Southwest Pool

System Facilities Study

Firm Point-To-Point Transmission Service Request 274980

Empire District Electric

From American Electric Power West To Empire District Electric

In The Requested Amount Of 100MW With 100MW Allocated

From June 1, 2003
To June 1, 2013

With Deferral To The Period From March 1, 2006 To March 1, 2016

SPP Coordinated Planning #SPP-2001-244-1 Created July 14, 2003

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Executive Summary

At the request of Empire District Electric (Transmission Customer), the Southwest Power Pool (Transmission Provider) developed this Facilities Study to summarize the operating limits and to determine the financial characteristics associated with Transmission Service Request 274980 This request is for 100MW of Firm Point-To-Point Transmission Service from American Electric Power West (AEPW) to Empire District Electric (EDE). The requested term of this Transmission Service is 10 years from June 1, 2003 to June 1, 2013.

To complete the request for Transmission Service, the Transmission Provider 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, in the amount of \$27,485,000, associated with the engineering and construction of assigned Network Upgrades excluding pre-payment requirements. The Transmission Customer must also confirm this request on the Transmission Provider's OASIS pursuant to the results of this Facilities Study.

Annual available transfer capability (ATC) allocated to the Transmission Customer is determined by the least amount of seasonal ATC within each year of a reservation period. For the development of this study, a contract date of September 1, 2003 was assumed. Allocated ATC and associated revenue requirements are based on this request being complete by this date. In the event that the Transmission Provider does not receive an executed Service Agreement and letter of credit by this date, 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. The minimum ATC during the 2003 summer peak, from June 1 to October 1, is 0MW. The ATC does not increase during the term of service as summarized in Table 8.

The ATC listed in <u>Table 8</u> 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, the Deferral of Service as provided for in section 15.5 of the Transmission Provider's Open Access Transmission Tariff (OATT) was deemed applicable to this request for Transmission Service. The period in which 10.0 years of requested Transmission Service may be provided at or near the capacity level requested is from March 1, 2006 to March 1, 2016.

Network Upgrades will be required on the AEPW, Grand River Dam Authority (GRRD), OG+E Electric Services (OKGE), Southwestern Power Administration (SWPA) and Western Farmers Electric Cooperative (WFEC) transmission systems. The engineering and construction cost estimates for assignable Network Upgrades total \$29,627,500 excluding expedited upgrades. The sum of engineering and construction cost estimates for expedited (non-assignable) Network Upgrades is \$0. Interest and other indirect expenses associated with expedited Network Upgrades are assigned and included in the total estimated cost.

As the requested reservation period includes the entire planning horizon, all constraints have been identified in the corresponding impact study. Therefore, there are no identified limits regarding the rollover rights of the Transmission Customer.

A Transmission Owner may require that a Transmission Customer pre-pay for all assignable Network Upgrades which it designs and constructs. These pre-payments are in the amount of the Transmission Owner's estimated engineering and construction costs. Pre-payments will be required prior to the scheduled in-service dates. However, levelized amortization and interest credits associated with these pre-payments are included in the monthly revenue requirements of the Transmission Customer. The Southwestern Power Administration is the only Transmission Owner that requires these pre-payments.

The estimated levelized revenue requirements for providing the necessary Network Upgrades to accommodate the Transmission Service request are \$51,549,000 excluding pre-payments. Pre-payment costs are \$2,142,500 for estimated engineering and

construction expenses. Therefore, the total estimate for assignable Network Upgrades is \$53,691,500. The average rate based on this total estimated cost of Network Upgrades, including the expediting of pre-planned Network Upgrades, is \$4,475/MW-Month over the entire term. Excluding the engineering and construction costs of upgrades being expedited and by accounting for only interest and other indirect costs over the term of Transmission Service, the average indirect cost multiplier is 1.8122 over the entire term.

The projected base rate transmission service charges (excluding charges for ancillary services) are \$15,382,560 during the reservation period based on the 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 total estimated revenue requirements for providing the necessary Network Upgrades to accommodate the Transmission Service request are \$53,691,500. As the estimated base rate transmission service charges are less than the total estimated revenue requirements for Network Upgrades, the Transmission Customer shall pay the revenue requirements associated with the Network Upgrades.

The revenue requirements for generation re-dispatching are listed in <u>Table 11</u>. These requirements are only to accommodate the construction of Network Upgrades. The total estimated revenue requirements of the Transmission Customer on a monthly basis are listed in <u>Table 12</u>. A list of the average annual Transmission Service costs is in <u>Table 13</u>. A summary of all costs is included in <u>Table 16</u>. The total estimated cost is \$53,691,500. The average rate based on this total estimated cost is \$4,475/MW-Month over the entire term.

If a completed Service Agreement is received by the Transmission Provider on or before September 1, 2003, Firm Point-To-Point Transmission Service may be provided on approximately March 1, 2006 given no unexpected delays in design, permitting, and construction. The upgrade of constraints identified in the corresponding Impact Study

may not be completed until after the start-date of the requested Transmission Service due to lead times for engineering & construction.

The Transmission Provider must receive an unconditional and irrevocable letter of credit, in the amount of \$27,485,000, before the Transmission Owners incur initial engineering and construction costs. This amount is for all assignable Network Upgrades less prepayment requirements. The amount of the letter of credit will be adjusted on an annual basis to reflect amortization of these costs. <u>Table 14</u> includes the required annual amounts. 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 this allocated capacity.

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, third-party facilities were identified. Not all third-party facilities were monitored during the development of the corresponding Impact Study. Therefore, additional third-party facility upgrades may be required to accommodate the requested Transmission Service.

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.

A corresponding Impact Study was completed that identified limitations and required modifications of the Transmission Provider system necessary to provide the specified Transmission Service. The Network Upgrades that were not assigned to a previous request and are required to provide the specified Transmission Service are listed in <u>Table</u> 1. 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 <u>Table 7</u>.

All Network Upgrades assigned to previous Transmission Service requests that have not yet 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 inservice date to accommodate this request for Transmission Service.

Network Upgrades that were previously assigned and will require only accelerated inservice dates to accommodate the specified Transmission Service are listed in <u>Table 2</u>. Network Upgrades that were previously assigned and will require only additional capacity to accommodate the specified Transmission Service are listed in <u>Table 3</u>. Network Upgrades that were previously assigned and will require both additional capacity and accelerated in-service dates to accommodate the specified Transmission Service are listed in <u>Table 4</u>. 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 <u>Table 6</u>.

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. These facilities are listed in <u>Table 5</u>. This table also includes overloaded facilities in the current planning horizon that limit the rollover rights of the Transmission Customer.

Given the estimated dates when Network Upgrades will be required for the specified Transmission Service to be provided, there are facility limits that may either delay the start date of the service or limit the ATC to less than that requested. Transfer-limiting facilities are listed in <u>Tables 6</u> and <u>7</u>. Seasonal and annual transfer limits given engineering and construction lead times are also listed in these tables. A summary of ATC throughout the reservation period is included in <u>Table 8</u>.

The Transmission Provider does not accept requests for firm Transmission Service without restrictions if the design criteria specified in the corresponding Impact Study are not met. However, the Transmission Provider may accept a request with either or both of the following: 1) a reduction of provided capacity to designated levels within the specified time frames, and 2) a deferral of service, as listed in <u>Table 8</u>. The Transmission Provider accepts this request for Transmission Service given this allocation of capacity of which is equal to that requested beginning March 2006. Thereafter, the specified capacity throughout the remainder of the reservation period through February 2016 is available to accommodate the Transmission Service deferred to the period from March 2006 to March 2016.

<u>Tables 6</u> through <u>10</u>, <u>12</u> and <u>13</u> include lists of capacity of which may be less than that requested through the reservation period. <u>Table 9</u> includes the ATC and the estimate of base rate transmission service charges. The ATC and the estimate of levelized revenue requirements plus any pre-payments for Network Upgrade are provided in <u>Table 10</u>. The Transmission Customer shall pay the higher of the base rate transmission service charges or the revenue requirements for the Network Upgrades.

Third-Party Facilities

For third-party facilities listed in <u>Table 15</u>, the Transmission Customer is responsible for obtaining arrangements for the necessary upgrades of the facilities per Section 21.1 of the Transmission Provider's OATT. If requested, the Transmission Provider 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 modeled facilities within the Transmission Provider system 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 the Transmission Provider who have not placed their facilities under the Transmission Provider's OATT.

Financial Methodology

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 facilities are upgraded throughout the reservation period, the Transmission Customer shall 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 usable 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 1) amortized engineering and construction costs associated with the new facilities, 2) annual carrying charges, excluding depreciation, based on the product of a) applicable gross and net engineering and construction costs associated with the new facilities, and b) 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 a) applicable gross and net book values associated with all replaced usable facilities, and salvage value of non-usable, and b) annual fixed charge rate (per-unit). 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.

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 though 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 though 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 though the reservation period of the new request.

A Transmission Owner may require that a Transmission Customer pre-pay for all assignable Network Upgrades which it designs and constructs. These pre-payments are the Transmission Owner's estimated engineering and construction costs. Pre-payments will be required prior to the scheduled in-service dates. However, amortization and associated interest reductions are made to the total monthly revenue requirements of the Transmission Customer due to all pre-payment requirements. Pre-payment dates and costs are listed in <u>Tables 1</u> through <u>4</u>.

