Southwest Pool

System Facilities Study For Transmission Service Request 212202

Requested By Tenaska As Agent For Power Resource Group, Inc.

From American Electric Power West To Entergy

For The Requested Amount Of 620MW

From April 1, 2003 To April 1, 2013

> SPP Coordinated Planning (#SPP-2002-169-1) Created August 29, 2002

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Southwest Power Pool Transmission Service Request #212202 SPP System Facilities Study SPP-2002-169-1

Executive Summary

At the request of Tenaska as the agent for Power Resource Group, Inc. (PRG), the Southwest Power Pool developed this Facilities Study for the purpose of evaluating the financial characteristics of Transmission Service Request 212202. This request is for 620MW of Firm Point-To-Point Transmission Service from American Electric Power West (AEP) to Entergy (EES). The requested term of this Transmission Service is 10 years from April 1, 2003 to April 1, 2013.

Three options were evaluated regarding levels of annulment of reservation 150680 for 465MW during the same time frame. In option A, annulment of 465MW was modeled in the corresponding system impact study. In options B and C, the annulment of 300MW and 0MW respectively was modeled. Therefore, option A includes the Network Upgrades required to accommodate 620MW from AEP to EES and 0MW from ERCOTE to EES. Option B includes the Network Upgrades required to accommodate 620MW from AEP to EES and 165MW from ERCOTE to EES. Option C includes the Network Upgrades required to accommodate 620MW from AEP to EES and 465MW from ERCOTE to EES.

The projected base rate transmission service charges for each option (excluding charges for ancillary services) are \$51,336,000 during the reservation period based on 620MW of capacity starting April 1, 2003 at \$690/MW-Month. The available transfer capability (ATC) of the existing transmission system will be increased with the specified Network Upgrades such that 620MW may be accommodated without interruption after 2005. However, interruption of transmission service will be required on a pre-contingency basis until all required Network Upgrades through 2005 are placed in service. 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 higher in all options than the

estimated base rate transmission service charges. As the estimated base rate transmission service charges are less than the estimated revenue requirements for Network Upgrades, Tenaska shall pay for the revenue requirements associated with the Network Upgrades.

There are additional costs associated with the necessary Network Upgrades. In order to install the proposed Linn County 345/161kV Substation, a reduction in generation at Wolf Creek is required. There are up-front expenses associated with 1) a reduction of generation at Wolf Creek by 250MW for 2 weeks, 2) a second contingency at Wolf Creek requiring unit shutdown during maintenance outage, and 3) possible NRC studies to interconnect with Wolf Creek – LaCygne 345kV line. The Transmission Customer must make payment for these expenses when they are incurred. At this time, the estimated cost for a reduction of generation at Wolf Creek by 250MW for 2 weeks is \$2,000,000. Therefore, the current total estimated cost in each option is for Network Upgrades plus expenses for 1) a second contingency at Wolf Creek requiring unit shutdown during maintenance outage, and 2) possible NRC studies to interconnect with Wolf Creek – LaCygne 345kV line.

In option A, the engineering and construction cost estimates for assignable Network Upgrades total \$66,379,470 excluding expedited upgrades. The engineering and construction cost estimates for expedited (non-assignable) Network Upgrades total \$5,128,000. Excluding the engineering and construction costs of upgrades being expedited and by accounting for interest and taxes over a 10-year term of Transmission Service, the average indirect cost multiplier is 1.4728 over the entire term. The estimated levelized revenue requirements for providing the necessary Network Upgrades to accommodate the Transmission Service request are \$97,763,520. The basis for this average indirect cost multiplier does not include the additional costs associated with Wolf Creek. Interest and tax expenses associated with expedited Network Upgrades are assigned and included in the total estimated cost. The average rate for Transmission Service based on the total estimated cost of Network Upgrades, excluding the expenses at Wolf Creek, is \$1,314/MW-Month over the 10-year term. Including the \$2,000,000 expense at Wolf Creek, the average rate for Transmission Service is \$1,341/MW-Month.

In option B, the engineering and construction cost estimates for assignable Network Upgrades total \$78,434,826 excluding expedited upgrades. The engineering and construction cost estimates for expedited (non-assignable) Network Upgrades total \$5,128,000. Excluding the engineering and construction costs of upgrades being expedited and by accounting for interest and taxes over a 10-year term of Transmission Service, the average indirect cost multiplier is 1.4875 over the entire term. The estimated levelized revenue requirements for providing the necessary Network Upgrades to accommodate the Transmission Service request are \$116,674,920. The basis for this average indirect cost multiplier does not include the additional costs associated with Wolf Creek. Interest and tax expenses associated with expedited Network Upgrades are assigned and included in the total estimated cost. The average rate for Transmission Service based on the total estimated cost of Network Upgrades, excluding the expenses at Wolf Creek, is \$1,568/MW-Month over the 10-year term. Including the \$2,000,000 expense at Wolf Creek, the average rate for Transmission Service is \$1,595/MW-Month.

In option C, the engineering and construction cost estimates for assignable Network Upgrades total \$73,924,826 excluding expedited upgrades. The engineering and construction cost estimates for expedited (non-assignable) Network Upgrades total \$5,101,000. Excluding the engineering and construction costs of upgrades being expedited and by accounting for interest and taxes over a 10-year term of Transmission Service, the average indirect cost multiplier is 1.4796 over the entire term. The estimated levelized revenue requirements for providing the necessary Network Upgrades to accommodate the Transmission Service request are \$109,375,680. The basis for this average indirect cost multiplier does not include the additional costs associated with Wolf Creek. Interest and tax expenses associated with expedited Network Upgrades are assigned and included in the total estimated cost. The average rate for Transmission Service based on the total estimated cost of Network Upgrades, excluding the expenses at Wolf Creek, is \$1,470/MW-Month over the 10-year term. Including the \$2,000,000 expense at Wolf Creek, the average rate for Transmission Service is \$1,497/MW-Month.

Annual ATC allocated to the Transmission Customer is normally determined by the least amount of seasonal ATC on an annual basis. In this application, the revenue requirements

associated with the required Network Upgrades are based on items received by November 1, 2002 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 November 1, 2002, then the scheduling of Network Upgrades will have to be reevaluated due to subsequent delays in scheduling engineering and construction as existing facilities are not normally taken out of service during the summer peak season.

SPP as the Transmission Provider must receive an unconditional and irrevocable letter of credit for the engineering and construction cost associated with assigned Network Upgrades before the Transmission Owners incur initial engineering and construction costs. The amount of the letter of credit will be adjusted on an annual basis to reflect amortization of these 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 620MW.

The Southwestern Power Administration (SPA) as a Transmission Owner requires that a Transmission Customer pre-pay for all assignable Network Upgrades which it designs and constructs. These pre-payments shall be based on SPA's estimated engineering and construction estimates. Pre-payments will be required no less than 8 months prior to the scheduled in-service date. However, applicable interest adjustments will be made to the monthly revenue requirements of the Transmission Customer due to this pre-payment requirement.

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 facilities upgrades may be required to accommodate the requested Transmission Service.

SPP has evaluated the impacts of annulling certain transmission service during the evaluation of this request. Should the annulment of service be agreed to be all parties, the customer will be obligated to pay for any construction costs incurred on facilities started for the annulled service. These costs will be calculated at the time of the service agreement execution.

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-2002-169 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 <u>Table 1</u>. Network Upgrades will be required on the AEP, Empire District Electric (EDE), Grand River Dam Authority (GRDA), Kansas City Power & Light (KCPL), OG+E Electric Services (OKGE), Southwestern Power Administration (SPA), Western Farmers Electric Cooperative (WFEC) and Westar Energy (WR) transmission systems. Due to the in-service dates of these Network Upgrades, some may limit or delay the requested Transmission Service.

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 additional capacity to accommodate this request for Transmission Service are listed in <u>Table 2</u>. 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.

Network Upgrades that were previously assigned and will require only accelerated inservice dates to accommodate this request for Transmission Service are listed in <u>Table 3</u>.

To accommodate this request, 10 previously assigned Network Upgrades will require an earlier in-service date than previously indicated. These include Transmission Owner's projects. Due to the in-service dates of these Network Upgrades, some may limit and delay the requested Transmission Service.

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 <u>Table 4</u>. 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.

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. AEP's International Paper – Wallace Lake 138kV line upgrade is not required given the application of the Dolet Hills Operating Guide. AEP's upgrade of the S. Shreveport – Wallace Lake 138kV line was removed due to the application of the Dolet Hills Operating Guide. OKGE will be installing a 138/69kV transformer at NE Enid that eliminates an upgrade of the Chestnut - Enid 69kV line. OKGE is making provisions for ample capacity in the Draper 345/138kV Substation to minimize the potential for overloading an autotransformer. OKGE will also be reducing the loading of the Helberg 161/69KV transformer by constructing a 69kV line from Short Mountain to Prairie View in 2005 at OKGE's expense.

EDE's Monett - Aurora HT 161kV line is currently being upgraded at its expense and this upgrade is scheduled to be completed by the end of 2002. To eliminate overloading OKGE's Muskogee 161/69KV transformer, load will be transferred to its 161kV system in 2003 at its expense.

Regarding the potential overload of the Winfield - Adora REC 69kV line, AEP has plans to install the Winnsboro 138/69kV facility with associated 138kV lines by 1/1/2005. Therefore, the upgrade requirements for this line has been eliminated. Use of KCPL's

operating guides eliminates assignable upgrades for the Stilwell 345/161kV Substation. Also, upgrading OKGE's Harden City - Ahloso 69kV line is not required given an effective operating guide including the use of a switch at the Ahloso facility. This same operating guide also eliminates the upgrade requirement of the Frisco - Harden City 69kV line. The Paola – Centennial 161kV line is limited by equipment in the Paola Substation. KCPL is assigning no cost of upgrading the substation as construction is required to accommodate KCPL's generator.

An upgrade to WFEC's Cyril - Anadarko 69kV line is not required as another lower cost alternative is available. This alternative includes expediting WFEC's new Payne Switch Station which was planned to include a 70MVA autotransformer. This new facility is currently scheduled for installation in 2010. This alternative also includes expediting WFEC's Lindsey - Lindsey Sw. 69kV line upgrade. In addition, OKGE's Coal Hill - AVEC Ozark 69kV line requires no changes as a switch replacement has already been completed.

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. Seasonal and annual transfer limits given engineering and construction lead times are listed in <u>Table 5</u>. The estimated time to complete the engineering and construction of the first transfer-limiting facility in the summer peak period of 2003 is 24 months after KCPL's receipt of authorization to proceed from SPP. KCPL's new Linn County 345/161kV Substation has a 24 month construction lead time and this addition is scheduled to be completed March 15, 2005. The constraint is due to the outage of the West Gardner - LaCygne 345kV line during the 2003 summer peak period. The minimum ATC during the 2003 summer peak, from June 1 to October 1, is 0MW.

Firm Point-To-Point Transmission Service may be provided to Tenaska during a summer peaking period in the amount requested on a firm basis after the new Linn County 345/161kV Substation and other upgrades are in service. If a completed Service Agreement is received by SPP on or before November 1, 2002, then the requested firm

Transmission Service may be provided by 2006 given no unexpected delays in design, permitting, and construction. The upgrade of several other constraints identified in the corresponding System Impact Study cannot be completed until after the start-date of the requested Transmission Service due to lead times for engineering & construction.

<u>Tables 5</u>, <u>6</u> and <u>7</u> include lists of capacity of which is less than that requested through the reservation period. <u>Table 6</u> 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 <u>Table 7</u>. The Transmission Customer shall pay the higher of the base rate transmission service charges or the levelized revenue requirements for the Network Upgrades.

