listed on a monthly basis in Table 9. The base rate transmission service charges from the requested Transmission Service are estimated to be \$828,000.

The estimate of total revenue requirements listed in Table 10 for the required Network Upgrades throughout the requested transaction period is \$776,112. The estimated revenue requirements for the required Network Upgrades are less than the projected base rate transmission service charges over the requested transaction period. Therefore, the Transmission Customer will be responsible for the base rate transmission service charges of which are estimated to be \$828,000 throughout the transaction period.

The Southwest Power Pool and WR as the affected Transmission Owner shall use due diligence to add necessary facilities or upgrade the Transmission System to provide the requested Transmission Service, provided WRGS agrees to compensate SPP for such costs pursuant to the terms of Section 27 of the SPP Open Access Transmission Tariff. Partial Interim Service is available to WRGS per Section 19.7 of the SPP Open Access Transmission Service Tariff.

Engineering and construction of all new facilities and modifications will not start until after an executed Service Agreement has been received by SPP and the affected Transmission Owners receive the appropriate authorization to proceed from SPP. In accordance with section 19.4 of the SPP Open Access Transmission Service Tariff, the Transmission Customer shall provide and maintain in effect, during the term of the Transmission Service Agreement, an unconditional and irrevocable letter of credit to the SPP in the amount of no less than \$742,000 for the initial engineering and construction costs to be incurred by the Transmission Owners. This amount does not include or offset other letters of credit or deposits as may be required under the tariff.

### **Conclusion**

Given the constraints identified in the System Impact Study SPP-2001-227, estimated engineering and construction costs in addition to lead times for construction of Network Upgrades are provided. These estimated costs are for facilities required to provide the requested Transmission 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.

Based on the results of the Impact Study SPP-2001-227, Network Upgrades that were identified as required to provide the requested Transmission Service are listed in Tables 1 through 4. Table 1 includes the Network Upgrades and costs assigned to the WRGS to accommodate Transmission Service Requests 263443 and 263444 from WR to Ameren. Table 2 includes previously assigned Network Upgrades requiring only additional capacity to accommodate this request. Table 3 includes previously assigned Network Upgrades requiring only accelerated in-service dates. Table 4 includes previously assigned Network Upgrades requiring both additional capacity and accelerated in-service dates to accommodate this request.

Throughout the transaction period of the requested Transmission Service, the estimate of the levelized revenue requirements for the required Network Upgrades is \$776,112 for Transmission Service Requests 263443 and 263444. ATC allocated to the Transmission Customer is determined by the least amount of seasonal ATC on an annual basis. A listing of ATC values and monthly revenue requirements for the required Network Upgrades is in Table 10. The base rate transmission service charges are estimated to be \$828,000 and the monthly revenue requirements are listed in Table 9. As the base rate transmission service charges are greater than the revenue requirements for the required Network Upgrades, the revenue requirements from the Transmission Customer are for the base rate transmission service charges.

To complete the request for Transmission Service, SPP must receive the following items from the Transmission Customer within 15 days of receipt of this study: 1) an executed Service Agreement, and 2) an unconditional and irrevocable letter of credit regarding the engineering and construction of Network Upgrades. The Transmission Customer must also confirm these requests on Southwest Power Pool's OASIS pursuant to the results of this Facilities Study which includes the curtailment of WRGS' reservations 260470 and 260471 from 100MW to 25MW, on an as-needed and pre-contingency basis, during April 1 to June 1, 2002. Upon receipt of these items by SPP and confirmation by the Transmission Customer, SPP will authorize the applicable Transmission Owners to proceed with the engineering and construction of the Network Upgrades assigned to this request.

In the event that Transmission Customers do not confirm other requests for Transmission Service that have previously assigned Network Upgrades, the assignment of applicable Network Upgrades will need to be reevaluated.