The Southwestern Power Administration is the only Transmission Owner that requires these pre-payments. In the event that a previously assigned Network Upgrade is expedited, then the Transmission Customer requiring the expediting will make the pre-payment prior to the new in-service date. When the Transmission Customer with the earlier reservation, which the Network Upgrade was previously assigned to, submits it's pre-payment, the Transmission Provider will immediately reimburse the Transmission Customer requiring the expediting in the amount of the pre-payment. Refund dates are listed in Tables 2 and 4.

Financial Analysis

The zone interfaced to the sink with the lowest zonal rate for Firm Point-To-Point Transmission Service is Empire District Electric (EDE). The current zonal rate of EDE is \$1,281.88/MW-Month. <u>Table 10</u> includes a summary of ATC values with all assigned Network Upgrades energized by the Date In Service specified in <u>Tables 6</u> and <u>7</u>. 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 <u>Table 9</u>. The base rate transmission service charges for the Transmission Service are estimated to be \$15,382,560.

The estimate of total revenue requirements for the required Network Upgrades throughout the reservation period is determined on a levelized basis. A Transmission Owner may require that a Transmission Customer pre-pay for all assignable Network Upgrades which it designs and constructs in the amount of estimated engineering and construction costs. When a pre-payment is required, the estimate of total monthly revenue requirements is reduced by a credit including amortization and associated interest. Pre-payment dates and costs are listed in <u>Tables 1</u> through <u>4</u> with a total cost of \$2,142,500.

The sum of the estimated monthly revenue requirements listed in <u>Table 10</u> for the required Network Upgrades throughout the reservation period is \$53,691,500. These monthly revenue requirements include pre-payment requirements for a Transmission

Owner's engineering and construction costs. The estimated revenue requirements for the required Network Upgrades are greater than the projected base rate transmission service charges over the specified reservation period. Therefore, the Transmission Customer will be responsible for the revenue requirements associated with the Network Upgrades of which are estimated to be \$53,691,500 throughout the reservation period.

The revenue requirements for generation re-dispatching are listed in <u>Table 11</u>. These requirements are only to accommodate the construction of Network Upgrades. The total estimated revenue requirements of the Transmission Customer on a monthly basis are listed in <u>Table 12</u>. A list of the average annual Transmission Service costs is in <u>Table 13</u>. A summary of all costs is included in <u>Table 16</u>.

The Transmission Provider and the affected Transmission Owners shall use due diligence to add necessary facilities or upgrade the Transmission System to provide the requested Transmission Service, provided the Transmission Customer agrees to compensate the Transmission Provider for such costs pursuant to the terms of Section 27 of the Open Access Transmission Tariff. Partial Interim Service is available per Section 19.7 of the Open Access Transmission Tariff.

Engineering and construction of all new facilities and modifications will not start until after an executed Service Agreement has been received by the Transmission Provider and the affected Transmission Owners receive the appropriate authorization to proceed from the Transmission Provider. In accordance with section 19.4 of the Open Access Transmission Tariff, the Transmission Customer shall provide an unconditional and irrevocable letter of credit to the Transmission Provider in the amount of no less than \$27,485,000 for the initial engineering and construction costs to be incurred by the Transmission Owners. This amount is for all assignable Network Upgrades less prepayment requirements. The Transmission Customer shall also maintain a letter of credit in effect during the term of the Transmission Service Agreement. The amount of the letter of credit will be adjusted on an annual basis to reflect amortization of these costs. <u>Table</u>

<u>14</u> includes the required annual amounts. 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 corresponding Impact Study, 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 when the Transmission Provider notifies the Transmission Owners to proceed with the necessary projects.

Based on the results of the corresponding Impact Study, Network Upgrades that were identified as required to provide the requested Transmission Service are listed in <u>Tables 1</u> through <u>4</u>. <u>Table 1</u> includes the Network Upgrades and costs assigned to the Transmission Customer to accommodate its Transmission Service Request. <u>Table 2</u> includes previously assigned Network Upgrades requiring only accelerated in-service dates. <u>Table 3</u> includes previously assigned Network Upgrades requiring only additional capacity to accommodate this request. <u>Table 4</u> includes previously assigned Network Upgrades requiring both additional capacity and accelerated in-service dates to accommodate this request.

Throughout the reservation period of the specified Transmission Service, the estimate of the levelized revenue requirements for the required Network Upgrades is \$53,691,500 for Transmission Service Request 274980. 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 <u>Table 10</u>. The base rate transmission service charges are estimated to be \$15,382,560 and the monthly revenue requirements are listed in Table 9. As the base rate transmission service

charges are less than the revenue requirements for the required Network Upgrades, the revenue requirements from the Transmission Customer are for those associated with the Network Upgrades. The total estimated revenue requirement is listed in <u>Table 12</u> in the amount of \$53,691,500.

To complete the request for Transmission Service, the Transmission Provider 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 associated with the engineering and construction of assigned Network Upgrades. The Transmission Customer must also confirm this request on the Transmission Provider's OASIS pursuant to the results of this Facilities Study. Upon receipt of these items and confirmation by the Transmission Customer, the Transmission Provider 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 Assigned Network Upgrades

Assigned Network Opgrades											
Facility	Transmission	Engineering &	Eng. & Const.	Const. Only	Date	Scheduled Date	Pre-Payment				
& Network Upgrade	Owner	Construction	Lead Time	Lead Time	Needed	In Service	Date				
		Costs (\$)	(Months)	(Months)	(M/D/Y)	(M/D/Y)	(M/D/Y)				
Flint Creek - East Centerton 345kV: Add 345kV terminal at											
	AEPW	1,000,000	30.0	24.0	6/1/2003	3/1/2006					
Flint Creek - East Centerton 345kV: Add 20 miles of 345 kV		, ,									
line.	AEPW	15,200,000	30.0	24 0	6/1/2003	3/1/2006					
East Centerton 345/161kV Transformer: Add 345/161kV		10,200,000	30.0	2.110	0/1/2000	0,1,2000					
	AEPW	4,000,000	30.0	24.0	6/1/2003	3/1/2006					
	ALFVV	4,000,000	30.0	24.0	0/1/2003	3/1/2000					
BEAVER - EUREKA SPRINGS 161KV: Replace Wavetrap	\	4E 000	0.0	0.0	2/4/2000	2/4/2000					
<u> </u>	AEPW	45,000	9.0	0.0	3/1/2006	3/1/2006					
EAST CENTRAL HENRYETTA - OKMULGEE 138KV:	A = 5\A/	40.000			40/4/000	0/4/0000					
Replace Okmulgee Wavetrap	AEPW	40,000	9.0	1.0	12/1/2004	3/1/2006					
EUREKA SPRINGS - OSAGE 161KV: Rebuild 5.34 miles of											
666 ACSR with 1590 ACSR. Replace wavetrap jumpers @											
1 0	AEPW	2,400,000	20.0	9.0	6/1/2006	6/1/2006					
BEAVER - EUREKA SPRINGS 161KV: Reconductor 1.25											
miles of 795 ACSR with 1590 ACSR.	AEPW	470,000	12.0	4.0	6/1/2008	6/1/2008					
Subtotal for AEPW		23,155,000									
CLAREMORE 161/69KV TRANSFORMER CKT 1: Add 3rd											
161/69 KV Transformer	GRRD	1,250,000	18.0	5.0	6/1/2003	6/1/2006					
Subtotal for GRRD	OININD	, ,	10.0	3.0	0/1/2003	0/1/2000					
Subtotal for GKKD		1,250,000									
TRIPEO PEONI OREEK (OMOVI)											
5 TRIBES - PECAN CREEK 161KV: Increase CTR (if relays		5 666	400		0/4/0000	0/4/0000					
will coordinate) at Five Tribes sub.	OKGE	5,000	12.0	0.0	6/1/2006	6/1/2006					
PECAN CREEK 345/161KV TRANSFORMER: Add 2nd											
345/161 kV 369MVA transformer.	OKGE	3,000,000		0.0	6/1/2004	6/1/2006					
Subtotal for OKGE		3,005,000									
				_	_						
	ı	1	I			l .					

Note: Pre-payment dates are only specified when applicable.