For options B and C, corresponding tables are provided. For option B, tables 10 through 18 are provided. For option C, tables 19 through 27 are included.

Third-Party Facilities

For third-party facilities listed in <u>Table 8</u> for option A, the Transmission Customer is responsible for obtaining arrangements for the necessary upgrades of the facilities per Section 21.1 of the SPP OATT. For options B and C, <u>tables 17</u> and <u>26</u> respectively are applicable 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 currently modeled facilities within SPP 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 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.

The zone interfaced to the sink with the lowest zonal rate for Firm Point-To-Point Transmission Service is Southwestern Power Administration (SPA). The current zonal rate of SPA is \$690/MW-Month. The base rate transmission service charges from the requested Transmission Service are estimated to be \$51,336,000 for the requested 620MW level of capacity throughout the entire 10-year term for all three options.

For option A, the estimate of total revenue requirements, excluding SPA's pre-payment requirements, listed in <u>Table 7</u> for the required Network Upgrades throughout the requested transaction period is \$90,399,600. The estimated revenue requirements for the required Network Upgrades are greater than the projected base rate transmission service charges over the requested transaction period. Therefore, the Transmission Customer will be responsible for the revenue requirements associated with the Network Upgrades.

In option B, the estimate of total revenue requirements, excluding SPA's pre-payment requirements, listed in <u>Table 16</u> for the required Network Upgrades throughout the requested transaction period is \$108,660,600. In option C, the estimate of total revenue

requirements, excluding SPA's pre-payment requirements, listed in <u>Table 25</u> for the required Network Upgrades throughout the requested transaction period is \$97,801,440.

The Southwest Power Pool and the affected Transmission Owners including AEP, EDE, GRDA, KCPL, OKGE, SPA, WFEC and WR shall use due diligence to add necessary facilities or upgrade the Transmission System to provide the requested Transmission Service, provided Tenaska 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 Tenaska 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 an unconditional and irrevocable letter of credit to the SPP in the amount of no less than \$66,379,470 for the initial engineering and construction costs to be incurred by the Transmission Owners in option A. For options B and C, the amount of the letter of credit shall be \$78,434,826 and \$73,924,826 respectively. 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. This amount does not include or offset other letters of credit or deposits as may be required under the tariff.

Existing transmission service was identified as providing a significant benefit to the requested transmission service if it was annulled. The existing transmission service, which is proposed to be annulled, requires transmission expansion in order to reliability provide the service. Should the transmission customer confirm the requested service, the customer shall complete the remaining financial obligation of construction facilities in progress and load revenue in order to allow annulment. The estimated financial obligation for construction at the commencement of the requested service is \$4,000,000.

The customer shall work with SPP on acceptable compensation for the outstanding financial obligations.

Conclusion

Given the constraints identified in the System Impact Study SPP-2002-169, 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.

In option A based on the results of the System Impact Study SPP-2002-169, 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 Tenaska to accommodate Transmission Service Request 212202 from AEP to Entergy. <u>Table 2</u> includes previously assigned Network Upgrades requiring only additional capacity to accommodate this request. <u>Table 3</u> includes previously assigned Network Upgrades requiring only accelerated in-service dates. <u>Table 4</u> includes previously assigned Network Upgrades requiring both additional capacity and accelerated in-service dates to accommodate this request. For option B and C, corresponding tables 9 through 12 and 17 through 20 respectively are provided.

For option A throughout the transaction period of the requested Transmission Service, the estimate of the levelized revenue requirements for the required Network Upgrades is \$97,763,520 for Transmission Service Request 212202. This excludes all additional expenses associated with generation reduction at Wolf Creek. 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 7</u> which includes the SPA pre-payment credit. The base rate transmission service charges are estimated to be \$51,336,000 and the monthly

revenue requirements are listed in <u>Table 6</u>. 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. For option B throughout the transaction period of the requested Transmission Service, the estimate of the levelized revenue requirements for the required Network Upgrades is \$116,674,920. The values listed in <u>Table 16</u> include the SPA pre-payment credit. In option C throughout the transaction period of the requested Transmission Service, the estimate of the levelized revenue requirements for the required Network Upgrades is \$109,375,680. The values listed in <u>Table 25</u> include the SPA pre-payment credit.

To complete the request for Transmission Service, SPP must receive the following items from the Transmission Customer: 1) an executed Service Agreement, and 2) an unconditional and irrevocable letter of credit regarding the engineering and construction of Network Upgrades. 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 – Option A

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION	ENG. & CONST. LEAD	DATE NEEDED	SCHEDULED DATE IN	
	COSTS (\$2001)	TIME (MONTHS)	(M/D/Y)	SERVICE (M/D/Y) (1)	
Cherokee REC - Knox Lee 138kV: Reconductor 3.25 miles of 666 ACSR with 1272 ACSR by AEPW.	981,000	12	6/1/2003	3/15/2004	
Cherokee REC - Tatum 138kV: Reconductor 6.25 miles of 666 ACSR with 1272 ACSR by AEPW.	1,641,000	18	6/1/2004	6/1/2004	
Rock Hill - Tatum 138kV: Reconductor 0.81 miles 666MCM to 1272 ACSR by AEPW.	342,970	12	6/1/2004	6/1/2004	
East Centerton To Gentry REC 161KV: Rebuild 19.16 miles of 2-397.5 ACSR with 2156 ACSR by AEPW.	8,000,000	30	6/1/2004	6/1/2005	
Eureka Springs To Beaver Dam 161KV: Recond. 1.25 miles with 1590 ACSR by AEPW.	515,000	12	6/1/2006	6/1/2006	
Farmington AECC To Chamber Springs Rd 161KV: Replace Farmington Switch by AEPW.	60,000	9	6/1/2004	6/1/2004	
Fulton To Patmos 115KV: Recond. 7.1 miles with 1272 ACSR by AEPW.	2,100,000	18	6/1/2006	6/1/2006	
Gentry REC To Flint Creek 161KV: Rebuild 1.09 miles of 2-397.5 ACSR with 2156 ACSR. Replace wavetrap jumpers by AEPW.	400,000	12	6/1/2003	3/15/2004	
S Texarkana REC To Texarkana Plant 69KV: Rebuild 5.92 miles of 266 ACSR with 795 ACSR. Replace 4/0 CU jumpers @ Texarkana Plant by AEPW.	2,400,000	15	6/1/2006	6/1/2006	
Broken Arrow North - Oneta 138KV: Rebuild 4.31 miles of 795 ACSR with 1590 ACSR by AEPW.	2,370,500	18	6/1/2006	6/1/2006	
Chamber Springs Road 345/161KV Transformer: Install 2nd 345/161 kV unit by AEPW.	4,000,000	18	6/1/2007	6/1/2007	
Oak Hill - Knox Lee 138KV: Replace wavetrap @ Knoxlee by AEPW.	20,000	12	6/1/2006	6/1/2006	

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
Pittsburg - Lone Star South 138KV: Reset CT @ Pittsburg by AEPW.	10,000	3	6/1/2004	6/1/2004
Bonanza Tap - Bonanza 161KV: Rebuild 0.06 miles of 397.5 ACSR with 795MCM ACSR by AEPW.	50,000	12	6/1/2008	6/1/2008
Longwood - Noram 138KV: Reconductor 4.66 miles of bundled 266 ACSR with 1590 ACSR and replace jumpers & Bus Riser jumpers by AEPW.	1,577,000	18	6/1/2006	6/1/2006
Noram - Raines 138KV: Rebuild 5.58 miles of 2-266 ACSR with 1590 ACSR by AEPW.	2,000,000	18	6/1/2006	6/1/2006
Jacksonville - Overton 138kV: Reset relays at Jacksonville & Overton by AEPW.	15,000	6	6/1/2006	6/1/2006
Broken Bow - Craig JCT 138KV: Rebuild 7.66 miles of 3/0 CW CU with 795 ACSR by AEPW.	2,700,000	15	10/1/2003	6/1/2004
Bann - Alumax Tap 138KV: Replace six (6) 138 kV switches, five at Bann & one at Alumax Tap. Rebuild 0.67 miles of 1024 ACAR with 2156 ACSR. Replace wavetrap jumpers @ Bann. Replace breaker 3300 @ Bann by AEPW.	630,000	12	6/1/2004	6/1/2004
Perdue - Diana 138KV: Replace Breaker 10070 @ Perdue by AEPW.	150,000	15	12/1/2003	2/1/2004
Chamber Springs - Tontitown 161kV: Rebuild 12 miles with 2156MCM of which is part of Chamber Springs - Dyess line by AEPW.	7,200,000	24	6/1/2003	3/15/2005
Broken Arrow 101ST North to Oneta 138kV: Replace wave trap by AEPW.	30,000	9	6/1/2006	6/1/2006
Flint Creek-Tontitown 161kV: Replace switch and jumpers by AEPW.	45,000	12	6/1/2004	6/1/2004
Rock Hill 138/69kV Transformer: Add 3rd Rock Hill 138/69kV 46MVA Unit by AEPW.	1,400,000	24	6/1/2006	6/1/2006

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.

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
Tontitown-Elms Springs REC 161kV: Replace Switch and Elm Springs Strain Bus by AEPW. (This line is part of Flint Creek - Dyess line.)	100,000	12	6/1/2004	6/1/2004
Subtotal by AEPW.	38,737,470			
Reinmiller 161/69KV Transformer: Replace with a 150 MVA unit by EDE.	1,730,000	13	6/1/2008	6/1/2008
Oronogo - Joplin Oakland North 161KV: Reconstruct and replace 1.4 miles of 556 ACSR with Bundled 556 ACSR by EDE.	800,000	18	6/1/2003	6/1/2004
POWERSITE 161/69/12.5KV TRANSFORMER: Replace with 75MVA transformer by EDE.	1,250,000	18	12/1/2007	12/1/2007
Subtotal by EDE.	3,780,000			
412SUB - KANSAS TAP 161KV: Reconductor 9.7 miles with 1590MCM ACSR by GRDA.	1,488,000	12	6/1/2006	6/1/2006
Kerr - 412SUB 161KV: Reconductor 12.5 miles with 1590MCM ACSR by GRDA.	1,918,000	12	6/1/2006	6/1/2006
Titantic Tap - Tahlequah 69KV: Reconductor 9.4 miles with 795MCM ACSR by GRDA.	1,551,000	18	6/1/2006	6/1/2006
OKAY 161/69KV TRANSFORMER: Replace with 84MVA transformer by GRDA.	1,340,000	18	6/1/2006	6/1/2006
Subtotal by GDRA.	6,297,000			
Bucyrus - Stilwell 161KV: Rebuild Stilwell line terminal by KCPL.	6,000	6	6/1/2003	6/1/2003
Linn County 345/161kV Substation: Build new substation with 345/161kV 400 Mva transformer. Tap Wolf Creek to LaCygne 345kV line and Centerville to Paola 161kV line by KCPL.	6,945,000	24	6/1/2003	3/15/2005
Subtotal by KCPL.	6,951,000		.	