**Table 1**

**Estimated Network Upgrade Costs, Lead Times & In-Service Dates  
For Facilities Assigned To Only This Request For Transmission Service  
For Requests 263443 & 263444 From WR To Ameren  
During The Period From January 1, 2002 To January 1, 2003**

NETWORK UPGRADE	COSTS TO ENGINEER & CONSTRUCT (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	POSSIBLE DATE IN SERVICE (M/D/Y) (1)	SCHEDULED DATE IN SERVICE (M/D/Y) (2)
Hoyt HTI Switching JCT To Circleville 115KV: Replace 82 structures by WR.	742,000	6	4/1/02	6/1/02	6/1/02

- Note: (1) When the projected completion of Network Upgrades is 1) between June 1 and September 15, or 2) between September 15 and 4.5 months thereafter, then 4.5 months are added as these facilities will not be taken out of service during the summer peaking period. Therefore, the possible end of construction is February 1 or later of the next year.
- (2) The scheduled date is based on when continuous annual service may be started after the possible in-service date. If N/A, then the facility upgrade/addition is not required, due to its lead time for engineering and construction, as 1) continuous annual service above the ATC limit may be provided only after the requested reservation period, or 2) the facility is not required at a later time within the reservation period due to reduced loading of the facility below its emergency rating.



**Table 2**

**Estimated Network Upgrade Costs, Lead Times & In-Service Dates  
For Previously Assigned Facilities Requiring Only Additional Capacity  
For Requests 263443 & 263444 From WR To Ameren  
During The Period From January 1, 2002 To January 1, 2003**

PREVIOUSLY ASSIGNED NETWORK UPGRADE	NEW ADDED UPGRADE	PREVIOUS REQUEST (NO.)	PREVIOUS ENG. & CONST. COSTS (\$)	CURRENT TOTAL ENG. & CONST. COST (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	PREVIOUSLY SCHEDULED DATE IN SERVICE (M/D/Y)
None							
SUBTOTAL			\$0	\$0			

**Table 3**

**Estimated Network Upgrade Costs, Lead Times & In-Service Dates  
For Previously Assigned Facilities Requiring Only Accelerated In-Service Dates  
For Requests 263443 & 263444 From WR To Ameren  
During The Period From January 1, 2002 To January 1, 2003**

PREVIOUSLY ASSIGNED NETWORK UPGRADE	PREVIOUS REQUEST (NO.)	ENGINEERING & CONSTRUCTION COSTS (\$)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	PREVIOUS DATE IN SERVICE (M/D/Y)	POSSIBLE DATE IN SERVICE (M/D/Y) (1)	SCHEDULED DATE IN SERVICE (M/D/Y) (2)
None							
SUBTOTAL		\$0					

- Note: (1) When the projected completion of Network Upgrades is 1) between June 1 and September 15, or 2) between September 15 and 4.5 months thereafter, then 4.5 months are added as these facilities will not be taken out of service during the summer peaking period. Therefore, the possible end of construction is February 1 or later of the next year.
- (2) The scheduled date is based on when continuous annual service may be started after the possible in-service date. If N/A, then the facility upgrade/addition is not required, due to its lead time for engineering and construction, as 1) continuous annual service above the ATC limit may be provided only after the requested reservation period, or 2) the facility is not required at a later time within the reservation period due to reduced loading of the facility below its emergency rating.

**Table 4**

**Estimated Network Upgrade Costs, Lead Times & In-Service Dates  
For Previously Assigned Facilities Requiring Both Additional Capacity And Accelerated In-Service Dates  
For Requests 263443 & 263444 From WR To Ameren  
During The Period From January 1, 2002 To January 1, 2003**

PREVIOUSLY ASSIGNED NETWORK UPGRADE	NEW ADDED UPGRADE	PREVIOUS REQUEST (NO.)	PREVIOUS ENG. & CONST. COSTS (\$)	CURRENT TOTAL ENG.& CONST. COST (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	PREVIOUS DATE IN SERVICE (M/D/Y)	POSSIBLE DATE IN SERVICE (M/D/Y) (1)	SCHEDULED DATE IN SERVICE (M/D/Y) (2)
None									
SUBTOTAL			\$0	\$0					