Table 1 (Continued)

Assigned Network Upgrades

		work epgrac					
Facility	Transmission	Engineering &	Eng. & Const.	Const. Only	Date	Scheduled Date	Pre-Payment
& Network Upgrade	Owner	Construction	Lead Time	Lead Time	Needed	In Service	Date
		Costs (\$)	(Months)	(Months)	(M/D/Y)	(M/D/Y)	(M/D/Y)
BEAVER - EUREKA SPRINGS 161KV: Reconnect CT's to							
1000:5 Tap on Bkrs 42, 32, & half or 22. Replace metering							
& reset relays for Line 2 & Line 3.	SWPA	22,500	8.0	0.0	3/1/2006	3/1/2006	7/1/2005
PHAROAH - WELEETKA 138KV: Replace metering CT's at		22,000	0.0	0.0	0/1/2000	0,1,2000	17172000
Weleetka.	SWPA	60,000	12.0	0.0	6/1/2007	6/1/2007	10/1/2006
BEAVER - EUREKA SPRINGS 161KV: Reconductor 6	SWEA	00,000	12.0	0.0	0/1/2007	0/1/2007	10/1/2000
miles of 795 ACSR with 1590 ACSR and conduct	014/54				0/4/0000	0/4/0000	4044000
Environmental Impact Study.	SWPA	1,860,000	18.0	0.0	6/1/2008	6/1/2008	10/1/2007
CLAY - SPRINGFIELD 161KV: Replace disconnect							
switches at Springfield.	SWPA	200,000	12.0	0.0	12/1/2009	12/1/2009	4/1/2009
Subtotal for SWPA		2,142,500					
PHAROAH - WELEETKA 138KV: Replace wavetrap at							
Weleetka and replace jumpers.	WFEC	75,000	4.0	2.0	6/1/2007	6/1/2007	
Subtotal for WFEC	WILO	75,000	4.0	2.0	0/1/2007	0/1/2007	
Subtotal for WFEC		75,000					
Total		29,627,500					

Note: Pre-payment dates are only specified when applicable.

Table 2
Previously Assigned Network Upgrades
Requiring Only Accelerated In-Service Dates

Facility, Previously Assigned Network Upgrade, & Transmission Owner	Previous Request (No.)	Engineering & Construction Cost (\$)	Eng. & Const. Lead Time (Months)		Previous Date In Service (M/D/Y)	Scheduled Date In Service (M/D/Y)	Pre-Payment Date (M/D/Y)	Refund Date (M/D/Y)
None.								
Total		\$0						

Note: Pre-payment and refund dates are only specified when applicable.

Pre-payments and refunds, if applicable, are in the amount of the engineering and construction cost.

Table 3
Previously Assigned Network Upgrades
Requiring Only Additional Capacity

Facility,	New	Previous	Previous	New	Assigned	Eng. &	Const.	New	Previously	Pre-
Previously Assigned	Network Upgrade	Request	Eng. & Const.	Eng. &	Eng. &	Const. Lead	Only Lead	Date	Scheduled Date	Payment
Network Upgrade,		(No.)	Costs (\$)	Const. Costs	Const. Costs	Time	Time	Needed	In Service	Date
& Transmission Owner				(\$)	(\$)	(Months)	(Months)	(M/D/Y)	(M/D/Y)	(M/D/Y)
None.										
Total			\$0	\$0	\$0					

Note: Pre-payment dates are only specified when applicable.

Assignable and pre-payment amounts are only the difference of the previous and new cost estimates for engineering and construction.

Table 4
Previously Assigned Network Upgrades
Requiring Both Accelerated In-Service Dates And Additional Capacity

Facility,	New	Previous	Previous	New	Assigned	Eng. &	Const.	New	Previous	New	Pre-	Refund
Previously Assigned	Network Upgrade	Request	Eng. &	Eng. &	Eng. &	Const. Lead	Only Lead	Date	Date In	Scheduled Date	Payment	Date
Network Upgrade,		(No.)	Const. Cost	Const. Cost	Const. Cost	Time	Time	Needed	Service	In Service	Date	(M/D/Y)
& Trans. Owner			(\$)	(\$)	(\$)	(Month)	(Month)	(M/D/Y)	(M/D/Y)	(M/D/Y)	(M/D/Y)	
None												
Total			\$0	\$0	\$0							

Note: Pre-payment and refund dates are only specified when applicable.

Pre-payment amounts, if applicable at the pre-payment date, are the new cost estimates for engineering and construction.

Assignable amounts are only the difference of the previous and new cost estimates for engineering and construction.

Refundable amounts, if applicable at the refund date, are the previous engineering and construction costs.

Table 5
Facilities Requiring No Upgrades Or Limiting Rollover Rights

Facility	Transmission Owner	Reason For No Upgrade	Reservation Rollover Limit In Planning Horizon Where Applicable (M/D/Y)
CHAMBER SPRINGS -	Λ.Ε.D.\Λ/	Delieued on immediate and by coloated unique	
	AEPW	Relieved or impact removed by selected upgrades.	
CHAMBER SPRINGS - FLINT CREEK 161KV	AEPW	Relieved or impact removed by selected upgrades.	
CHAMBER SPRINGS - TONTITOWN 161KV	AEPW	Relieved or impact removed by selected upgrades.	
DYESS - EAST ROGERS 161KV	AEPW	Lowell portion of the Tontitown project, scheduled for completion 6/1/04, eliminates overload.	
DYESS - SPRINGDALE 69KV	AEPW	Lowell portion of the Tontitown project, scheduled for completion 6/1/04, eliminates overload.	
EAST CENTERTON - GENTRY REC 161KV	AEPW	Relieved or impact removed by selected upgrades.	
ELM SPRINGS REC - TONTITOWN 161KV	AEPW	Relieved or impact removed by selected upgrades.	
FARMINGTON AECC - SOUTH FAYETTEVILLE 161KV	AEPW	Relieved or impact removed by selected upgrades.	
FLINT CREEK - GENTRY REC 161KV	AEPW	Relieved or impact removed by selected upgrades.	
FLINT CREEK - TONTITOWN 161KV	AEPW	Relieved or impact removed by selected upgrades.	
WELEETKA - WELEETKA 138KV	AEPW	Relieved or impact removed by selected upgrades.	
CLAREMORE 161/69KV TRANSFORMER CKT 2	GRRD	Upgrade to eliminate overload of CKT 1 also eliminates overload of CKT 2.	
BROOKLINE - SPRINGFIELD 161KV	SPRM	Relieved or impact removed by selected upgrades.	
SOUTHWEST - SOUTHWEST DISPOSAL 161KV	SPRM	Relieved or impact removed by selected upgrades.	
BROOKLINE - SPRINGFIELD 161KV	SWPA	Relieved or impact removed by selected upgrades.	
WELEETKA - WELEETKA 138KV	SWPA	Relieved or impact removed by selected upgrades.	

Table 5 (Continued)

Facilities Requiring No Upgrades Or Limiting Rollover Rights

Facility	Transmission Owner	Reason For No Upgrade	Reservation Rollover Limit In Planning Horizon Where Applicable (M/D/Y)
EXPLORER OKMULGEE - RIVERSIDE STATION 138KV	AEPW	Ratings were updated.	
50MAHA - SUB 312 - POWERSITE 161KV	EMDE	Contingency modeled is not applicable.	
SUB 438 - RIVERSIDE - TABLE ROCK 161KV	EMDE	Contingency modeled is not applicable.	
412SUB - KANSAS TAP 161KV	GRRD	Chouteau Maid Operating Procedure Applied	
412SUB - KERR 161KV	GRRD	Chouteau Maid Operating Procedure Applied	
AFTON 161/69KV TRANSFORMER	GRRD	Given loading during deferral period with other upgrades, an upgrade is not required.	
PHAROAH - WELEETKA 138KV	GRRD	No upgrade required.	
2SILDOL - TABLE ROCK 69KV	SWPA	No upgrade required.	
SUB 438 - RIVERSIDE - TABLE ROCK 161KV	SWPA	No upgrade required.	
EAST CENTRAL HENRYETTA - WELEETKA 138KV	AEPW	Given loading during deferral period with other upgrades, an upgrade is not required.	

Table 6 Facilities That Limit Transmission Service And Have Network Upgrades Assigned To Previous Reservations

		Previous	Reservations					This Reservation			
					Possib	ole (1)	Scheduled				
Reservation / Study (No.)	Facility & Network Upgrade, Plus Summary Of Restricted Operating Period	Trans. Owner	Eng. & Const. Lead (Month)	Const. Only Lead (Month)	Date Available (M/D/Y)	Delay (Month)	In Service (2) (M/D/Y)	ATC (MW)	Impact Study (Model)	Upgrade Needed (M/D/Y)	Changes Required (3)
	None										

- Note: (1) Some existing facilities may not be taken out of service during the summer peaking period. When a facility may not be taken out of service and the projected completion of a Network Upgrade is between either 1) June 1 and September 15, or 2) September 15 and the date when construction ends given construction starts September 15, then the construction time is added to September 15. However, the Possible Date Available is limited to June 1 of the following year. Delay is the difference of the Possible Date Available and the Upgrade Needed date for the previous reservation.
 - (2) The Scheduled In Service date is based on when continuous annual service may be started that is on or after the Possible Date Available. If N/A, then the facility upgrade/addition is not required, due to its lead time for engineering and construction, as a) continuous annual service above the ATC limit may be provided only after the requested reservation period, or b) the facility is not required at a later time within the reservation period due to reduced loading of the facility below its emergency rating. The Scheduled In Service date may be later than the Possible Date Available when either a) another facility with a lower value of associated ATC has a longer Engineering & Construction Lead time, or b) the start of the season, in which the Network Upgrade is required, is later than the Possible Date Available.
 - (3) Changes Required may include expediting the previously assigned Network Upgrade to an earlier Scheduled In Service date and providing additional capacity. The Scheduled In Service date is based on items received by an assumed date as documented in this study including a) a signed Service Agreement and letter of credit received by the Transmission Provider, and b) authorization to proceed with engineering and construction received by the Transmission Owners from the Transmission Provider.