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
Pecan Creek 345/161KV Transformer: Add 2nd 345/161 kV 369MVA unit by OKGE	3,000,000	30	12/1/2003	5/1/2005
Pecan Creek - Muskogee 345KV: Increase CT ratio at Pecan Creek from 800-5 to 2000-5 to allow a 1500 amp rating of line section by OKGE.	2,500	12	6/1/2006	6/1/2006
FACTORY - 3RD ST 69KV: Replace 800A Trap & Increase CT Ratio to 1200-5A by OKGE.	30,000	12	6/1/2005	6/1/2005
Subtotal by OKGE.	3,032,500			
Eureka Springs To Beaver Dam 161KV: SWPA: Reconnect CT's to 1000:5 Tap on Bkrs 42 32 & half or 22. Replace metering & reset relays for Line 2 & Line 3 by SPA.	22,500	8	6/1/2006	6/1/2006
Muskogee Tap To Gore 161KV: Recond. 16 miles with 795 ACSR by SPA.	4,000,000	18	6/1/2006	6/1/2006
Midway To Bull Shoals 161KV: Replace disconnect switches, metering CTs and wave trap at Bull Shoals by SPA.	150,000	12	6/1/2003	4/1/2004
NORFORK TO BUFORD TAP 161KV: Resag conductor and replace structures as necessary by SPA	250,000	6	6/1/2007	6/1/2007
Logan - Clay 161KV: SPA: Replace transmission line structures to allow operation at 100C by SPA	250,000	8	6/1/2004	6/1/2004
Springfield 161/69KV Transformer #3: Replace 25MVA transformer #3 with 80MVA transformer by SPA	1,300,000	12	12/1/2004	12/1/2004
Clay - Springfield 161KV: SPA: Replace disconnect switches at Springfield by SPA.	200,000	12	12/1/2004	12/1/2004
Subtotal by SPA.	6,172,500			

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
Franklin Switch To Midwest Tap 138KV: Replace 600A metering CTs with 1200A by WFEC.	55,000	9	6/1/2005	6/1/2005
Southwest Station To Anadarko 138KV: Replace bus, jumpers, switches, supports and foundations at Anadarko Switch Station by WFEC.	450,000	12	6/1/2004	6/1/2004
Pharoah To Weleetka 138KV: Replace wavetrap at Weleetka and replace jumpers by WFEC.	75,000	4	6/1/2006	6/1/2006
Subtotal by WFEC.	580,000			
Gill Energy Center East To Macarthur 69KV: Replace substation bus and jumpers at MacArthur 69 kV by WR.	22,000	12	6/1/2006	6/1/2006
Gill Energy Center East To Oatville 69KV: Replace disconnect switches at Gill 69 kV (use 800 A.), Replace line switch at Oatville 69 kV (use 800 A.) by WR.	45,000	12	6/1/2004	6/1/2004
Hoyt HTI Switching JCT To Circleville 115KV: Replace 82 structures by WR.	742,000	6	4/1/2003	6/1/2003
South Coffeyville To Dearing 138 KV: Replace wave trap to increase rating to conductor rating by WR (2000 A) by WR.	20,000	12	6/1/2008	6/1/2008
Subtotal by WR.	829,000			
Total.	66,379,470		T 1 10	

Table 2 – Option A

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Previously Assigned Facilities Requiring Only Additional Capacity For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

PREVIOUSLY ASSIGNED NETWORK UPGRADE	NEW ADDED UPGRADE	PREVIOUS REQUEST	PREVIOUS ENG. &	CURRENT TOTAL ENG.	ENG. & CONST. LEAD	DATE NEEDED	PREVIOUSLY SCHEDULED DATE
TIET IV OTHER OF OTHER	01 0111 22 2	(NO.)	CONST.	& CONST.	TIME	(M/D/Y)	IN SERVICE
NONE			COSTS (\$)	COST (\$2001)	(MONTHS)		(M/D/Y)
SUBTOTAL			\$0	\$0			

Table 3 – Option A

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Previously Assigned Facilities Requiring Only Accelerated In-Service Dates For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

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)	SCHEDULED DATE IN SERVICE (M/D/Y) (2)
Gentry REC To Flint Creek 161KV: Replace Flint Creek Wavetrap by AEP.	Transmission Owner	30,000	9	6/1/2004	6/1/2005	6/1/2004
Payne Switch Station: Expedite construction of new facility with 70MVA autotransformer by WFEC.	Transmission Owner	1,800,000	18	6/1/2007	6/1/2010	6/1/2007
Lindsay - Lindsay Sw. 69KV: Expedite replacing conductor in 8.0 miles from 1/0 to 556 ACSR, TS-1 to TH-10 by WFEC.	Transmission Owner	1,648,000	18	6/1/2007	6/1/2010	6/1/2007
CRESWELL - PARIS 69KV: Rebuild 5.7mile line by WR.	163958	1,650,000	6	6/1/2003	6/1/2004	6/1/2003
Total		5,128,000				

- 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 normally 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 - Option A

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Previously Assigned Facilities Requiring Both Additional Capacity And Accelerated In-Service Dates For Request 212202 From AEP To Entergy

During The 10-Year Period From April 1, 2003 To April 1, 2013

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

Note: 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 normally 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 - Option A

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 Request 212202 From AEP To Entergy

During The 10-Year Period From April 1, 2003 To April 1, 2013

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)
NONE					

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 02SR: 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 6 – Option A

Summary Of Requested Capacity

And The Estimate Of Base Rate Transmission Service Charges Only,

Excluding The Cost Of Network Upgrades,

For Request 212202 From AEP To Entergy

OPERATING PERIOD (MONTH)	2003 CAPACITY (MW)	2003 BASE RATE REVENUES (\$)	ANNUAL CAPACITY (MW)	ANNUAL BASE RATE REVENUES (\$)	2013 CAPACITY (MW)	2013 BASE RATE REVENUES (\$)
January	N/A	N/A	620	427,800	620	427,800
February	N/A	N/A	620	427,800	620	427,800
March	N/A	N/A	620	427,800	620	427,800
April	620	427,800	620	427,800	N/A	N/A
May	620	427,800	620	427,800	N/A	N/A
June	620	427,800	620	427,800	N/A	N/A
July	620	427,800	620	427,800	N/A	N/A
August	620	427,800	620	427,800	N/A	N/A
September	620	427,800	620	427,800	N/A	N/A
October	620	427,800	620	427,800	N/A	N/A
November	620	427,800	620	427,800	N/A	N/A
December	620	427,800	620	427,800	N/A	N/A
SUBTOTAL BY YEAR		\$3,850,200		\$5,133,600 Annually		\$1,283,400
TOTAL FOR ALL YEARS						\$51,336,000

Table 7 - Option A

Summary Of Requested Capacity

And The Estimate Of Network Upgrade Revenue Requirements Only, Excluding SPA Pre-Payments,

For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

OPERATING PERIOD (Month)	2003 Capacity (MW)	2003 NETWORK UPGRADE REVENUES (\$)	ANNUAL Capacity (MW)	ANNUAL NETWORK UPGRADE REVENUES (\$)	2013 Capacity (MW)	2013 NETWORK UPGRADE REVENUES (\$)	
January	N/A	N/A	620	753,330	620	753,330	
February	N/A	N/A	620	753,330	620	753,330	
March	N/A	N/A	620	753,330	620	753,330	
April	620	753,330	620	753,330	N/A	N/A	
May	620	753,330	620	753,330	N/A	N/A	
June	620	753,330	620	753,330	N/A	N/A	
July	620	753,330	620	753,330	N/A	N/A	
August	620	753,330	620	753,330	N/A	N/A	
September	620	753,330	620	753,330	N/A	N/A	
October	620	753,330	620	753,330	N/A	N/A	
November	620	753,330	620	753,330	N/A	N/A	
December	620	753,330	620	753,330	N/A	N/A	
SUBTOTAL BY YEAR		\$6,779,970		\$9,039,960 Annually	\$2,259,990		
TOTAL FOR ALL YEARS	\$90,399,600					\$90,399,600	

Note: Revenues are based on items received by November 1, 2002 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. Annual ATC allocated to the Transmission Customer in this application is not determined by the least amount of seasonal ATC on an annual basis.

Note: The total cost excludes the up-front expenses associated with 1) a reduction of generation at Wolf Creek, 2) a second contingency at Wolf Creek requiring unit shutdown during maintenance outage, and 3) NRC studies to interconnect with Wolf Creek – LaCygne 345kV line.

Note: These monthly payments exclude SPA's pre-payment requirements for their estimated engineering and construction costs as listed in Table 9.

Table 8 – Option A

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY	MODELED	IDENTIFIED	TRANSFER
YEAR	THIRD-PARTY	THIRD-PARTY	CASE
	OWNER	NETWORK ELEMENT	LOADING
			(%)
03AP		NONE	
03G		NONE	
03SP	EES-EES	97920 6PPG 23 230 to 97919 6VERDINE 230 CKT 1	101.2
03SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	105.3
03SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	103.8
03SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	103.8
03SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	108.5
03FA	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	101.6
03FA	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	100.6
03FA	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	102.3
03FA	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	100.8
03FA	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	108.2
03FA	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	106.1
03FA	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	109.0
03FA	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	106.9
03FA	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	100.6
03FA	EES-EES	97920 6PPG 23 230 to 98051 2PPC NO 69.0 CKT 1	100.8
03FA	EES-EES	97920 6PPG 23 230 to 98052 2PPC SO 69.0 CKT 1	100.9
03FA	SWPA-EES	52660 BULL SH5 161 to 99825 5MIDWAY# 161 CKT 1	105.4
03WP	AMRN-AMRN	30026 APCH FLT 161 to 30027 APCH FLT69.0 CKT 1	100.1
03WP	AMRN-AMRN	31408 OVERTON 345 to 31409 OVERTON 161 CKT 1	100.1
03WP	AECI-AMRN	96096 5MARIES 161 to 31024 MARIES 138 CKT 1	100.3
03WP	EES-EES	99146 3STERL 115 to 99137 3WALGRV 115 CKT 2	100.5
03WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	103.5
03WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	100.7
04G	AMRN-AMRN	31221 MOBERLY 161 to 31222 MOBERLY 69.0 CKT 1	100.7
04G	MIPU-MIPU	59288 RGAFB 2 69.0 to 59284 GRDVWTP269.0 CKT 1	100.3
04G	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	104.8
04G	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	103.8
04G	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	102.6
04G	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	102.7
04G	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	101.6
04G	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	100.4
04G	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	103.7
04G	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	102.2

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY	MODELED	IDENTIFIED	TRANSFER
YEAR	THIRD-PARTY	THIRD-PARTY	CASE
	OWNER	NETWORK ELEMENT	LOADING
			(%)
04G	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	101.2
04G	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	107.3
04G	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	105.7
04G	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	104.8
04G	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 1	102.7
04G	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 2	102.7
04G	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	108.5
04G	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	107.4
04G	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	106.2
04G	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	110.4
04G	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	108.8
04G	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	107.9
04G	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	109.9
04G	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	107.7
04G	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	100.7
04G	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	108.5
04G	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	101.4
04G	EES-EES	97920 6PPG 23 230 to 98051 2PPC NO 69.0 CKT 1	101.9
04G	EES-EES	97920 6PPG 23 230 to 98052 2PPC SO 69.0 CKT 1	102.0
05SP	ALTW-MEC	34060 WNTRST 5 161 to 64068 GRENFLD5 161 CKT 1	100.4
05SP	CELE-CELE	50031 COCODR 6 230 to 50039 COUGH 4 138 CKT 1	101.3
05SP	CELE-CELE	50154 PINEV 4 138 to 50179 SHOAKS 4 138 CKT 1	101.8
05SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	103.8
05SP	MIPU-MIPU	59253 ST JOE 5 161 to 59252 MIDWAY 5 161 CKT 1	102.3
05SP	AECI-AECI	96002 1THLG2 22.0 to 96120 5THMHIL 161 CKT 1	101.5
05SP	AECI-AECI	96071 5CLINTN 161 to 96692 2CLINTN 69.0 CKT 3	100.3
05SP	EES-EES	97920 6PPG 23 230 to 97919 6VERDINE 230 CKT 1	101.1
05SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	104.5
05SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	103.9
05SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	103.6
05SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	110.1
05SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	103.8
05WP	CELE-CELE	50039 COUGH 4 138 to 50031 COCODR 6 230 CKT 1	102.2
05WP	EES-EES	99146 3STERL 115 to 99137 3WALGRV 115 CKT 2	100.8
05WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	100.9