- Note: (1) When the projected completion of Network Upgrades is 1) between June 1 and September 15, or 2) between September 15 and 4.5 months thereafter, then 4.5 months are added as these facilities will not be taken out of service during the summer peaking period. Therefore, the possible end of construction is February 1 or later of the next year.
- (2) The scheduled date is based on when continuous annual service may be started after the possible in-service date. If N/A, then the facility upgrade/addition is not required, due to its lead time for engineering and construction, as 1) continuous annual service above the ATC limit may be provided only after the requested reservation period, or 2) the facility is not required at a later time within the reservation period due to reduced loading of the facility below its emergency rating.

**Table 5**  
**Transfer Limits Given Engineering And Construction Lead Times**  
**Of Previously Assigned Facilities And Facilities Assigned To This Request**  
**For Requests 263443 & 263444 From WR To Ameren**  
**During The Period From January 1, 2002 To January 1, 2003**

PREVIOUS OR THIS RESERVATION		THIS RESERVATION		PREVIOUS OR THIS RESERVATION		CALCULATED		POSSIBLE (1)		SCHEDULED (2)
NETWORK ELEMENT	TRANS. OWNER	ATC (MW)	ATC (MODEL)	DATE UPGRADE NEEDED (M/D/Y)	ENG. & CONST. LEAD TIME (MONTH)	DATE AVAIL-ABLE (M/D/Y)	DELAY (MONTH )	DATE AVAIL-ABLE (M/D/Y)	DELAY (MONTH )	DATE AVAILABLE (M/D/Y)
Request 260470 + 260471, SPP-2001-211-1, with a contract date of 11/15/2001.										
Hoyt – Hoyt HTI Switching Junction 115kV: Rebuild 0.79 miles 795KCMIL ACSR.	WR	100 (3)	02FA	10/1/02	6	5/16/02		5/16/02		6/1/02
Minimum 10/1 – 12/1:		100								

- Note: (1) When the projected completion of Network Upgrades is 1) between June 1 and September 15, or 2) between September 15 and 4.5 months thereafter, then 4.5 months are added as these facilities will not be taken out of service during the summer peaking period. Therefore, the possible end of construction is February 1 or later of the next year.
- (2) The scheduled date is based on when continuous annual service may be started after the possible in-service date. If N/A, then the facility upgrade/addition is not required, due to its lead time for engineering and construction, as 1) continuous annual service above the ATC limit may be provided only after the requested reservation period, or 2) the facility is not required at a later time within the reservation period due to reduced loading of the facility below its emergency rating.
- (3) Not limiting as the scheduled completion of the upgrade is before it is required to accommodate this request for Transmission Service.

**Table 5 (Continued)**  
**Transfer Limits Given Engineering And Construction Lead Times**  
**Of Previously Assigned Facilities And Facilities Assigned To This Request**  
**For Requests 263443 & 263444 From WR To Ameren**  
**During The Period From January 1, 2002 To January 1, 2003**

PREVIOUS OR THIS RESERVATION		THIS RESERVATION		PREVIOUS OR THIS RESERVATION		CALCULATED		POSSIBLE (1)		SCHEDULED (2)
NETWORK ELEMENT	TRANS. OWNER	ATC (MW)	ATC (MODEL)	DATE UPGRADE NEEDED (M/D/Y)	ENG. & CONST. LEAD TIME (MONTH)	DATE AVAIL-ABLE (M/D/Y)	DELAY (MONTH)	DATE AVAIL-ABLE (M/D/Y)	DELAY (MONTH)	DATE AVAILABLE (M/D/Y)
This Request 263443 + 263444, SPP-2001-227-2, with a contract date of 12/1/2001										
Hoyt HTI Switching Junction to Circleville 115kV: Replace 82 structures.	WR	12 (3)	02G	4/1/02	6	5/31/02	2	6/1/02	2	6/1/02
Hoyt HTI Switching Junction to Circleville 115kV: Replace 82 structures.	WR	30 (4)	02SP	4/1/02	6	5/31/02	2	6/1/02	2	6/1/02
Hoyt HTI Switching Junction to Circleville 115kV: Replace 82 structures.	WR	67 (4)	02WP	4/1/02	6	5/31/02	2	6/1/02	2	6/1/02
Minimum 1/1 – 1/1:		100								