<u>Impact Study Models</u> 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
Facilities That Limit Transmission Service
And Have Network Upgrades Assigned To This Reservation

			10		o imp iteser		Possibl	le (1)	Scheduled
Facility & Network Upgrade,			Impact	Upgrade	Eng. &	Const.	Date		In Service
Plus Summary Of	Trans.	ATC	Study	Needed	Const. Lead	Lead Only	Available	Delay	(2)
Restricted Operating Period	Owner	(MW)	(Model)	(M/D/Y)	(Month)	(Month)	(M/D/Y)	(Month)	(M/D/Y)
East Centerton 345/161kV Transformer:									
Add 345/161kV 600/660MVA auto									
transformer.	AEPW			6/1/2003	30.0	24.0	3/2/2006	33.0	3/1/2006
Flint Creek - East Centerton 345kV: Add									
20 miles of 345 kV line.	AEPW			6/1/2003	30.0	24.0	3/2/2006	33.0	3/1/2006
Flint Creek - East Centerton 345kV: Add									
345kV terminal at Flint Creek.	AEPW			6/1/2003	30.0	24.0	3/2/2006	33.0	3/1/2006
CHAMBER SPRINGS - TONTITOWN									
161KV: AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 12 miles with 2156MCM ACSR,									
replacing Chamber Springs wavetrap &									
reset relays.	AEPW	0	03SP	6/1/2003	24.0	12.0	6/1/2006	36.0	
CLAREMORE 161/69KV									
TRANSFORMER CKT 1: Add 3rd 161/69									
KV Transformer	GRRD	0	03SP	6/1/2003	18.0	5.0	3/1/2005	21.0	6/1/2006
CLAREMORE 161/69KV									
TRANSFORMER CKT 2: None.	GRRD	0	03SP	6/1/2003					
DYESS - EAST ROGERS 161KV: None									
given AEP planned Tontitown Project.	AEPW	0	03SP	6/1/2003	. 1 ***	C '11'	.1 .1		1.1

- Note: (1) Some existing facilities may not be taken out of service during the summer peaking period. When a facility may not be taken out of service and the projected completion of a Network Upgrade is between either a) June 1 and September 15, or b) September 15 and the date when construction ends given construction starts September 15, then the construction time is added to September 15. However, the Possible Date Available is limited to June 1 of the following year. Delay is the difference of the Possible Date Available and the Upgrade Needed date for this reservation.
 - (2) The Scheduled In Service date is based on when continuous annual service may be started that is on or after the Possible Date Available. If N/A, then the facility upgrade/addition is not required, due to its lead time for engineering and construction, as a) continuous annual service above the ATC limit may be provided only after the requested reservation period, or b) the facility is not required at a later time within the reservation period due to reduced loading of the facility below its emergency rating. The Scheduled In Service date may be later than the Possible Date Available when either a) another facility with a lower value of associated ATC has a longer Engineering & Construction Lead time, or b) the start of the season, in which the Network Upgrade is required, is later than the Possible Date Available. The Scheduled In Service date is based on items received by an assumed date as documented in this study including a) a signed Service Agreement and letter of credit received by the Transmission Provider, and b) authorization to proceed with engineering and construction received by the Transmission Owners from the Transmission

Impact Study 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

			10	Ŭ			Possibl	le (1)	Scheduled
Facility & Network Upgrade,			Impact	Upgrade	Eng. &	Const.	Date		In Service
Plus Summary Of	Trans.	ATC	Study	Needed	Const. Lead	Lead Only	Available	Delay	(2)
Restricted Operating Period	Owner	(MW)	(Model)	(M/D/Y)	(Month)	(Month)	(M/D/Y)	(Month)	(M/D/Y)
DYESS - SPRINGDALE 69KV: Reset							12/1/		
relays @ Springdale.	AEPW	0	03SP	6/1/2003	3.0	1.0	2003	6.0	
EAST CENTERTON - GENTRY REC									
161KV:		0	03SP	6/1/2003					
ELM SPRINGS REC - TONTITOWN									
161KV:		0	03SP	6/1/2003					
FLINT CREEK - GENTRY REC 161KV:									
AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 1.09 miles of 2-397.5 ACSR									
with 2156 ACSR & replacing Flint Creek							1/14/		
wavetrap & jumpers	AEPW	0	03SP	6/1/2003	12.0	4.0	2005	19.5	
FLINT CREEK - TONTITOWN 161KV:									
AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 16.3 miles of 2-297 ACSR with									
2156 ACSR, replacing Flint Creek									
wavetrap & jumpers, & replacing Flint	. = 5\			0/4/0000			0/0/0000		
Creek switch # 1K75.	AEPW	0	03SP	6/1/2003	30.0	15.0	3/2/2006	33.0	
FLINT CREEK - GENTRY REC 161KV:		77	03SP	6/1/2003					
ELM SPRINGS REC - TONTITOWN									
161KV: AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 1.6 miles of 2-397 ACSR with							4/4.4/		
2156 ACSR & replacing Elm Springs	4 E D\4'	00	0000	0/4/0000	40.0	4.0	1/14/	40.5	
Switch and Strain Bus.	AEPW	86	03SP	6/1/2003	12.0	4.0	2005	19.5	

			18		o Tins Reser		Possib	le (1)	Scheduled
Facility & Network Upgrade,			Impact	Upgrade	Eng. &	Const.	Date		In Service
Plus Summary Of	Trans.	ATC	Study	Needed	Const. Lead	Lead Only	Available	Delay	(2)
Restricted Operating Period	Owner	(MW)	(Model)	(M/D/Y)	(Month)	(Month)	(M/D/Y)	(Month)	(M/D/Y)
EAST CENTERTON - GENTRY REC									
161KV: AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 19.16 miles of 2-397.5 ACSR									
with 2156 ACSR & replacing East									
Centerton Wavetrap & jumpers.	AEPW	93	03SP	6/1/2003	30.0	15.0	3/2/2006	33.0	
CHAMBER SPRINGS - FARMINGTON									
AECC 161KV: AEPW to add Flint Creek to									
East Centerton 345kV facilities that									
eliminates replacing Farmington switch									
8839, rebuild 10.24 miles with 2156									
ACSR, replace Chamber Springs									
wavetrap, & replace Farmington AECC	٨٢٥٨٨	0	0400	C/4/2004					
bus. CHAMBER SPRINGS - TONTITOWN	AEPW	0	04SP	6/1/2004					
161KV: AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 12 miles with 2156MCM ACSR,									
replacing Chamber Springs wavetrap &									
reset relays.	AEPW	0	04SP	6/1/2004	24.0	12.0	6/1/2006	24.0	
CLAREMORE 161/69KV	/\LI VV		0 101	0/ 1/2001	21.0	12.0	0/ 1/2000	21.0	
TRANSFORMER CKT 1: Add 3rd 161/69									
KV Transformer	GRRD	0	04SP	6/1/2004	18.0	5.0	3/1/2005	9.0	6/1/2006
CLAREMORE 161/69KV				0, 1, 200		0.0	0, 1, 200		0 = 0.0
TRANSFORMER CKT 2: None.	GRRD	0	04SP	6/1/2004					
EAST CENTERTON - GENTRY REC	-								
161KV: AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 19.16 miles of 2-397.5 ACSR									
with 2156 ACSR & replacing East									
Centerton Wavetrap & jumpers.	AEPW	0	04SP	6/1/2004	30.0	15.0	3/2/2006	21.0	

			10	J			Possibl	le (1)	Scheduled
Facility & Network Upgrade,			Impact	Upgrade	Eng. &	Const.	Date		In Service
Plus Summary Of	Trans.	ATC	Study	Needed	Const. Lead	Lead Only	Available	Delay	(2)
Restricted Operating Period	Owner	(MW)	(Model)	(M/D/Y)	(Month)	(Month)	(M/D/Y)	(Month)	(M/D/Y)
FLINT CREEK - GENTRY REC 161KV:									
AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 1.09 miles of 2-397.5 ACSR									
with 2156 ACSR & replacing Flint Creek							1/14/		
wavetrap & jumpers	AEPW	0	04SP	6/1/2004	12.0	4.0	2005	7.5	
FLINT CREEK - TONTITOWN 161KV:									
AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 16.3 miles of 2-297 ACSR with									
2156 ACSR, replacing Flint Creek									
wavetrap & jumpers, & replacing Flint									
Creek switch # 1K75.	AEPW	0	04SP	6/1/2004	30.0	15.0	3/2/2006	21.0	
EAST CENTERTON - GENTRY REC		_							
161KV:		3	04SP	6/1/2004					
FLINT CREEK - GENTRY REC 161KV:		7	04SP	6/1/2004					
PECAN CREEK 345/161KV									
TRANSFORMER: Add 2nd 345/161 kV									
369MVA transformer.	OKGE	62	04SP	6/1/2004	30.0		3/2/2006	21.0	6/1/2006
CHAMBER SPRINGS - FARMINGTON									
AECC 161KV: AEPW to add Flint Creek to									
East Centerton 345kV facilities that									
eliminates replacing Farmington switch									
8839, rebuild 10.24 miles with 2156									
ACSR, replace Chamber Springs									
wavetrap, & replace Farmington AECC									
bus.	AEPW	64	04SP	6/1/2004	24.0	12.0	6/1/2006	24.0	
5 TRIBES - PECAN CREEK 161KV: May							- · · - ·		
be able to increase CTR (if relays will							9/15/		
coordinate) at Five Tribes sub.	OKGE	0	09SP	6/1/2006	12.0		2004		6/1/2006