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY YEAR	MODELED THIRD-PARTY	IDENTIFIED THIRD-PARTY	TRANSFER CASE
	OWNER	NETWORK ELEMENT	LOADING (%)
08SP	SUNC-SUNC	56448 HOLCOMB3 115 to 56447 HOLCGEN122.0 CKT 1	100.2
08SP	SUNC-SUNC	56448 HOLCOMB3 115 to 56447 HOLCGEN122.0 CKT 1	100.1
08SP	SUNC-SUNC	56448 HOLCOMB3 115 to 56447 HOLCGEN122.0 CKT 1	100.1
08SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	104.6
08SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	104.1
08SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	104.1
08SP	AECI-AECI	96081 5GAINES 161 to 97090 2GNSVL2 69.0 CKT 1	100.4
08SP	AECI-AECI	96110 5PITTSV 161 to 96331 2PITTSV 69.0 CKT 1	100.5
08SP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	102.2
08SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	105.0
08SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	104.6
08SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	102.6
08SP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	106.3
08SP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	105.9
08SP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	103.9
08SP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	113.9
08SP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	110.8
08SP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	110.7
08SP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	122.2
08SP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	122.2
08SP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	121.2
08SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	125.0
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96649 2JASPER 69.0 CKT 1	101.1
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96649 2JASPER 69.0 CKT 1	100.5
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	100.2
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	100.1
08SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	100.6
08SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	100.3
08SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	100.1
08WP	AMRN-AMRN	31408 OVERTON 345 to 31409 OVERTON 161 CKT 1	100.6
08WP	AMRN-AMRN	31408 OVERTON 345 to 31409 OVERTON 161 CKT 1	100.5
08WP	AMRN-AMRN	31408 OVERTON 345 to 31409 OVERTON 161 CKT 1	100.4
08WP	CELE-CELE	50039 COUGH 4 138 to 50031 COCODR 6 230 CKT 1	103.0
08WP	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	105.9
08WP	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	105.4

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

08WP EES-EES 97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1 104.6 08WP EES-EES 97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1 103.5 08WP EES-EES 97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1 103.0 08WP EES-EES 97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1 102.1 08WP EES-EES 97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1 109.5 08WP EES-EES 97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1 108.1 08WP EES-EES 97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1 105.0 08WP EES-EES 97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1 106.1 08WP EES-EES 97480 L558T485 138 to 97539 4WDHAVN 138 CKT 1 105.0 08WP EES-EES 97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1 109.1 08WP EES-EES 97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1 108.9 08WP EES-EES 97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1 108.5 08WP EES-EES 97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1 104.9 08WP EES-EES 9	STUDY YEAR	MODELED THIRD-PARTY OWNER	IDENTIFIED THIRD-PARTY NETWORK ELEMENT	TRANSFER CASE LOADING (%)
08WP EES-EES 97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1 103.5 08WP EES-EES 97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1 103.0 08WP EES-EES 97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1 102.1 08WP EES-EES 97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1 109.5 08WP EES-EES 97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1 108.1 08WP EES-EES 97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1 109.1 08WP EES-EES 97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1 109.0 08WP EES-EES 97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1 108.9 08WP EES-EES 97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1 108.9 08WP EES-EES 97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1 104.9 08WP EES-EES 97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1 104.9 08WP EES-EES 97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1 104.6 08WP EES-EES 97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1 107.5	08WP	FES-FES	97454 4WALDEN 138 to 97469 4APRII 138 CKT 1	` ′
08WP EES-EES 97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1 103.0 08WP EES-EES 97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1 102.1 08WP EES-EES 97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1 109.5 08WP EES-EES 97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1 108.1 08WP EES-EES 97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1 105.0 08WP EES-EES 97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1 109.0 08WP EES-EES 97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1 109.1 08WP EES-EES 97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1 108.9 08WP EES-EES 97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1 108.9 08WP EES-EES 97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1 104.9 08WP EES-EES 97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1 102.2 08WP EES-EES 97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1 107.5 08WP EES-EES 97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1 105.4 08WP				
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08WP EES-EES 97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1 106.9 08WP EES-EES 97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1 109.1 08WP EES-EES 97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1 102.3 08WP EES-EES 97698 4JASPER 138 to 97704 4RAYBURN 138 CKT 1 104.2 08WP EES-EES 97698 4JASPER 138 to 97704 4RAYBURN 138 CKT 1 103.6 08WP EES-EES 97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1 109.9 08WP EES-EES 97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1 103.1 08WP EES-EES 97920 6PPG 23 230 to 97919 6VERDINE 230 CKT 1 100.3 08WP EES-EES 99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1 102.6 08WP SWPA-AECI 52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1 103.4	08WP	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	109.4
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08WP EES-EES 97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1 102.3 08WP EES-EES 97698 4JASPER 138 to 97704 4RAYBURN 138 CKT 1 104.2 08WP EES-EES 97698 4JASPER 138 to 97704 4RAYBURN 138 CKT 1 103.6 08WP EES-EES 97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1 109.9 08WP EES-EES 97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1 103.1 08WP EES-EES 97920 6PPG 23 230 to 97919 6VERDINE 230 CKT 1 100.3 08WP EES-EES 99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1 102.6 08WP SWPA-AECI 52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1 103.4	08WP	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	106.9
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Table 9 – Option A

SPA's Estimated Network Upgrade Costs, In-Service Dates & Pre-Payment Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy

SPA NETWORK UPGRADE REQUIRING PRE-PAYMENT	ENGINEERING & CONSTRUCTION COSTS (\$2002)	SCHEDULED DATE IN SERVICE (M/D/Y)	PRE- PAYMENT DATE (M/D/Y)
Eureka Springs To Beaver Dam 161KV: SWPA: Reconnect CT's to 1000:5 Tap on Bkrs 42 32 & half or 22. Replace metering & reset relays for Line 2 & Line 3 by SPA.	22,500	6/1/2006	9/30/2005
Muskogee Tap To Gore 161KV: Recond. 16 miles with 795 ACSR by SPA.	4,000,000	6/1/2006	9/30/2005
Midway To Bull Shoals 161KV: Replace disconnect switches, metering CTs and wave trap at Bull Shoals by SPA.	150,000	4/1/2004	8/1/2003
NORFORK TO BUFORD TAP 161KV: Resag conductor and replace structures as necessary by SPA	250,000	6/1/2007	9/30/2006
Logan - Clay 161KV: SPA: Replace transmission line structures to allow operation at 100C by SPA	250,000	6/1/2004	10/1/2003
Springfield 161/69KV Transformer #3: Replace 25MVA transformer #3 with 80MVA transformer by SPA	1,300,000	12/1/2004	4/1/2004
Clay - Springfield 161KV: SPA: Replace disconnect switches at Springfield by SPA.	200,000	12/1/2004	4/1/2004
Total pre-payment due SPA.	6,172,500		

Table 10 - Option B

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
Cherokee REC - Knox Lee 138kV: Reconductor 3.25 miles of 666 ACSR with 1272 ACSR by AEPW.	981,000	12	6/1/2003	3/15/2004
Cherokee REC - Tatum 138kV: Reconductor 6.25 miles of 666 ACSR with 1272 ACSR by AEPW.	1,641,000	18	6/1/2004	6/1/2004
Rock Hill - Tatum 138kV: Reconductor 0.81 miles 666MCM to 1272 ACSR by AEPW.	342,970	12	6/1/2004	6/1/2004
Lieberman - IPC Jefferson 138kV: Reconductor 26.35 miles of 336 ACSR with 795 ACSR by AEPW.	7,172,000	30	6/1/2006	6/1/2006
Lieberman - IPC Jefferson 138kV: Replace switches @ Lieberman by AEPW.	60,000	9	6/1/2006	6/1/2006
East Centerton To Gentry REC 161KV: Rebuild 19.16 miles of 2-397.5 ACSR with 2156 ACSR by AEPW.	8,000,000	30	6/1/2004	6/1/2005
Eureka Springs To Beaver Dam 161KV: Recond. 1.25 miles with 1590 ACSR by AEPW.	515,000	12	6/1/2006	6/1/2006
Farmington AECC To Chamber Springs Rd 161KV: Replace Farmington Switch by AEPW.	60,000	9	6/1/2005	6/1/2005
Fulton To Patmos 115KV: Reconductor 7.1 miles with 1272 ACSR by AEPW.	2,100,000	18	6/1/2006	6/1/2006
Gentry REC To Flint Creek 161KV: Rebuild 1.09 miles of 2-397.5 ACSR with 2156 ACSR. Replace wavetrap jumpers by AEPW.	400,000	12	6/1/2003	3/15/2004
S Texarkana REC To Texarkana Plant 69KV: Rebuild 5.92 miles of 266 ACSR with 795 ACSR. Replace 4/0 CU jumpers @ Texarkana Plant by AEPW.	2,400,000	15	6/1/2006	6/1/2006
TATUM TO ROCKHILL, 138KV: Reconductor other 5.76 miles of 795 ACSR with 1272 ACSR. Reset CTs and relays @ Rock Hill.	1,800,000	12	6/1/2003	6/1/2004

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
Broken Arrow North - Oneta 138KV: Rebuild 4.31 miles of 795 ACSR with 1590 ACSR by AEPW.	2,370,500	18	6/1/2006	6/1/2006
Chamber Springs Road 345/161KV Transformer: Install 2nd 345/161 kV unit by AEPW.	4,000,000	18	6/1/2006	6/1/2006
Marshall - North Marshall 69KV: Replace 350 CU bus & jumpers @ North Marshall by AEPW.	23,356	9	6/1/2007	6/1/2007
Oak Hill - Knox Lee 138KV: Replace wavetrap @ Knoxlee by AEPW.	20,000	12	6/1/2006	6/1/2006
Pittsburg - Lone Star South 138KV: Reset CT @ Pittsburg by AEPW.	10,000	3	6/1/2004	6/1/2004
Bonanza Tap - Bonanza 161KV: Rebuild 0.06 miles of 397.5 ACSR with 795MCM ACSR by AEPW.	50,000	12	6/1/2008	6/1/2008
Longwood - Noram 138KV: Reconductor 4.66 miles of bundled 266 ACSR with 1590 ACSR and replace jumpers & Bus Riser jumpers by AEPW.	1,577,000	18	6/1/2004	6/1/2004
Noram - Raines 138KV: Rebuild 5.58 miles of 2-266 ACSR with 1590 ACSR by AEPW.	2,000,000	18	6/1/2004	6/1/2004
Jacksonville - Overton 138kV: Reset relays at Jacksonville & Overton by AEPW.	15,000	6	6/1/2006	6/1/2006
Hallsville - Longview Heights 69KV: Rebuild 7.07 miles of 4/0 ACSR with 795 ACSR by AEPW.	3,000,000	18	6/1/2008	6/1/2008
Broken Bow - Craig JCT 138KV: Rebuild 7.66 miles of 3/0 CW CU with 795 ACSR by AEPW.	2,700,000	15	10/1/2003	6/1/2004
Bann - Alumax Tap 138KV: Replace six (6) 138 kV switches, five at Bann & one at Alumax Tap. Rebuild 0.67 miles of 1024 ACAR with 2156 ACSR. Replace wavetrap jumpers @ Bann. Replace breaker 3300 @ Bann by AEPW.	630,000	12	6/1/2004	6/1/2004

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.