- Note: (1) When the projected completion of Network Upgrades is 1) between June 1 and September 15, or 2) between September 15 and 4.5 months thereafter, then 4.5 months are added as these facilities will not be taken out of service during the summer peaking period. Therefore, the possible end of construction is February 1 or later of the next year.
- (2) The scheduled date is based on when continuous annual service may be started after the possible in-service date. If N/A, then the facility upgrade/addition is not required, due to its lead time for engineering and construction, as 1) continuous annual service above the ATC limit may be provided only after the requested reservation period, or 2) the facility is not required at a later time within the reservation period due to reduced loading of the facility below its emergency rating.
- (3) For 100MW of ATC, Transmission Service allocated to SPP OASIS reservations 260470 and 260471 for WRGS may require curtailment on an as-needed and pre-contingency basis from 100MW to 25MW during the period from April 1 to June 1, 2002 pursuant to Impact Study SPP-2001-227b dated November 14, 2001.
- (4) Not limiting as the scheduled completion of the upgrade is before it is required to accommodate this request for Transmission Service.

**Table 5 (Continued)**  
**Transfer Limits Given Engineering And Construction Lead Times**  
**Of Previously Assigned Facilities And Facilities Assigned To This Request**  
**For Requests 263443 & 263444 From WR To Ameren**  
**During The Period From January 1, 2002 To January 1, 2003**

PREVIOUS OR THIS RESERVATION		THIS RESERVATION		PREVIOUS OR THIS RESERVATION		CALCULATED		POSSIBLE (1)		SCHEDULED (2)
NETWORK ELEMENT	TRANS. OWNER	ATC (MW)	ATC (MODEL)	DATE UPGRADE NEEDED (M/D/Y)	ENG. & CONST. LEAD TIME (MONTH)	DATE AVAIL-ABLE (M/D/Y)	DELAY (MONTH )	DATE AVAIL-ABLE (M/D/Y)	DELAY (MONTH )	DATE AVAILABLE (M/D/Y)
This Request 263443 + 263444, SPP-2001-227-2, with a contract date of 12/1/2001.										
West Junction City (East) To West Junction City 115kV: Trans Op Dir 402 applicable.	WR	100	01WP							N/A
Golden Plains Junction to Hesston 69kV: Local Area Problem.	WR	100	02G							N/A
Craig Junction To Timberlane 115KV: Alternative upgrade to be completed before 02SP.	WR	100	02SP							N/A
43RD & Lorraine To Hutchinson Energy Center 69KV: Trans Op Dir 1205 applicable.	WR	100	02SP							N/A
Gill Energy Center East To Oatville 69KV: Trans Op Dir 620.	WR	26	02SP							N/A
Minimum 6/1 – 10/1:		100								

Note: (1) When the projected completion of Network Upgrades is 1) between June 1 and September 15, or 2) between September 15 and 4.5 months thereafter, then 4.5 months are added as these facilities will not be taken out of service during the summer peaking period. Therefore, the possible end of construction is February 1 or later of the next year.

(2) The scheduled date is based on when continuous annual service may be started after the possible in-service date. If N/A, then the facility upgrade/addition is not required, due to its lead time for engineering and construction, as 1) continuous annual service above the ATC limit may be provided only after the requested reservation period, or 2) the facility is not required at a later time within the reservation period due to reduced loading of the facility below its emergency rating.