Table 7 (Continued)

Facilities That Limit Transmission Service

				Ŭ			Possib	le (1)	Scheduled
Facility & Network Upgrade,			Impact	Upgrade	Eng. &	Const.	Date		In Service
Plus Summary Of	Trans.	ATC	Study	Needed	Const. Lead	Lead Only	Available	Delay	(2)
Restricted Operating Period	Owner	(MW)	(Model)	(M/D/Y)	(Month)	(Month)	(M/D/Y)	(Month)	(M/D/Y)
BATTLEFIELD - SOUTHWEST									
DISPOSAL 161KV: AEPW to add Flint									
Creek to East Centerton 345kV facilities									
that eliminates paralleling Southwest -									
Southwest Disposal - Battlefield 161 kV									
line with new line.	SPRM	0	09SP	6/1/2009					
BEAVER - EUREKA SPRINGS 161KV:									
Reconductor 1.25 miles of 795 ACSR with									
1590 ACSR, and reconductor 6 miles of	AEPW								
795 ACSR with 1590 ACSR and conduct	&								
Environmental Impact Study.	SWPA	0	09SP	6/1/2008	18.0		3/1/2005		6/1/2008
BROOKLINE - SPRINGFIELD 161KV:									
AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
replacing disconnect switches at	014/54			0/4/000=					
Springfield.	SWPA	0	09SP	6/1/2005					
CHAMBER SPRINGS - FARMINGTON							- 1- 11		
AECC 161KV: Replace Farmington switch	. = 5\			0/4/000=			5/31/		
8839	AEPW	0	09SP	6/1/2005	9.0	1.0	2004		
CHAMBER SPRINGS - FARMINGTON									
AECC 161KV: AEPW to add Flint Creek to									
East Centerton 345kV facilities that									
eliminates replacing Farmington switch									
8839, rebuild 10.24 miles with 2156									
ACSR, replace Chamber Springs									
wavetrap, & replace Farmington AECC	AEPW	0	09SP	6/1/2009	24.0	12.0	6/1/2006		
bus.	AEPVV	0	0958	0/1/2009	24.0	12.0	0/1/2006		

			10	Ŭ			Possibl	le (1)	Scheduled
Facility & Network Upgrade,			Impact	Upgrade	Eng. &	Const.	Date		In Service
Plus Summary Of	Trans.	ATC	Study	Needed	Const. Lead	Lead Only	Available	Delay	(2)
Restricted Operating Period	Owner	(MW)	(Model)	(M/D/Y)	(Month)	(Month)	(M/D/Y)	(Month)	(M/D/Y)
CHAMBER SPRINGS - FLINT CREEK									
161KV: AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 14.33 Miles with 2156 ACSR									
and replacing Terminal Equipment.	AEPW	0	09SP	6/1/2009	30.0	15.0	3/2/2006		
CHAMBER SPRINGS - TONTITOWN									
161KV: AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 12 miles with 2156MCM ACSR,									
replacing Chamber Springs wavetrap &									
reset relays.	AEPW	0	09SP	6/1/2005	24.0	12.0	6/1/2006	12.0	
CLAREMORE 161/69KV									
TRANSFORMER CKT 1: Add 3rd 161/69									
KV Transformer	GRRD	0	09SP	6/1/2005	18.0	5.0	3/1/2005		6/1/2006
CLAREMORE 161/69KV									
TRANSFORMER CKT 2: None.	GRRD	0	09SP	6/1/2005					
EAST CENTERTON - GENTRY REC									
161KV: AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 19.16 miles of 2-397.5 ACSR									
with 2156 ACSR & replacing East									
Centerton Wavetrap & jumpers.	AEPW	0	09SP	6/1/2009	30.0	15.0	3/2/2006		
ELM SPRINGS REC - TONTITOWN									
161KV: AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 1.6 miles of 2-397 ACSR with									
2156 ACSR & replacing Elm Springs							1/14/		
Switch and Strain Bus.	AEPW	0	09SP	6/1/2009	12.0	4.0	2005		

			10	Ŭ			Possib	le (1)	Scheduled
Facility & Network Upgrade,			Impact	Upgrade	Eng. &	Const.	Date		In Service
Plus Summary Of	Trans.	ATC	Study	Needed	Const. Lead	Lead Only	Available	Delay	(2)
Restricted Operating Period	Owner	(MW)	(Model)	(M/D/Y)	(Month)	(Month)	(M/D/Y)	(Month)	(M/D/Y)
EUREKA SPRINGS - OSAGE 161KV:									
Rebuild 5.34 miles of 666 ACSR with 1590									
ACSR. Replace wavetrap jumpers @									
Eureka Springs	AEPW	0	09SP	6/1/2008	20.0	9.0	5/1/2005		6/1/2006
FARMINGTON AECC - SOUTH									
FAYETTEVILLE 161KV: AEPW to add									
Flint Creek to East Centerton 345kV									
facilities that eliminates replacing									
Farmington switch 5894 and replace							11/14/		
South Fayetteville wavetrap jumpers.	AEPW	0	09SP	6/1/2009	12.0	2.0	2004		
FARMINGTON AECC - SOUTH									
FAYETTEVILLE 161KV:		0	09SP	6/1/2009					
FLINT CREEK - GENTRY REC 161KV:									
AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 1.09 miles of 2-397.5 ACSR									
with 2156 ACSR & replacing Flint Creek							1/14/		
wavetrap & jumpers	AEPW	0	09SP	6/1/2009	12.0	4.0	2005		
FLINT CREEK - TONTITOWN 161KV:									
AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 16.3 miles of 2-297 ACSR with									
2156 ACSR, replacing Flint Creek									
wavetrap & jumpers, & replacing Flint		_							
Creek switch # 1K75.	AEPW	0	09SP	6/1/2005	30.0	15.0	3/2/2006	9.0	
PECAN CREEK 345/161KV									
TRANSFORMER: Add 2nd 345/161 kV	01/05	_		0/4/005-			0/0/0055		0/4/0005
369MVA transformer.	OKGE	0	09SP	6/1/2007	30.0		3/2/2006		6/1/2006

				Ü			Possib	le (1)	Scheduled
Facility & Network Upgrade,			Impact	Upgrade	Eng. &	Const.	Date		In Service
Plus Summary Of	Trans.	ATC	Study	Needed	Const. Lead	Lead Only	Available	Delay	(2)
Restricted Operating Period	Owner	(MW)	(Model)	(M/D/Y)	(Month)	(Month)	(M/D/Y)	(Month)	(M/D/Y)
PHAROAH - WELEETKA 138KV:							9/15/		
Replace metering CT's at Weleetka.	SWPA	0	09SP	6/1/2007	12.0		2004		6/1/2007
PHAROAH - WELEETKA 138KV:									
Replace wavetrap at Weleetka and							12/31/		
replace jumpers.	WFEC	0	09SP	6/1/2007	4.0	2.0	2003		6/1/2007
SOUTHWEST - SOUTHWEST									
DISPOSAL 161KV: AEPW to add Flint									
Creek to East Centerton 345kV facilities									
that eliminates paralleling Southwest -									
Southwest Disposal - Battlefield 161 kV							8/31/		
line with new line.	SPRM	0	09SP	6/1/2009	24.0	12.0	2005		
WELEETKA - WELEETKA 138KV:									
AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
replacing Strain Bus @ Weleetka SWPA							10/15/		
substation.	AEPW	27	09SP	6/1/2009	12.0	1.0	2004		
WELEETKA - WELEETKA 138KV:									
AEPW to add Flint Creek to East							0/4-/		
Centerton 345kV facilities that eliminates	014/54			0/4/0000	400		9/15/		
replacing wave trap.	SWPA	27	09SP	6/1/2009	12.0		2004		
MC . ATEC C									
Minimum ATC Summary									
6/1 - 10/1, 2003 - 2005		0							
6/1 - 10/1, 2006 - 2013		100							

Table 7 (Continued)