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
Perdue - Diana 138KV: Replace Breaker 10070 @ Perdue by AEPW.	150,000	15	12/1/2003	2/1/2004
Chamber Springs - Tontitown 161kV: Rebuild 12 miles with 2156MCM of which is part of Chamber Springs - Dyess line by AEPW.	7,200,000	24	6/1/2003	3/15/2005
Broken Arrow 101ST North to Oneta 138kV: Replace wave trap by AEPW.	30,000	9	6/1/2006	6/1/2006
Flint Creek-Tontitown 161kV: Replace switch and jumpers by AEPW.	45,000	12	6/1/2004	6/1/2004
Rock Hill 138/69kV Transformer: Add 3rd Rock Hill 138/69kV 46MVA Unit by AEPW.	1,400,000	24	6/1/2006	6/1/2006
Tontitown-Elms Springs REC 161kV: Replace Switch and Elm Springs Strain Bus by AEPW. (This line is part of Flint Creek - Dyess line.)	100,000	12	6/1/2004	6/1/2004
Subtotal by AEPW.	50,792,826			
Reinmiller 161/69KV Transformer: Replace with a 150 MVA unit by EDE.	1,730,000	13	6/1/2008	6/1/2008
Oronogo - Joplin Oakland North 161KV: Reconstruct and replace 1.4 miles of 556 ACSR with Bundled 556 ACSR by EDE.	800,000	18	6/1/2003	6/1/2004
POWERSITE 161/69/12.5KV TRANSFORMER: Replace with 75MVA transformer by EDE.	1,250,000	18	12/1/2007	12/1/2007
Subtotal by EDE.	3,780,000			
412SUB - KANSAS TAP 161KV: Reconductor 9.7 miles with 1590MCM ACSR by GRDA.	1,488,000	12	6/1/2006	6/1/2006
Kerr - 412SUB 161KV: Reconductor 12.5 miles with 1590MCM ACSR by GRDA.	1,918,000	12	6/1/2006	6/1/2006
Titantic Tap - Tahlequah 69KV: Reconductor 9.4 miles with 795MCM ACSR by GRDA. Note: (1) When the projected complete	1,551,000	18	6/1/2006	6/1/2006

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy

During The 10-Year Period From April 1, 2003 To April 1, 2013

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
OKAY 161/69KV TRANSFORMER: Replace with 84MVA transformer by GRDA.	1,340,000	18	6/1/2006	6/1/2006
Subtotal by GDRA.	6,297,000			
Bucyrus - Stilwell 161KV: Rebuild Stilwell line terminal by KCPL.	6,000	6	6/1/2003	6/1/2003
Linn County 345/161kV Substation: Build new substation with 345/161kV 400 Mva transformer. Tap Wolf Creek to LaCygne 345kV line and Centerville to Paola 161kV line by KCPL.	6,945,000	24	6/1/2003	3/15/2005
Subtotal by KCPL.	6,951,000			
Pecan Creek 345/161KV Transformer: Add 2nd 345/161 kV 369MVA unit by OKGE	3,000,000	30	12/1/2003	5/1/2005
Pecan Creek - Muskogee 345KV: Increase CT ratio at Pecan Creek from 800-5 to 2000-5 to allow a 1500 amp rating of line section by OKGE.	2,500	12	6/1/2006	6/1/2006
FACTORY - 3RD ST 69KV: Replace 800A Trap & Increase CT Ratio to 1200-5A by OKGE.	30,000	12	6/1/2005	6/1/2005
Subtotal by OKGE.	3,032,500			
Eureka Springs To Beaver Dam 161KV: SWPA: Reconnect CT's to 1000:5 Tap on Bkrs 42 32 & half or 22. Replace metering & reset relays for Line 2 & Line 3 by SPA.	22,500	8	6/1/2006	6/1/2006
Muskogee Tap To Gore 161KV: Recond. 16 miles with 795 ACSR by SPA.	4,000,000	18	6/1/2004	6/1/2004
Midway To Bull Shoals 161KV: Replace disconnect switches, metering CTs and wave trap at Bull Shoals by SPA.	150,000	12	6/1/2003	4/1/2004
NORFORK TO BUFORD TAP 161KV: Resag conductor and replace structures as necessary by SPA Note: (1) When the projected complet	250,000	6	6/1/2006	6/1/2006

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy

During The 10-Year Period From April 1, 2003 To April 1, 2013

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
Logan - Clay 161KV: SPA: Replace transmission line structures to allow operation at 100C by SPA	250,000	8	6/1/2004	6/1/2004
Springfield 161/69KV Transformer #3: Replace 25MVA transformer #3 with 80MVA transformer by SPA.	1,300,000	12	12/1/2004	12/1/2004
Clay - Springfield 161KV: SPA: Replace disconnect switches at Springfield by SPA.	200,000	12	12/1/2004	12/1/2004
Subtotal by SPA.	6,172,500			
Franklin Switch To Midwest Tap 138KV: Replace 600A metering CTs with 1200A by WFEC.	55,000	9	6/1/2005	6/1/2005
Southwest Station To Anadarko 138KV: Replace bus, jumpers, switches, supports and foundations at Anadarko Switch Station by WFEC.	450,000	12	6/1/2004	6/1/2004
Pharoah To Weleetka 138KV: Replace wavetrap at Weleetka and replace jumpers by WFEC.	75,000	4	6/1/2006	6/1/2006
Subtotal by WFEC.	580,000			
Gill Energy Center East To Macarthur 69KV: Replace substation bus and jumpers at MacArthur 69 kV by WR.	22,000	12	6/1/2006	6/1/2006
Gill Energy Center East To Oatville 69KV: Replace disconnect switches at Gill 69 kV (use 800 A.), Replace line switch at Oatville 69 kV (use 800 A.) by WR.	45,000	12	6/1/2004	6/1/2004
Hoyt HTI Switching JCT To Circleville 115KV: Replace 82 structures by WR.	742,000	6	4/1/2003	6/1/2003
South Coffeyville To Dearing 138 KV: Replace wave trap to increase rating to conductor rating by WR (2000 A) by WR.	20,000	12	6/1/2007	6/1/2007
Subtotal by WR.	829,000			
Total. Note: (1) When the projected complet	78,434,826	1 111	Y 1 10	1. 1. 15

Table 11 - Option B

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Previously Assigned Facilities Requiring Only Additional Capacity For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

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 12 – Option B

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Previously Assigned Facilities Requiring Only Accelerated In-Service Dates For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

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)	SCHEDULED DATE IN SERVICE (M/D/Y) (2)
Gentry REC To Flint Creek 161KV: Replace Flint Creek Wavetrap by AEP.	Transmission Owner	30,000	9	6/1/2004	6/1/2005	6/1/2004
Payne Switch Station: Expedite construction of new facility with 70MVA autotransformer by WFEC.	Transmission Owner	1,800,000	18	6/1/2007	6/1/2010	6/1/2007
Lindsay - Lindsay Sw. 69KV: Expedite replacing conductor in 8.0 miles from 1/0 to 556 ACSR, TS-1 to TH-10 by WFEC.	Transmission Owner	1,648,000	18	6/1/2007	6/1/2010	6/1/2007
CRESWELL - PARIS 69KV: Rebuild 5.7mile line by WR.	163958	1,650,000	6	6/1/2003	6/1/2004	6/1/2003
Total		5,128,000				

- 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 normally 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 13 – Option B

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Previously Assigned Facilities Requiring Both Additional Capacity And Accelerated In-Service Dates For Request 212202 From AEP To Entergy

During The 10-Year Period From April 1, 2003 To April 1, 2013

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

Note: 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 normally 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 14 – Option B

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 Request 212202 From AEP To Entergy

During The 10-Year Period From April 1, 2003 To April 1, 2013

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)
NONE					

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 02SR: 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 15 – Option B

Summary Of Requested Capacity

And The Estimate Of Base Rate Transmission Service Charges Only,

Excluding The Cost Of Network Upgrades,

For Request 212202 From AEP To Entergy

OPERATING PERIOD (MONTH)	2003 CAPACITY (MW)	2003 BASE RATE REVENUES (\$)	ANNUAL CAPACITY (MW)	ANNUAL BASE RATE REVENUES (\$)	2013 CAPACITY (MW)	2013 BASE RATE REVENUES (\$)
January	N/A	N/A	620	427,800	620	427,800
February	N/A	N/A	620	427,800	620	427,800
March	N/A	N/A	620	427,800	620	427,800
April	620	427,800	620	427,800	N/A	N/A
May	620	427,800	620	427,800	N/A	N/A
June	620	427,800	620	427,800	N/A	N/A
July	620	427,800	620	427,800	N/A	N/A
August	620	427,800	620	427,800	N/A	N/A
September	620	427,800	620	427,800	N/A	N/A
October	620	427,800	620	427,800	N/A	N/A
November	620	427,800	620	427,800	N/A	N/A
December	620	427,800	620	427,800	N/A	N/A
SUBTOTAL BY YEAR		\$3,850,200		\$5,133,600 Annually		\$1,283,400
TOTAL FOR ALL YEARS						\$51,336,000

Table 16 – Option B

Summary Of Requested Capacity

And The Estimate Of Network Upgrade Revenue Requirements Only, Excluding SPA Pre-Payments,

For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

OPERATING PERIOD (Month)	2003 Capacity (MW)	2003 NETWORK UPGRADE REVENUES (\$)	ANNUAL Capacity (MW)	ANNUAL NETWORK UPGRADE REVENUES (\$)	2013 Capacity (MW)	2013 NETWORK UPGRADE REVENUES (\$)
January	N/A	N/A	620	905,505	620	905,505
February	N/A	N/A	620	905,505	620	905,505
March	N/A	N/A	620	905,505	620	905,505
April	620	905,505	620	905,505	N/A	N/A
May	620	905,505	620	905,505	N/A	N/A
June	620	905,505	620	905,505	N/A	N/A
July	620	905,505	620	905,505	N/A	N/A
August	620	905,505	620	905,505	N/A	N/A
September	620	905,505	620	905,505	N/A	N/A
October	620	905,505	620	905,505	N/A	N/A
November	620	905,505	620	905,505	N/A	N/A
December	620	905,505	620	905,505	N/A N/A	
SUBTOTAL BY YEAR		\$8,149,545		\$10,866,060 Annually	\$2,716,515	
TOTAL FOR ALL YEARS						\$108,660,600

Note: Revenues are based on items received by November 1, 2002 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. Annual ATC allocated to the Transmission Customer in this application is not determined by the least amount of seasonal ATC on an annual basis.

Note: The total cost excludes the up-front expenses associated with 1) a reduction of generation at Wolf Creek, 2) a second contingency at Wolf Creek requiring unit shutdown during maintenance outage, and 3) NRC studies to interconnect with Wolf Creek – LaCygne 345kV line.

Note: These monthly payments exclude SPA's pre-payment requirements for their estimated engineering and construction costs as listed in Table 18.