**Table 6**  
**Network Elements Assigned To Previous Requests For Transmission Service**  
**That Limit The ATC To Less Than That Requested**  
**Due To Engineering And Construction Schedules**  
**For Requests 263443 & 263444 From WR To Ameren**  
**During The Period From January 1, 2002 To January 1, 2003**

PREVIOUSLY ASSIGNED NETWORK UPGRADE	PREVIOUS REQUEST (NO.)	DATE IN SERVICE (M/D/Y)	ATC (MW)	ATC MODEL	RESTRICTED OPERATING PERIOD (M/D - M/D) (YEAR)

ATC Models

Example Season Designation: From Date – To Date (M/D/Y), Season Description

02AP: 4/1/02 – 6/1/02, Spring Minimum

02FA: 10/1/02 – 12/1/02, Fall Peak

02G: 4/1/02 – 6/1/02, Spring Peak

02WP: 12/1/02 – 4/1/03, Winter Peak

02SP: 6/1/02 – 10/1/02, Summer Peak

**Table 7  
Network Elements Assigned To This Transmission Service Request  
That Limit The ATC To Less Than That Requested  
Due To Engineering And Construction Schedules  
For Requests 263443 & 263444 From WR To Ameren  
During The Period From January 1, 2002 To January 1, 2003**

NETWORK UPGRADE	DATE IN SERVICE (M/D/Y)	ATC (MW)	ATC MODEL	RESTRICTED OPERATING PERIOD (M/D - M/D) (YEAR)
Hoyt HTI Switching Junction to Circleville 115kV: Replace 82 structures.	6/1/02	100 (1)	02G	<u>4/1 - 6/1</u> 2002
“	“	100	02SP	<u>6/1 - 10/1</u> 2002
“	“	100	02WP	<u>10/1 - 12/31</u> 2002

Note: Date In Service is based on items received by December 1, 2001 including 1) a signed Service Agreement and Letter of Credit received by SPP, and 2) authorization to proceed with engineering and construction received by Transmission Owners from SPP.

(1) For this level of ATC, Transmission Service allocated to SPP OASIS reservations 260470 and 260471 for WRGS may require curtailment on an as-needed and pre-contingency basis from 100MW to 25MW during the period from April 1 to June 1, 2002 pursuant to Impact Study SPP-2001-227b dated November 14, 2001. Otherwise, there is only 12MW of ATC.

ATC Models

Example Season Designation: From Date – To Date (M/D/Y), Season Description

02AP: 4/1/02 – 6/1/02, Spring Minimum

02FA: 10/1/02 – 12/1/02, Fall Peak

02G: 4/1/02 – 6/1/02, Spring Peak

02WP: 12/1/02 – 4/1/03, Winter Peak

02SP: 6/1/02 – 10/1/02, Summer Peak



**Table 8**  
**Summary Of Available Transfer Capability**  
**With All Network Upgrades Assigned To This And Previous Reservations**  
**For Requests 263443 & 263444 From WR To Ameren**  
**During The Period From January 1, 2002 To January 1, 2003**

OPERATING PERIOD (YEAR)	OPERATING PERIOD (M/D - M/D)	ATC (MW)
2002	1/1 – 4/1	100
2002	4/1 – 6/1	100 (1)
2002	6/1 – 10/1	100
2002	10/1 – 12/1	100
2002	12/1 – 12/31	100
2002	1/1 – 12/31	100

Note: Values of ATC are based a signed Service Agreement received by December 1, 2001. Annual ATC allocated to the Transmission Customer is determined by the least amount of seasonal ATC on an annual basis.

(1) For this level of ATC, Transmission Service allocated to SPP OASIS reservations 260470 and 260471 for WRGS may require curtailment on an as-needed and pre-contingency basis from 100MW to 25MW during the period from April 1 to June 1, 2002 pursuant to Impact Study SPP-2001-227b dated November 14, 2001. Otherwise, there is only 12MW of ATC.