Facilities That Limit Transmission Service

							Possib	le (1)	Scheduled
Facility & Network Upgrade,			Impact	Upgrade	Eng. &	Const.	Date		In Service
Plus Summary Of	Trans.	ATC	Study	Needed	Const. Lead	Lead Only	Available	Delay	(2)
Restricted Operating Period	Owner	(MW)	(Model)	(M/D/Y)	(Month)	(Month)	(M/D/Y)	(Month)	(M/D/Y)
CHAMBER SPRINGS - TONTITOWN									
161KV: AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 12 miles with 2156MCM ACSR,									
replacing Chamber Springs wavetrap &				12/1/					
reset relays.	AEPW	0	04WP	2004	24.0	12.0	6/1/2006	18.0	
EAST CENTRAL HENRYETTA -									
OKMULGEE 138KV: Replace Okmulgee				12/1/			5/31/		
Wavetrap	AEPW	0	04WP	2004	9.0	1.0	2004		3/1/2006
BEAVER - EUREKA SPRINGS 161KV:									
Reconnect CT's to 1000:5 Tap on Bkrs 42,									
32, & half or 22. Replace metering & reset									
relays for Line 2 & Line 3.	SWPA	0	09WP	3/1/2006	8.0		5/1/2004		3/1/2006
BEAVER - EUREKA SPRINGS 161KV:									
Reconductor 1.25 miles of 795 ACSR with									
1590 ACSR, and reconductor 6 miles of	AEPW								
795 ACSR with 1590 ACSR and conduct	&								
Environmental Impact Study.	SWPA	0	09WP	6/1/2008	18.0		3/1/2005		6/1/2008
BEAVER - EUREKA SPRINGS 161KV:									
Replace Wavetrap & Metering CT		_		_ , , ,			5/31/		_ , , ,
Jumpers	AEPW	0	09WP	3/1/2006	9.0		2004		3/1/2006
BROOKLINE - SPRINGFIELD 161KV:									
AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
replacing disconnect switches at				12/1/					
Springfield.	SWPA	0	09WP	2008					
BROOKLINE - SPRINGFIELD 161KV:		_	0014/5	12/1/					
None	SPRM	0	09WP	2008					

			•	Ŭ			Possib	le (1)	Scheduled
Facility & Network Upgrade,			Impact	Upgrade	Eng. &	Const.	Date		In Service
Plus Summary Of	Trans.	ATC	Study	Needed	Const. Lead	Lead Only	Available	Delay	(2)
Restricted Operating Period	Owner	(MW)	(Model)	(M/D/Y)	(Month)	(Month)	(M/D/Y)	(Month)	(M/D/Y)
CHAMBER SPRINGS - FARMINGTON									
AECC 161KV: AEPW to add Flint Creek to									
East Centerton 345kV facilities that									
eliminates replacing Farmington switch									
8839, rebuild 10.24 miles with 2156									
ACSR, replace Chamber Springs				40/4/					
wavetrap, & replace Farmington AECC	4 = 5147		0011/5	12/1/	24.2	40.0	0/4/0000		
bus.	AEPW	0	09WP	2009	24.0	12.0	6/1/2006		
CHAMBER SPRINGS - TONTITOWN									
161KV: AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 12 miles with 2156MCM ACSR,				12/1/					
replacing Chamber Springs wavetrap & reset relays.	AEPW	0	09WP	2005	24.0	12.0	6/1/2006	6.0	
leset lelays.	ALFVV	0	0977	12/1/	24.0	12.0	0/1/2000	0.0	
CLAY - SPRINGFIELD 161KV: None	SPRM	0	09WP	2009					
CLAY - SPRINGFIELD 161KV: Replace	OI I (IVI	•	00111	12/1/			9/15/		12/1/
disconnect switches at Springfield.	SWPA	0	09WP	2009	12.0		2004		2009
EAST CENTERTON - GENTRY REC									
161KV: AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 19.16 miles of 2-397.5 ACSR									
with 2156 ACSR & replacing East				12/1/					
Centerton Wavetrap & jumpers.	AEPW	0	09WP	2009	30.0	15.0	3/2/2006		
FLINT CREEK - TONTITOWN 161KV:									
AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 16.3 miles of 2-297 ACSR with									
2156 ACSR, replacing Flint Creek									
wavetrap & jumpers, & replacing Flint		_	0014/5	12/1/		4	0/0/0055		
Creek switch # 1K75.	AEPW	0	09WP	2009	30.0	15.0	3/2/2006		

Table 7 (Continued)

Facilities That Limit Transmission Service

							Possibl	le (1)	Scheduled
Facility & Network Upgrade,			Impact	Upgrade	Eng. &	Const.	Date		In Service
Plus Summary Of	Trans.	ATC	Study	Needed	Const. Lead	Lead Only	Available	Delay	(2)
Restricted Operating Period	Owner	(MW)	(Model)	(M/D/Y)	(Month)	(Month)	(M/D/Y)	(Month)	(M/D/Y)
PECAN CREEK 345/161KV									
TRANSFORMER: Add 2nd 345/161 kV				12/1/					
369MVA transformer.	OKGE	0	09WP	2009	30.0		3/2/2006		6/1/2006
		_		12/1/					
FLINT CREEK - GENTRY REC 161KV:		3	09WP	2009					
FLINT CREEK - GENTRY REC 161KV:									
AEPW to add Flint Creek to East									
Centerton 345kV facilities that eliminates									
rebuilding 1.09 miles of 2-397.5 ACSR with 2156 ACSR & replacing Flint Creek				12/1/			1/14/		
wavetrap & jumpers	AEPW	7	09WP	2009	12.0	4.0	2005		
5 TRIBES - PECAN CREEK 161KV: May	/\LI VV	,	00111	2000	12.0	7.0	2000		
be able to increase CTR (if relays will				12/1/			9/15/		
coordinate) at Five Tribes sub.	OKGE	89	09WP	2008	12.0		2004		6/1/2006
,									
Minimum ATC Summary									
12/1/2003 - 4/1/2004		0							
12/1/2004 - 4/1/2005		0							
12/1/2005 - 3/1/2006		0							
3/1/2006 - 4/1/2006		100							
Annual Limits									
6/1/2003 - 3/1/2006		0							
3/1/2006 - 3/1/2016		100							

Table 8
Summary Of Available Transfer Capability With Network Upgrades

Inst	ufficient ATC (1)		Sufficient ATC					
Operating Period	Operating Period	ATC	Operating Period	Operating Period	ATC			
(Year)	(M/D - M/D)	(MW)	(Year)	(M/D - M/D)	(MW)			
2003	6/1-10/1	0	2006	3/1-4/1	100			
2003	10/1-12/1	100	2006	4/1-6/1	100			
2003	12/1- 12/31	0	2006	6/1-10/1	100			
2003	All	0	2006	10/1-12/1	100			
		0	2006	12/1-12/31	100			
2004	1/1 - 4/1	0	2007	1/1 - 3/1	100			
2004	4/1-6/1	100	2006 - 2007	3/1 - 3/1	100 (2)			
2004	6/1-10/1	0						
2004	10/1-12/1	100	2007	3/1 - 12/31	100 (2)			
2004	12/1- 12/31	0						
2004	All	0	2008 - 2015	All	100 (2)			
		0						
2005	1/1-4/1	0	2016	1/1-3/1	100 (2)			
2005	4/1-6/1	100						
2005	6/1-10/1	0						
2005	10/1-12/1	100						
2005	12/1- 12/31	0						
2005	All	0						
2006	1/1-3/1	0						

Note: Values of ATC are based on items received by September 1, 2003 including 1) a signed Service

Agreement and letter of credit received by the Transmission Provider, and 2) authorization to proceed
with engineering and construction received by Transmission Owners from the Transmission Provider.

Annual ATC allocated to the Transmission Customer is determined by the least amount of seasonal ATC
within each year of a reservation period.

- (1) When the ATC 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, the Deferral of Service is applicable.
- (2) Allocated ATC to the Transmission Customer on an annual basis.

Table 9
Base Rate Transmission Service Charges

Operating Period		2006		2007	In	termediate Years		2016		
(Month)	ATC (MW)	Base Rate Revenues (\$)	ATC (MW)	Base Rate Revenues (\$)	ATC (MW)	Base Rate Revenues (\$)	ATC (MW)	Base Rate Revenues (\$)		
January	N/A	N/A	100	128,188	100	128,188	100	128,188		
February	N/A	N/A	100	128,188	100	128,188	100	128,188		
March	100	128,188	100	128,188	100	128,188	N/A	N/A		
April	100	128,188	100	128,188	100	128,188	N/A	N/A		
May	100	128,188	100	128,188	100	128,188	N/A	N/A		
June	100	128,188	100	128,188	100	128,188	N/A	N/A		
July	100	128,188	100	128,188	100	128,188	N/A	N/A		
August	100	128,188	100	128,188	100	128,188	N/A	N/A		
September	100	128,188	100	128,188	100	128,188	N/A	N/A		
October	100	128,188	100	128,188	100	128,188	N/A	N/A		
November	100	128,188	100	128,188	100	128,188	N/A	N/A		
December	100	128,188	100	128,188	100	128,188	N/A	N/A		
Subtotal By Year		\$1,281,880		\$1,538,256		\$1,538,256		\$256,376		
Total For All Years								\$15,382,560		

Note: Values of ATC are based on items received by September 1, 2003 including 1) a signed Service Agreement and letter of credit received by the Transmission Provider, and 2) authorization to proceed with engineering and construction received by Transmission Owners from the Transmission Provider. Annual ATC allocated to the Transmission Customer is determined by the least amount of seasonal ATC within each year of a reservation period.