Table 17 - Option B

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY	MODELED	IDENTIFIED	TRANSFER
YEAR	THIRD-PARTY	THIRD-PARTY	CASE
	OWNER	NETWORK ELEMENT	LOADING
			(%)
03AP		NONE	
03G		NONE	
03SP	EES-EES	97920 6PPG 23 230 to 97919 6VERDINE 230 CKT 1	101.5
03SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	104.1
03SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	104.4
03SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	104.3
03FA	CELE-CELE	50031 COCODR 6 230 to 50039 COUGH 4 138 CKT 1	102.0
03FA	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	102.8
03FA	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	101.7
03FA	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	100.6
03FA	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	100.6
03FA	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	101.7
03FA	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	105.2
03FA	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	103.2
03FA	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	102.3
03FA	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 1	101.6
03FA	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 1	100.7
03FA	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 2	101.6
03FA	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 2	100.7
03FA	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	106.4
03FA	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	105.4
03FA	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	104.2
03FA	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	108.3
03FA	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	106.4
03FA	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	105.4
03FA	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	105.6
03FA	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	106.4
03FA	EES-EES	97920 6PPG 23 230 to 98051 2PPC NO 69.0 CKT 1	102.5
03FA	EES-EES	97920 6PPG 23 230 to 98051 2PPC NO 69.0 CKT 1	103.4
03FA	EES-EES	97920 6PPG 23 230 to 98052 2PPC SO 69.0 CKT 1	102.6
03FA	EES-EES	97920 6PPG 23 230 to 98052 2PPC SO 69.0 CKT 1	103.5
03FA	SWPA-EES	52660 BULL SH5 161 to 99825 5MIDWAY# 161 CKT 1	106.8
03WP	AMRN-AMRN	30026 APCH FLT 161 to 30027 APCH FLT69.0 CKT 1	100.2
03WP	AMRN-AMRN	31408 OVERTON 345 to 31409 OVERTON 161 CKT 1	100.1
03WP	CELE-CELE	50031 COCODR 6 230 to 50039 COUGH 4 138 CKT 1	102.1

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY	MODELED	IDENTIFIED	TRANSFER
YEAR	THIRD-PARTY	THIRD-PARTY	CASE
	OWNER	NETWORK ELEMENT	LOADING
			(%)
03WP	AECI-AMRN	96096 5MARIES 161 to 31024 MARIES 138 CKT 1	100.7
03WP	EES-EES	99146 3STERL 115 to 99137 3WALGRV 115 CKT 2	100.8
03WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	101.2
04G	SWPA-EES	52660 BULL SH5 161 to 99825 5MIDWAY# 161 CKT 1	100.9
04G	MIPU-MIPU	59288 RGAFB 2 69.0 to 59284 GRDVWTP269.0 CKT 1	100.4
04G	NPPD-NPPD	64711 GENTLM2G23.4 to 64831 GENTLMN3 345 CKT 1	100.1
04G	OPPD-OPPD	65390 S1263T1T 161 to 65627 W BROCK869.0 CKT 1	100.1
04G	OPPD-OPPD	65390 S1263T1T 161 to 65627 W BROCK869.0 CKT 1	100.1
04G	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	109.8
04G	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	108.7
04G	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	107.5
04G	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	107.6
04G	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	106.6
04G	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	105.4
04G	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	101.8
04G	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	100.7
04G	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	109.9
04G	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	107.9
04G	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	107.0
04G	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	105.0
04G	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	111.4
04G	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	110.5
04G	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	108.4
04G	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	107.9
04G	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 1	108.0
04G	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 1	106.4
04G	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 2	108.0
04G	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 2	106.4
04G	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	111.5
04G	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	111.0
04G	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	100.6
04G	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	105.4
04G	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	106.1
04G	EES-EES	97920 6PPG 23 230 to 98051 2PPC NO 69.0 CKT 1	103.7
04G	EES-EES	97920 6PPG 23 230 to 98051 2PPC NO 69.0 CKT 1	104.6

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY	MODELED	IDENTIFIED	TRANSFER
YEAR	THIRD-PARTY	THIRD-PARTY	CASE
	OWNER	NETWORK ELEMENT	LOADING
-			(%)
04G	EES-EES	97920 6PPG 23 230 to 98052 2PPC SO 69.0 CKT 1	103.7
04G	EES-EES	97920 6PPG 23 230 to 98052 2PPC SO 69.0 CKT 1	104.6
05SP	ALTW-MEC	34060 WNTRST 5 161 to 64068 GRENFLD5 161 CKT 1	100.7
05SP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	104.8
05SP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	104.6
05SP	CELE-CELE	50031 COCODR 6 230 to 50039 COUGH 4 138 CKT 1	103.4
05SP	CELE-CELE	50154 PINEV 4 138 to 50179 SHOAKS 4 138 CKT 1	103.6
05SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	104.4
05SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	100.3
05SP	MIPU-MIPU	59253 ST JOE 5 161 to 59252 MIDWAY 5 161 CKT 1	102.6
05SP	AECI-AECI	96071 5CLINTN 161 to 96692 2CLINTN 69.0 CKT 3	100.4
05SP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	101.0
05SP	EES-EES	97920 6PPG 23 230 to 97919 6VERDINE 230 CKT 1	101.3
05SP	EES-CELE	99167 3RINGLD 115 to 50024 CARROLL4 138 CKT 1	104.9
05SP	EES-CELE	99167 3RINGLD 115 to 50024 CARROLL4 138 CKT 1	104.7
05SP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	100.7
05SP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	100.7
05SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	104.5
05SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	104.2
05SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	104.1
05SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	105.2
05WP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	104.3
05WP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	104.3
05WP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	104.3
05WP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	104.3
05WP	CELE-CELE	50039 COUGH 4 138 to 50031 COCODR 6 230 CKT 1	100.8
05WP	CELE-CELE	50039 COUGH 4 138 to 50031 COCODR 6 230 CKT 1	104.3
05WP	EES-EES	99146 3STERL 115 to 99137 3WALGRV 115 CKT 2	101.1
05WP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	103.4
05WP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	103.4
05WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	101.5
08SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	105.2
08SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	104.6
08SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	104.3
08SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	101.6

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY	MODELED	IDENTIFIED	TRANSFER
YEAR	THIRD-PARTY	THIRD-PARTY	CASE
	OWNER	NETWORK ELEMENT	LOADING
			(%)
08SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	102.6
08SP	SPRM-AECI	59970 CLAY 5 161 to 97161 5LOGAN 161 CKT 1	105.8
08SP	AECI-AECI	96081 5GAINES 161 to 97090 2GNSVL2 69.0 CKT 1	100.6
08SP	AECI-AECI	96110 5PITTSV 161 to 96331 2PITTSV 69.0 CKT 1	100.5
08SP	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	101.8
08SP	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 1	102.8
08SP	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 1	101.2
08SP	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 2	102.8
08SP	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 2	101.2
08SP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	103.4
08SP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	101.4
08SP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	107.8
08SP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	104.9
08SP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	103.1
08SP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	100.5
08SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	108.6
08SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	108.5
08SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	105.0
08SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	100.2
08SP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	101.5
08SP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	123.7
08SP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	123.6
08SP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	120.3
08SP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	112.7
08SP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	120.0
08SP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	112.9
08SP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	112.9
08SP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	111.9
08SP	EES-EES	99387 3MURF-S 115 to 99389 4MURFRE 138 CKT 1	111.2
08SP	EES-EES	99387 3MURF-S 115 to 99389 4MURFRE 138 CKT 1	111.2
08SP	EES-EES	99387 3MURF-S 115 to 99389 4MURFRE 138 CKT 1	104.6
08SP	EES-EES	99387 3MURF-S 115 to 99389 4MURFRE 138 CKT 1	104.6
08SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	110.7
08SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	106.5
08SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	100.2

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY	MODELED	IDENTIFIED	TRANSFER
YEAR	THIRD-PARTY	THIRD-PARTY	CASE
	OWNER	NETWORK ELEMENT	LOADING
2225			(%)
08SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	104.0
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96649 2JASPER 69.0 CKT 1	101.4
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96649 2JASPER 69.0 CKT 1	100.7
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	100.9
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	100.7
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	100.7
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	100.4
08SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	101.4
08SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	101.0
08SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	100.8
08SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	100.7
08WP	AMRN-AMRN	31408 OVERTON 345 to 31409 OVERTON 161 CKT 1	100.5
08WP	AMRN-AMRN	31408 OVERTON 345 to 31409 OVERTON 161 CKT 1	100.1
08WP	AMRN-AMRN	31408 OVERTON 345 to 31409 OVERTON 161 CKT 1	100.6
08WP	AMRN-AMRN	31408 OVERTON 345 to 31409 OVERTON 161 CKT 1	100.7
08WP	IP-MEC	32415 GALESBRG 138 to 64411 GALESBR5 161 CKT 2	100.3
08WP	CELE-CELE	50031 COCODR 6 230 to 50039 COUGH 4 138 CKT 1	101.7
08WP	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	107.9
08WP	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	105.9
08WP	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	106.7
08WP	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	104.7
08WP	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	107.0
08WP	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	106.3
08WP	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	105.5
08WP	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	104.3
08WP	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	108.5
08WP	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	101.4
08WP	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	100.7
08WP	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	105.7
08WP	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	105.4
08WP	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	103.1
08WP	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	103.2
08WP	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	109.3
08WP	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	109.0
08WP	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	106.7

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY	MODELED	IDENTIFIED	TRANSFER
YEAR	THIRD-PARTY	THIRD-PARTY	CASE
	OWNER	NETWORK ELEMENT	LOADING
			(%)
08WP	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	106.9
08WP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	107.4
08WP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	106.4
08WP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	106.3
08WP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	107.1
08WP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	110.3
08WP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	110.1
08WP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	109.4
08WP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	108.1
08WP	EES-EES	97514 4GRIMES 138 to 97526 4MAG AND 138 CKT 1	101.5
08WP	EES-EES	97514 4GRIMES 138 to 97526 4MAG AND 138 CKT 1	100.4
08WP	EES-EES	97522 4TUBULAR 138 to 97453 4DOBBIN 138 CKT 1	109.0
08WP	EES-EES	97522 4TUBULAR 138 to 97453 4DOBBIN 138 CKT 1	107.2
08WP	EES-EES	97522 4TUBULAR 138 to 97453 4DOBBIN 138 CKT 1	107.5
08WP	EES-EES	97522 4TUBULAR 138 to 97453 4DOBBIN 138 CKT 1	106.6
08WP	EES-EES	97526 4MAG AND 138 to 97510 4SOTA 1 138 CKT 1	100.8
08WP	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	107.8
08WP	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	107.6
08WP	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	107.3
08WP	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	100.2
08WP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	104.8
08WP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	101.2
08WP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	102.1
08WP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	101.3
08WP	EES-EES	97698 4JASPER 138 to 97704 4RAYBURN 138 CKT 1	106.4
08WP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	105.6
08WP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	101.9
08WP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	102.8
08WP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	102.0
08WP	EES-EES	97920 6PPG 23 230 to 97919 6VERDINE 230 CKT 1	100.7
08WP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	110.0
08WP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	104.7
08WP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	101.6
08WP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	101.5
08WP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	118.4

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY	MODELED	IDENTIFIED	TRANSFER
YEAR	THIRD-PARTY	THIRD-PARTY	CASE
	OWNER	NETWORK ELEMENT	LOADING
			(%)
08WP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	113.1
08WP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	110.1
08WP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	109.9
08WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	103.6
08WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	103.2
08WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	102.9
08WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	102.2

Table 18 - Option B

SPA's Estimated Network Upgrade Costs, In-Service Dates & Pre-Payment Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy

SPA NETWORK UPGRADE REQUIRING PRE-PAYMENT	ENGINEERING & CONSTRUCTION COSTS (\$2002)	SCHEDULED DATE IN SERVICE (M/D/Y)	PRE- PAYMENT DATE (M/D/Y)
Eureka Springs To Beaver Dam 161KV: SWPA: Reconnect CT's to 1000:5 Tap on Bkrs 42 32 & half or 22. Replace metering & reset relays for Line 2 & Line 3 by SPA.	22,500	6/1/2006	9/30/2005
Muskogee Tap To Gore 161KV: Recond. 16 miles with 795 ACSR by SPA.	4,000,000	6/1/2004	10/1/2003
Midway To Bull Shoals 161KV: Replace disconnect switches, metering CTs and wave trap at Bull Shoals by SPA.	150,000	4/1/2004	8/1/2003
NORFORK TO BUFORD TAP 161KV: Resag conductor and replace structures as necessary by SPA	250,000	6/1/2006	9/30/2005
Logan - Clay 161KV: SPA: Replace transmission line structures to allow operation at 100C by SPA	250,000	6/1/2004	10/1/2003
Springfield 161/69KV Transformer #3: Replace 25MVA transformer #3 with 80MVA transformer by SPA	1,300,000	12/1/2004	4/1/2004
Clay - Springfield 161KV: SPA: Replace disconnect switches at Springfield by SPA.	200,000	12/1/2004	4/1/2004
Total pre-payment due SPA.	6,172,500		

Table 19 - Option C

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
981,000	12	6/1/2003	3/15/2004
1,641,000	18	6/1/2004	6/1/2004
342,970	12	6/1/2004	6/1/2004
7,172,000	30	6/1/2003	6/1/2005
60,000	9	6/1/2003	6/1/2005
5,000	6	6/1/2003	6/1/2005
174,000	30	6/1/2005	6/1/2005
515,000	12	6/1/2006	6/1/2006
60,000	9	6/1/2005	6/1/2005
2,300,000	18	6/1/2006	6/1/2006
2,400,000	15	6/1/2006	6/1/2006
1,800,000	12	6/1/2003	6/1/2004
	CONSTRUCTION COSTS (\$2001) 981,000 1,641,000 342,970 7,172,000 60,000 174,000 515,000 60,000 2,300,000 2,400,000	CONSTRUCTION COSTS (\$2001) CONST. LEAD TIME (MONTHS) 981,000 12 1,641,000 18 342,970 12 7,172,000 30 60,000 9 5,000 6 174,000 30 515,000 12 60,000 9 2,300,000 18 2,400,000 15	CONSTRUCTION COSTS (\$2001) CONST. LEAD TIME (M/D/Y) NEEDED (M/D/Y) 981,000 12 6/1/2003 1,641,000 18 6/1/2004 342,970 12 6/1/2004 7,172,000 30 6/1/2003 60,000 9 6/1/2003 5,000 6 6/1/2003 174,000 30 6/1/2005 515,000 12 6/1/2006 60,000 9 6/1/2005 2,300,000 18 6/1/2006 2,400,000 15 6/1/2006

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
Broken Arrow North - Oneta 138KV: Rebuild 4.31 miles of 795 ACSR with 1590 ACSR by AEPW.	2,370,500	18	6/1/2006	6/1/2006
Chamber Springs Road 345/161KV Transformer: Install 2nd 345/161 kV unit by AEPW.	4,000,000	18	6/1/2006	6/1/2006
Marshall - North Marshall 69KV: Replace 350 CU bus & jumpers @ North Marshall by AEPW.	23,356	3	6/1/2004	6/1/2004
Oak Hill - Knox Lee 138KV: Replace wavetrap @ Knoxlee by AEPW.	20,000	12	6/1/2006	6/1/2006
Pittsburg - Lone Star South 138KV: Reset CT @ Pittsburg by AEPW.	10,000	3	6/1/2003	6/1/2003
Bonanza Tap - Bonanza 161KV: Rebuild 0.06 miles of 397.5 ACSR with 795MCM ACSR by AEPW.	50,000	12	6/1/2008	6/1/2008
Longwood - Noram 138KV: Reconductor 4.66 miles of bundled 266 ACSR with 1590 ACSR and replace jumpers & Bus Riser jumpers by AEPW.	1,577,000	18	5/1/2004	5/1/2004
Noram - Raines 138KV: Rebuild 5.58 miles of 2-266 ACSR with 1590 ACSR by AEPW.	2,000,000	18	5/1/2004	5/1/2004
Oak Pan-Harr REC - Longwood 138KV: Rebuild 1.8 miles of 666 ACSR with 1590 ACSR by AEPW.	750,000	12	6/1/2006	6/1/2006
Raines - Arsenal Hill 138KV: Rebuild 5.32 miles 2-266MCM ACSR with 1590MCM ACSR by AEPW.	3,731,000	24	6/1/2006	6/1/2006
Jacksonville - Overton 138kV: Reset relays at Jacksonville & Overton by AEPW.	15,000	6	6/1/2003	6/1/2003
Marshall 138/69KV Transformer CKT 1: Replace 755 ACAR Strain Bus by AEPW.	25,000	9	12/1/2007	12/1/2007
Marshall 138/69KV Transformer CKT 2: Replace 755 ACAR Strain Bus by AEPW. Note: (1) When the projected complet	25,000	9	12/1/2007	12/1/2007

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.

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

CONSTRUCTION CONST. LEAD NEEDED DATE	CE (1) (1) 06
(\$2001) (MONTHS) (M/D/Y) Hallsville - Longview Heights 69KV: Rebuild 7.07 miles of 4/0 ACSR with 7.07 miles of 4/	06
Hallsville - Longview Heights 69KV: Rebuild 7.07 miles of 4/0 ACSR with 795 ACSR by AEPW. Perdue - Diana 138KV: Replace 150,000 15 12/1/2003 2/1/2003	06
Rebuild 7.07 miles of 4/0 ACSR with 795 ACSR by AEPW. 3,000,000 18 6/1/2006 6/1/20 Perdue - Diana 138KV: Replace 150,000 15 12/1/2003 2/1/20	
\pm 1 150 000 1 15 1 17/1/2002 1 2/1/20	04
Breaker 10070 @ Perdue by AEPW. 130,000 13 12/1/2003 2/1/20	
Chamber Springs - Tontitown 161kV: Rebuild 12 miles with 2156MCM of which is part of Chamber Springs - Dyess line by AEPW. 7,200,000 24 6/1/2003 3/15/20	005
Broken Arrow 101ST North to Oneta 138kV: Replace wave trap by AEPW. 30,000 9 6/1/2006 6/1/20	06
Rock Hill 138/69kV Transformer: Add 3rd Rock Hill 138/69kV 46MVA Unit by AEPW. 24 6/1/2006 6/1/20	06
Tontitown-Elms Springs REC 161kV: Replace Switch and Elm Springs Strain Bus by AEPW. (This line is part of Flint Creek - Dyess line.) 100,000 12 6/1/2004 6/1/2004	04
Subtotal by AEPW. 43,927,826	
Reinmiller 161/69KV Transformer: 1,730,000 13 6/1/2007 6/1/2007	07
Oronogo - Joplin Oakland North 161KV: Reconstruct and replace 1.4 miles of 556 ACSR with Bundled 556 ACSR by EDE. 800,000 18 6/1/2003 6/1/2003	04
POWERSITE 161/69/12.5KV TRANSFORMER: Replace with 1,250,000 18 12/1/2007 12/1/207 75MVA transformer by EDE.	007
Subtotal by EDE. 3,780,000	
412SUB - KANSAS TAP 161KV: Reconductor 9.7 miles with 1590MCM 1,488,000 12 6/1/2006 6/1/20 ACSR by GRDA.	06
Kerr - 412SUB 161KV: Reconductor 12.5 miles with 1590MCM ACSR by 1,918,000 12 6/1/2006 6/1/20 GRDA. 12 12 6/1/2006 6/1/2006	06
Titantic Tap - Tahlequah 69KV: Reconductor 9.4 miles with 795MCM ACSR by GRDA. 1,551,000 18 6/1/2006 6/1/20	06
Subtotal by GDRA. 4,957,000	

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE
Bucyrus - Stilwell 161KV: Rebuild				(M/D/Y) (1)
Stilwell line terminal by KCPL.	6,000	6	6/1/2003	6/1/2003
Linn County 345/161kV Substation: Build new substation with 345/161kV 400 Mva transformer. Tap Wolf Creek to LaCygne 345kV line and Centerville to Paola 161kV line by KCPL.	6,945,000	24	6/1/2003	3/15/2005
Subtotal by KCPL.	6,951,000			
Tahlequah To Highway 59 161KV: Remove switches #130 and #132 to increase rating from 600A to conductor limit of 662 Amps for Rate B and replace structures by OKGE.	30,000	12	6/1/2006	6/1/2006
Pecan Creek 345/161KV Transformer: Add 2nd 345/161 kV 369MVA unit by OKGE	3,000,000	30	12/1/2003	5/1/2005
Pecan Creek - Muskogee 345KV: Increase CT ratio at Pecan Creek from 800-5 to 2000-5 to allow a 1500 amp rating of line section by OKGE.	2,500	12	6/1/2006	6/1/2006
Van Buren - VBI 161KV: OKGE: Replace Switch and reconnect CT ratio at VBI by OKGE.	50,000	12	6/1/2007	6/1/2007
Osage - Continental Blacks 69KV: Rebuild & Reconductor 0.57 Miles, replace Wavetrap and increase CT ratio by OKGE.	255,000	18	6/1/2008	6/1/2008
FACTORY - 3RD ST 69KV: Replace 800A Trap & Increase CT Ratio to 1200-5A by OKGE.	30,000	12	6/1/2005	6/1/2005
Subtotal by OKGE.	3,367,500			
Eureka Springs To Beaver Dam 161KV: SWPA: Reconnect CT's to 1000:5 Tap on Bkrs 42 32 & half or 22. Replace metering & reset relays for Line 2 & Line 3 by SPA.	22,500	8	6/1/2004	6/1/2004
Eureka Springs To Beaver Dam 161KV: SWPA: Reconductor 6 miles of 795 ACSR with 1590 ACSR and develop Environmental Study by SPA.	1,860,000	18	6/1/2004	6/1/2004

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
Gore To Sallisaw 161KV: Increase clearances of approximately ten spans by SPA.	500,000	12	6/1/2004	6/1/2004
Muskogee Tap To Gore 161KV: Recond. 16 miles with 795 ACSR by SPA.	4,000,000	18	6/1/2006	6/1/2006
Midway To Bull Shoals 161KV: Replace disconnect switches, metering CTs and wave trap at Bull Shoals by SPA.	150,000	12	6/1/2003	4/1/2004
NORFORK TO BUFORD TAP 161KV: Resag conductor and replace structures as necessary by SPA	250,000	6	6/1/2006	6/1/2006
Van Buren - VBI 161KV: SPA: Replace metering CTs, disc sw, bkrs, and bus differential relaying at Van Buren by SPA	1,000,000	12	6/1/2007	6/1/2007
Logan - Clay 161KV: SPA: Replace transmission line structures to allow operation at 100C by SPA	250,000	8	6/1/2004	6/1/2004
Springfield 161/69KV Transformer #3: Replace 25MVA transformer #3 with 80MVA transformer by SPA.	1,300,000	12	12/1/2004	12/1/2004
Clay - Springfield 161KV: SPA: Replace disconnect switches at Springfield by SPA.	200,000	12	12/1/2004	12/1/2004
Subtotal by SPA.	9,532,500			
Franklin Switch To Midwest Tap 138KV: Replace 600A metering CTs with 1200A by WFEC.	55,000	9	6/1/2005	6/1/2005
Southwest Station To Anadarko 138KV: Replace bus, jumpers, switches, supports and foundations at Anadarko Switch Station by WFEC.	450,000	12	6/1/2004	6/1/2004
Pharoah To Weleetka 138KV: Replace wavetrap at Weleetka and replace jumpers by WFEC.	75,000	4	6/1/2006	6/1/2006
Subtotal by WFEC.	580,000			