**Table 9**  
**Summary Of Available Transfer Capability With All Network Upgrades**  
**And The Estimate Of Base Rate Transmission Service Charges Only,**  
**Excluding The Cost Of Network Upgrades,**  
**For Requests 263443 & 263444 From WR To Ameren**  
**During The Period From January 1, 2002 To January 1, 2003**

OPERATING PERIOD (MONTH)	2001 ATC (MW)	2001 BASE RATE REVENUES (\$)	2002 ATC (MW)	2002 BASE RATE REVENUES (\$)	2003 ATC (MW)	2003 BASE RATE REVENUES (\$)	2004 ATC (MW)	2004 BASE RATE REVENUES (\$)
January	N/A	0	100	69,000	N/A	0	N/A	0
February	N/A	0	100	69,000	N/A	0	N/A	0
March	N/A	0	100	69,000	N/A	0	N/A	0
April	N/A	0	100	69,000	N/A	0	N/A	0
May	N/A	0	100	69,000	N/A	0	N/A	0
June	N/A	0	100	69,000	N/A	0	N/A	0
July	N/A	0	100	69,000	N/A	0	N/A	0
August	N/A	0	100	69,000	N/A	0	N/A	0
September	N/A	0	100	69,000	N/A	0	N/A	0
October	N/A	0	100	69,000	N/A	0	N/A	0
November	N/A	0	100	69,000	N/A	0	N/A	0
December	N/A	0	100	69,000	N/A	0	N/A	0
<b>SUBTOTAL BY YEAR</b>		\$0		\$828,000		\$0		\$0
<b>TOTAL FOR ALL YEARS</b>	\$828,000							

Note: Values of ATC are based a signed Service Agreement received by December 1, 2001. Annual ATC allocated to the Transmission Customer is determined by the least amount of seasonal ATC on an annual basis.

**Table 10**  
**Summary Of Available Transfer Capability With All Network Upgrades**  
**And The Estimate Of Network Upgrade Revenue Requirements Only**  
**For Requests 263443 & 263444 From WR To Ameren**  
**During The Period From January 1, 2002 To January 1, 2003**

OPERATING PERIOD (Month)	2001 ATC (MW)	2001 NETWORK UPGRADE REVENUES (\$)	2002 ATC (MW)	2002 NETWORK UPGRADE REVENUES (\$)	2003 ATC (MW)	2003 NETWORK UPGRADE REVENUES (\$)	2004 ATC (MW)	2004 NETWORK UPGRADE REVENUES (\$)
January	N/A	0	100	64,676	N/A	0	N/A	0
February	N/A	0	100	64,676	N/A	0	N/A	0
March	N/A	0	100	64,676	N/A	0	N/A	0
April	N/A	0	100	64,676	N/A	0	N/A	0
May	N/A	0	100	64,676	N/A	0	N/A	0
June	N/A	0	100	64,676	N/A	0	N/A	0
July	N/A	0	100	64,676	N/A	0	N/A	0
August	N/A	0	100	64,676	N/A	0	N/A	0
September	N/A	0	100	64,676	N/A	0	N/A	0
October	N/A	0	100	64,676	N/A	0	N/A	0
November	N/A	0	100	64,676	N/A	0	N/A	0
December	N/A	0	100	64,676	N/A	0	N/A	0
<b>SUBTOTAL BY YEAR</b>		\$0		\$776,112		\$0		\$0
<b>TOTAL FOR ALL YEARS</b>	\$776,112							

Note: Values of ATC are based a signed Service Agreement received by December 1, 2001. Annual ATC allocated to the Transmission Customer is determined by the least amount of seasonal ATC on an annual basis.

**Table 11**

**Identified Third-Party Network Upgrades & Required In-Service Dates  
To Accommodate This Request For Transmission Service  
For Requests 263443 & 263444 From WR To Ameren  
During The Period From January 1, 2002 To January 1, 2003**

IDENTIFIED THIRD-PARTY NETWORK UPGRADE	DATE NEEDED (M/D/Y)
None	