Table 10
Network Upgrade Revenue Requirements Including Pre-Payments

Operating Period		2004		2005		2006		2007
(Month)	ATC (MW)	Network Upgrade Revenues (\$)	ATC (MW)	Network Upgrade Revenues (\$)	ATC (MW)	Network Upgrade Revenues (\$)	ATC (MW)	Network Upgrade Revenues (\$)
January	N/A	N/A	N/A	N/A	N/A	N/A	100	429,575
February	N/A	N/A	N/A	N/A	N/A	N/A	100	429,575
March	N/A	N/A	N/A	N/A	100	429,575	100	429,575
April	N/A	N/A	N/A	N/A	100	429,575	100	429,575
May	N/A	N/A	N/A	N/A	100	429,575	100	429,575
June	N/A	N/A	N/A	N/A	100	429,575	100	429,575
July	N/A	N/A	N/A	22,500	100	429,575	100	429,575
August	N/A	N/A	N/A	N/A	100	429,575	100	429,575
September	N/A	N/A	N/A	N/A	100	429,575	100	429,575
October	N/A	N/A	N/A	N/A	100	489,575	100	2,289,575
November	N/A	N/A	N/A	N/A	100	429,575	100	429,575
December	N/A	N/A	N/A	N/A	100	429,575	100	429,575
Subtotal By Year		\$0		\$22,500		\$4,355,750		\$7,014,900

A Transmission Owner may require that a Transmission Customer pre-pay for all assignable Network Upgrades which it designs and constructs. These pre-payments are in the amount of the Transmission Owner's estimated engineering and construction costs. Applicable refunds are also included. The estimated monthly revenue requirements listed in this table include these pre-payments and refunds. All estimated monthly revenue requirements excluding pre-payments and refunds are \$429,575.

Note:

Table 10 (Continued)
Network Upgrade Revenue Requirements Including Pre-Payments

	2008	2009		2010		2011	
ATC (MW)	Network Upgrade Revenues (\$)	ATC (MW)	Network Upgrade Revenues (\$)	ATC (MW)	Network Upgrade Revenues (\$)	ATC (MW)	Network Upgrade Revenues (\$)
100	429,575	100	429,575	100	429,575	100	429,575
100	429,575	100	429,575	100	429,575	100	429,575
100	429,575	100	429,575	100	429,575	100	429,575
100	429,575	100	629,575	100	429,575	100	429,575
100	429,575	100	429,575	100	429,575	100	429,575
100	429,575	100	429,575	100	429,575	100	429,575
100	429,575	100	429,575	100	429,575	100	429,575
100	429,575	100	429,575	100	429,575	100	429,575
100	429,575	100	429,575	100	429,575	100	429,575
100	429,575	100	429,575	100	429,575	100	429,575
100	429,575	100	429,575	100	429,575	100	429,575
100	429,575	100	429,575	100	429,575	100	429,575
	\$5,154,900	\$5,354,900		\$5,154,900		\$5,154,900	
	(MW) 100 100 100 100 100 100 100 1	(MW) Upgrade Revenues (\$) 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 \$5,154,900	(MW) Upgrade Revenues (\$) (MW) 100 429,575 100 100 429,575 100 100 429,575 100 100 429,575 100 100 429,575 100 100 429,575 100 100 429,575 100 100 429,575 100 100 429,575 100 100 429,575 100 100 429,575 100 100 429,575 100 100 429,575 100 100 429,575 100	(MW) Upgrade Revenues (\$) (MW) Upgrade Revenues (\$) 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 629,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575	(MW) Upgrade Revenues (\$) (MW) Upgrade Revenues (\$) (MW) 100 429,575 100 429,575 100 100 429,575 100 429,575 100 100 429,575 100 429,575 100 100 429,575 100 629,575 100 100 429,575 100 429,575 100 100 429,575 100 429,575 100 100 429,575 100 429,575 100 100 429,575 100 429,575 100 100 429,575 100 429,575 100 100 429,575 100 429,575 100 100 429,575 100 429,575 100 100 429,575 100 429,575 100 100 429,575 100 429,575 100 100 429,575 100 429,575 100 100	(MW) Upgrade Revenues (\$) (MW) Upgrade Revenues (\$) (MW) Upgrade Revenues (\$) 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 629,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 429,575 100 </td <td>(MW) Upgrade Revenues (\$) (MW) Upgrade Revenues (\$) (MW) Upgrade Revenues (\$) (MW) 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 629,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 4</td>	(MW) Upgrade Revenues (\$) (MW) Upgrade Revenues (\$) (MW) Upgrade Revenues (\$) (MW) 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 629,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 429,575 100 429,575 100 429,575 100 100 4

A Transmission Owner may require that a Transmission Customer pre-pay for all assignable Network Upgrades which it designs and constructs. These pre-payments are in the amount of the Transmission Owner's estimated engineering and construction costs. Applicable refunds are also included. The estimated monthly revenue requirements listed in this table include these pre-payments and refunds. All estimated monthly revenue requirements excluding pre-payments and refunds are \$429,575.

Table 10 (Continued)
Network Upgrade Revenue Requirements Including Pre-Payments

Operating Period		2012		2013		2014	2015	
(Month)	ATC (MW)	Network Upgrade Revenues (\$)						
January	100	429,575	100	429,575	100	429,575	100	429,575
February	100	429,575	100	429,575	100	429,575	100	429,575
March	100	429,575	100	429,575	100	429,575	100	429,575
April	100	429,575	100	429,575	100	429,575	100	429,575
May	100	429,575	100	429,575	100	429,575	100	429,575
June	100	429,575	100	429,575	100	429,575	100	429,575
July	100	429,575	100	429,575	100	429,575	100	429,575
August	100	429,575	100	429,575	100	429,575	100	429,575
September	100	429,575	100	429,575	100	429,575	100	429,575
October	100	429,575	100	429,575	100	429,575	100	429,575
November	100	429,575	100	429,575	100	429,575	100	429,575
December	100	429,575	100	429,575	100	429,575	100	429,575
Subtotal By Year	f A TO	\$5,154,900		\$5,154,900	1 2002	\$5,154,900	1.0	\$5,154,900

A Transmission Owner may require that a Transmission Customer pre-pay for all assignable Network Upgrades which it designs and constructs. These pre-payments are in the amount of the Transmission Owner's estimated engineering and construction costs. Applicable refunds are also included. The estimated monthly revenue requirements listed in this table include these pre-payments and refunds. All estimated monthly revenue requirements excluding pre-payments and refunds are \$429,575.

Note:

Table 10 (Continued)
Network Upgrade Revenue Requirements Including Pre-Payments

Operating Period		2016	2017			2018		2019
(Month)	ATC (MW)	Network Upgrade Revenues (\$)	ATC (MW)	Network Upgrade Revenues (\$)	ATC (MW)	Network Upgrade Revenues (\$)	ATC (MW)	Network Upgrade Revenues (\$)
January	100	429,575	N/A	N/A	N/A	N/A	N/A	N/A
February	100	429,575	N/A	N/A	N/A	N/A	N/A	N/A
March	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
April	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
May	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
June	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
July	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
August	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
September	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
October	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
November	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
December	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal By Year		\$859,150		\$0		\$0		\$0
Total For All Years	f A TO			11 0 1	1 2002		. 10	\$53,691,500

A Transmission Owner may require that a Transmission Customer pre-pay for all assignable Network Upgrades which it designs and constructs. These pre-payments are in the amount of the Transmission Owner's estimated engineering and construction costs. Applicable refunds are also included. The estimated monthly revenue requirements listed in this table include these pre-payments and refunds. All estimated monthly revenue requirements excluding pre-payments and refunds are \$429,575.

Table 11
Generation Re-Dispatching Revenue Requirements

		Genera	tion Re-Dispatchi	ing Revenue Requ	irements	
Operating Period (Month)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)
January	0	0	0	0	0	0
February	0	0	0	0	0	0
March	0	0	0	0	0	0
April	0	0	0	0	0	0
May	0	0	0	0	0	0
June	0	0	0	0	0	0
July	0	0	0	0	0	0
August	0	0	0	0	0	0
September	0	0	0	0	0	0
October	0	0	0	0	0	0
November	0	0	0	0	0	0
December	0	0	0	0	0	0
Subtotal By Year	\$0	\$0	\$0	\$0	\$0	\$0

Table 11 (Continued)

Generation Re-Dispatching Revenue Requirements

		Genera	tion Re-Dispatch	ing Revenue Requ	iirements	
Operating Period (Month)	2011 (\$)	2012 (\$)	2013 (\$)	2014 (\$)	2015 (\$)	2016 (\$)
January	0	0	0	0	0	0
February	0	0	0	0	0	0
March	0	0	0	0	0	0
April	0	0	0	0	0	0
May	0	0	0	0	0	0
June	0	0	0	0	0	0
July	0	0	0	0	0	0
August	0	0	0	0	0	0
September	0	0	0	0	0	0
October	0	0	0	0	0	0
November	0	0	0	0	0	0
December	0	0	0	0	0	0
Subtotal By Year	\$0	\$0	\$0	\$0	\$0	\$0
Total For All Years						\$0

Table 12
Total Estimated Revenue Requirements

Operating Period		2004	2005			2006	2007	
(Month)	ATC (MW)	Revenue Requirements (\$)	ATC (MW)	Revenue Requirements (\$)	ATC (MW)	Revenue Requirements (\$)	ATC (MW)	Revenue Requirements (\$)
January	N/A	N/A	N/A	N/A	N/A	N/A	100	429,575
February	N/A	N/A	N/A	N/A	N/A	N/A	100	429,575
March	N/A	N/A	N/A	N/A	100	429,575	100	429,575
April	N/A	N/A	N/A	N/A	100	429,575	100	429,575
May	N/A	N/A	N/A	N/A	100	429,575	100	429,575
June	N/A	N/A	N/A	N/A	100	429,575	100	429,575
July	N/A	N/A	N/A	22,500	100	429,575	100	429,575
August	N/A	N/A	N/A	N/A	100	429,575	100	429,575
September	N/A	N/A	N/A	N/A	100	429,575	100	429,575
October	N/A	N/A	N/A	N/A	100	489,575	100	2,289,575
November	N/A	N/A	N/A	N/A	100	429,575	100	429,575
December	N/A	N/A	N/A	N/A	100	429,575	100	429,575
Subtotal By Year		\$0		\$22,500		\$4,355,750		\$7,014,900

Table 12 (Continued)
Total Estimated Revenue Requirements

Operating Period		2008		2009		2010		2011
(Month)	ATC (MW)	Revenue Requirements (\$)	ATC (MW)	Revenue Requirements (\$)	ATC (MW)	Revenue Requirements (\$)	ATC (MW)	Revenue Requirements (\$)
January	100	429,575	100	429,575	100	429,575	100	429,575
February	100	429,575	100	429,575	100	429,575	100	429,575
March	100	429,575	100	429,575	100	429,575	100	429,575
April	100	429,575	100	629,575	100	429,575	100	429,575
May	100	429,575	100	429,575	100	429,575	100	429,575
June	100	429,575	100	429,575	100	429,575	100	429,575
July	100	429,575	100	429,575	100	429,575	100	429,575
August	100	429,575	100	429,575	100	429,575	100	429,575
September	100	429,575	100	429,575	100	429,575	100	429,575
October	100	429,575	100	429,575	100	429,575	100	429,575
November	100	429,575	100	429,575	100	429,575	100	429,575
December	100	429,575	100	429,575	100	429,575	100	429,575
Subtotal By Year		\$5,154,900		\$5,354,900		\$5,154,900		\$5,154,900

Table 12 (Continued)
Total Estimated Revenue Requirements

Operating Period		2012		2013		2014		2015
(Month)	ATC (MW)	Revenue Requirements (\$)	ATC (MW)	Revenue Requirements (\$)	ATC (MW)	Revenue Requirements (\$)	ATC (MW)	Revenue Requirements (\$)
January	100	429,575	100	429,575	100	429,575	100	429,575
February	100	429,575	100	429,575	100	429,575	100	429,575
March	100	429,575	100	429,575	100	429,575	100	429,575
April	100	429,575	100	429,575	100	429,575	100	429,575
May	100	429,575	100	429,575	100	429,575	100	429,575
June	100	429,575	100	429,575	100	429,575	100	429,575
July	100	429,575	100	429,575	100	429,575	100	429,575
August	100	429,575	100	429,575	100	429,575	100	429,575
September	100	429,575	100	429,575	100	429,575	100	429,575
October	100	429,575	100	429,575	100	429,575	100	429,575
November	100	429,575	100	429,575	100	429,575	100	429,575
December	100	429,575	100	429,575	100	429,575	100	429,575
Subtotal By Year		\$5,154,900		\$5,154,900		\$5,154,900		\$5,154,900

Table 12 (Continued) Total Estimated Revenue Requirements

Operating Period		2016		2017	2018			2019
(Month)	ATC (MW)	Revenue Requirements (\$)	ATC (MW)	Revenue Requirements (\$)	ATC (MW)	Revenue Requirements (\$)	ATC (MW)	Revenue Requirements (\$)
January	100	429,575	N/A	N/A	N/A	N/A	N/A	N/A
February	100	429,575	N/A	N/A	N/A	N/A	N/A	N/A
March	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
April	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
May	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
June	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
July	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
August	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
September	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
October	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
November	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
December	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal By Year		\$859,150		\$0		\$0		\$0
Total For All Years								\$53,691,500

Table 13
Annual Average Transmission Service Costs

Calendar Period (Year)	Maximum ATC (MW)	Average Of Allocated Monthly Peak ATC (MW)	Total Revenue Requirements (\$)	Average Transmission Service Cost (1) (2) (\$/MW-Month)
2003	0	0	0	0
2004	0	0		0
2005	0	0	22,500	0
2006	100	100	4,355,750	4,355.75
2007	100	100	7,014,900	5,845.75
2008	100	100	5,154,900	4,295.75
2009	100	100	5,354,900	4,462.42
2010	100	100	5,154,900	4,295.75
2011	100	100	5,154,900	4,295.75
2012	100	100	5,154,900	4,295.75
2013	100	100	5,154,900	4,295.75
2014	100	100	5,154,900	4,295.75
2015	100	100	5,154,900	4,295.75
2016	100	100	859,150	4,295.75
Total	100	100	53,691,500	4,474.29

Note:

- (1) The average transmission service cost is based on the average of the monthly peak ATC within the calendar year.
- (2) If revenues are required of the Transmission Customer for Network Upgrade pre-payments and generation re-dispatching prior to the calendar year that includes the initial portion of the first operating year, then these costs are added to those in the first calendar year for the purpose of determining an Average Transmission Service Cost in the first calendar year. Therefore, all costs prior to and including the first calendar year, which includes all or the first portion of the first operating year, are accumulated for determining the Average Transmission Service Cost as listed for the first calendar year.

Table 14 Annual Letter Of Credit Requirements

Start Date (M/D/Y)	Annual Amount (\$)
3/1/2006	27,485,000.00
3/1/2007	24,736,500.00
3/1/2008	21,988,000.00
3/1/2009	19,239,500.00
3/1/2010	16,491,000.00
3/1/2011	13,742,500.00
3/1/2012	10,994,000.00
3/1/2013	8,245,500.00
3/1/2014	5,497,000.00
3/1/2015	2,748,500.00

Table 15 Identified Third-Party Facilities

Modeled	Identified Third-Party Facilities			
Control Areas	& Owners			
SWPA - SPRM	BROOKLINE - SPRINGFIELD 161KV, AECI line			
AECI - SWPA	2SILDOL - TABLE ROCK 69KV, AECI line			
ENTR - AEPW	99832 5OSAGE # 161 to 53136 EUREKA 5 161 CKT 1			
ENTR - EMDE	99831 50MAHA * 161 to 59474 OZD312 5 161 CKT 1 (See note in System Impact Study)			
ENTR - ENTR	99811 5HARR-E 161 to 99831 5OMAHA * 161 CKT 1 (See note in System Impact Study)			
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Note: Owner is included if it is known and different from the modeled control area				

Note: Owner is included if it is known and different from the modeled control area.

Table 16 Summary Of Transmission Service Costs

Summary Of Trai		Cusis
Cost Components	Units	
& Descriptions		
Start Date	(M/D/Y)	March 1, 2006
End Date	(M/D/Y)	March 1, 2016
Term	(Years)	10.00
Maximum Allocated Capacity	(MW)	100
Average Of Allocated Monthly Peak	(MW)	100.00
Capacity Over Term	(IVI VV)	100.00
Pricing Methodology	(And/Or)	Or
Base Rate Estimate		
Total Revenue Requirements	(\$)	15,382,560
Average Rate Over Term	(\$/MW-Month)	1,281.88
Network Upgrade Estimate		
Total Assigned Eng. & Const.	(\$)	20 627 500
	(\$)	29,627,500
Expedited Eng. & Const.	(\$)	U
Total Levelized Cost	(\$)	52 601 500
	(\$)	53,691,500
Average Rate Over Term	(\$/MW-Month)	4,474.29
Average Indirect Cost Multiplier	(Per-Unit)	1.8122
(Based On Assigned Eng. & Const.).		
Network Upgrades	(2)	2 142 500
Requiring Pre-Payment	(\$)	2,142,500
(Included In Assigned Eng. & Const)		
Expedited Network Upgrades	(\$)	0
Requiring Pre-Payment & Refund	(\$)	0
(Included In Expedited Eng. & Const)		
Generation Re-Dispatching		
Estimate As Required For		
Construction Only		
Total	(\$)	0
Average Rate Over Term	(\$/MW-Month)	0.00
Note: All Re-Dispatch Costs	(φ/1/1// 1/101111)	0.00
Require Pre-Payment		
Network Upgrade &		
Generation Re-Dispatching		
Total	(\$)	53,691,500
Average Rate Over Term	(\$/MW-Month)	4,474.29
Total Transmission Service		
Total Estimate Of Allocable Costs	(\$)	53,691,500
Average Rate Over Term	(\$/MW-Month)	4,474.29