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

NETWORK UPGRADE	ENGINEERING & CONSTRUCTION COSTS (\$2001)	ENG. & CONST. LEAD TIME (MONTHS)	DATE NEEDED (M/D/Y)	SCHEDULED DATE IN SERVICE (M/D/Y) (1)
Gill Energy Center East To Macarthur 69KV: Replace substation bus and jumpers at MacArthur 69 kV by WR.	22,000	12	6/1/2006	6/1/2006
Gill Energy Center East To Oatville 69KV: Replace disconnect switches at Gill 69 kV (use 800 A.), Replace line switch at Oatville 69 kV (use 800 A.) by WR.	45,000	12	6/1/2004	6/1/2004
Hoyt HTI Switching JCT To Circleville 115KV: Replace 82 structures by WR.	742,000	6	4/1/2003	6/1/2003
South Coffeyville To Dearing 138 KV: Replace wave trap to increase rating to conductor rating by WR (2000 A) by WR.	20,000	12	6/1/2006	6/1/2006
Subtotal by WR.	829,000			
Total.	73,924,826			

Table 20 – Option C

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Previously Assigned Facilities Requiring Only Additional Capacity For Request 212202 From AEP To Entergy During The 10-Year Period From April 1, 2003 To April 1, 2013

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 21 – Option C

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Previously Assigned Facilities Requiring Only Accelerated In-Service Dates For Request 212202 From AEP To Entergy

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)	SCHEDULED DATE IN SERVICE (M/D/Y) (2)
Crockett - Grimes 345KV: Reset CTs.by AEP.	Transmission Owner	3,000	3	6/1/2006	6/1/2008	6/1/2006
Payne Switch Station: Expedite construction of new facility with 70MVA autotransformer by WFEC.	Transmission Owner	1,800,000	18	6/1/2007	6/1/2010	6/1/2007
Lindsay - Lindsay Sw. 69KV: Expedite replacing conductor in 8.0 miles from 1/0 to 556 ACSR, TS-1 to TH-10 by WFEC.	Transmission Owner	1,648,000	18	6/1/2007	6/1/2010	6/1/2007
CRESWELL - PARIS 69KV: Rebuild 5.7mile line by WR.	163958	1,650,000	6	6/1/2003	6/1/2004	6/1/2003
Total		5,101,000				

- 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 normally 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 22 – Option C

Estimated Network Upgrade Costs, Lead Times & In-Service Dates For Previously Assigned Facilities Requiring Both Additional Capacity And Accelerated In-Service Dates For Request 212202 From AEP To Entergy

During The 10-Year Period From April 1, 2003 To April 1, 2013

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

Note: 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 normally 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 23 - Option C

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 Request 212202 From AEP To Entergy

During The 10-Year Period From April 1, 2003 To April 1, 2013

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)
NONE					

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 02SR: 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 24 – Option C

Summary Of Requested Capacity

And The Estimate Of Base Rate Transmission Service Charges Only,

Excluding The Cost Of Network Upgrades,

For Request 212202 From AEP To Entergy

OPERATING PERIOD (MONTH)	2003 CAPACITY (MW)	2003 BASE RATE REVENUES (\$)	ANNUAL CAPACITY (MW)	ANNUAL BASE RATE REVENUES (\$)	2013 CAPACITY (MW)	2013 BASE RATE REVENUES (\$)
January	N/A	N/A	620	427,800	620	427,800
February	N/A	N/A	620	427,800	620	427,800
March	N/A	N/A	620	427,800	620	427,800
April	620	427,800	620	427,800	N/A	N/A
May	620	427,800	620	427,800	N/A	N/A
June	620	427,800	620	427,800	N/A	N/A
July	620	427,800	620	427,800	N/A	N/A
August	620	427,800	620	427,800	N/A	N/A
September	620	427,800	620	427,800	N/A	N/A
October	620	427,800	620	427,800	N/A	N/A
November	620	427,800	620	427,800	N/A	N/A
December	620	427,800	620	427,800	N/A	N/A
SUBTOTAL BY YEAR		\$3,850,200		\$5,133,600 Annually		\$1,283,400
TOTAL FOR ALL YEARS						\$51,336,000

Table 25 – Option C

Summary Of Requested Capacity

And The Estimate Of Network Upgrade Revenue Requirements Only, Excluding SPA Pre-Payments,

For Request 212202 From AEP To Entergy

During The 10-Year Period From April 1, 2003 To April 1, 2013

OPERATING PERIOD (Month)	2003 Capacity (MW)	2003 NETWORK UPGRADE REVENUES (\$)	ANNUAL Capacity (MW)	ANNUAL NETWORK UPGRADE REVENUES (\$)	2013 Capacity (MW)	2013 NETWORK UPGRADE REVENUES (\$)
January	N/A	N/A	620	815,012	620	815,012
February	N/A	N/A	620	815,012	620	815,012
March	N/A	N/A	620	815,012	620	815,012
April	620	815,012	620	815,012	N/A	N/A
May	620	815,012	620	815,012	N/A	N/A
June	620	815,012	620	815,012	N/A	N/A
July	620	815,012	620	815,012	N/A	N/A
August	620	815,012	620	815,012	N/A	N/A
September	620	815,012	620	815,012	N/A	N/A
October	620	815,012	620	815,012	N/A	N/A
November	620	815,012	620	815,012	N/A	N/A
December	620	815,012	620	815,012	N/A	N/A
SUBTOTAL BY YEAR		\$7,335,108		\$9,780,144 Annually		\$2,445,036
TOTAL FOR ALL YEARS						\$97,801,440

Note: Revenues are based on items received by November 1, 2002 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. Annual ATC allocated to the Transmission Customer in this application is not determined by the least amount of seasonal ATC on an annual basis.

Note: The total cost excludes the up-front expenses associated with 1) a reduction of generation at Wolf Creek, 2) a second contingency at Wolf Creek requiring unit shutdown during maintenance outage, and 3) NRC studies to interconnect with Wolf Creek – LaCygne 345kV line.

Note: These monthly payments exclude SPA's pre-payment requirements for their estimated engineering and construction costs as listed in Table 27.

Table 26 – Option C

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY YEAR	MODELED THIRD-PARTY	IDENTIFIED THIRD-PARTY	TRANSFER CASE
IEAK	OWNER	NETWORK ELEMENT	LOADING
	OWINER	TUDI WORK EEENEMI	(%)
03AP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	105.3
03AP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	103.9
03AP	EES-CELE	99167 3RINGLD 115 to 50024 CARROLL4 138 CKT 1	103.8
03AP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	102.2
03AP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	102.0
03AP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	101.9
03AP	EES-EES	99387 3MURF-S 115 to 99389 4MURFRE 138 CKT 1	114.4
03AP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	114.4
03G	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	101.4
03G	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	101.2
03G	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	100.6
03G	EES-EES	99387 3MURF-S 115 to 99389 4MURFRE 138 CKT 1	111.6
03G	EES-EES	99387 3MURF-S 115 to 99389 4MURFRE 138 CKT 1	111.4
03G	EES-EES	99387 3MURF-S 115 to 99389 4MURFRE 138 CKT 1	107.3
03SP	CELE-CELE	50039 COUGH 4 138 to 50031 COCODR 6 230 CKT 1	103.5
03SP	CELE-CELE	50154 PINEV 4 138 to 50179 SHOAKS 4 138 CKT 1	103.1
03SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	105.4
03SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	104.4
03SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	104.3
03SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	100.8
03SP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	100.4
03SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	104.9
03SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	100.2
03SP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	106.0
03SP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	101.3
03SP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	108.8
03SP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	108.7
03SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	114.5
03SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	114.4
03SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	106.0
03FA	CELE-CELE	50031 COCODR 6 230 to 50039 COUGH 4 138 CKT 1	100.7
03FA	SWPA-EES	52660 BULL SH5 161 to 99825 5MIDWAY# 161 CKT 1	110.2
03FA	SWPA-EES	52660 BULL SH5 161 to 99825 5MIDWAY# 161 CKT 1	109.5
03FA	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	109.5
03FA	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	109.6

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY YEAR	MODELED THIRD-PARTY	IDENTIFIED THIRD-PARTY	TRANSFER CASE
	OWNER	NETWORK ELEMENT	LOADING (%)
03FA	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	108.6
03FA	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	107.4
03FA	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	103.8
03FA	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	102.8
03FA	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	101.6
03FA	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	112.3
03FA	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	110.8
03FA	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	109.8
03FA	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	110.7
03FA	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	110.2
03FA	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 1	107.7
03FA	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 2	107.7
03FA	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	101.5
03FA	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	100.4
03FA	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	100.3
03FA	EES-EES	97522 4TUBULAR 138 to 97453 4DOBBIN 138 CKT 1	102.3
03FA	EES-EES	97522 4TUBULAR 138 to 97453 4DOBBIN 138 CKT 1	100.7
03FA	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	102.7
03FA	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	101.7
03FA	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	100.5
03FA	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	102.0
03FA	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	102.7
03FA	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	100.4
03FA	EES-EES	97920 6PPG 23 230 to 98051 2PPC NO 69.0 CKT 1	108.1
03FA	EES-EES	97920 6PPG 23 230 to 98052 2PPC SO 69.0 CKT 1	108.3
03WP	AMRN-AMRN	30026 APCH FLT 161 to 30027 APCH FLT69.0 CKT 1	100.4
03WP	AMRN-AMRN	31408 OVERTON 345 to 31409 OVERTON 161 CKT 1	100.2
03WP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	105.4
03WP	CELE-CELE	50031 COCODR 6 230 to 50039 COUGH 4 138 CKT 1	100.6
03WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	102.3
03WP	AECI-AECI	96090 5KINGDM 161 to 96517 2KINGDM 69.0 CKT 2	100.1
03WP	AECI-AMRN	96096 5MARIES 161 to 31024 MARIES 138 CKT 1	101.3
03WP	EES-EES	97920 6PPG 23 230 to 98051 2PPC NO 69.0 CKT 1	102.7
03WP	EES-EES	97920 6PPG 23 230 to 98052 2PPC SO 69.0 CKT 1	102.8
03WP	EES-EES	99146 3STERL 115 to 99137 3WALGRV 115 CKT 2	101.4

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY YEAR	MODELED THIRD-PARTY OWNER	IDENTIFIED THIRD-PARTY NETWORK ELEMENT	TRANSFER CASE LOADING
			(%)
03WP	EES-CELE	99167 3RINGLD 115 to 50024 CARROLL4 138 CKT 1	105.7
03WP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	105.1
03WP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	105.0
03WP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	102.8
03WP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	102.7
04G	SWPA-EES	52660 BULL SH5 161 to 99825 5MIDWAY# 161 CKT 1	104.3
04G	SWPA-EES	52660 BULL SH5 161 to 99825 5MIDWAY# 161 CKT 1	103.6
04G	MIPU-MIPU	59288 RGAFB 2 69.0 to 59284 GRDVWTP269.0 CKT 1	100.6
04G	OPPD-OPPD	65390 S1263T1T 161 to 65627 W BROCK869.0 CKT 1	100.2
04G	OPPD-OPPD	65390 S1263T1T 161 to 65627 W BROCK869.0 CKT 1	100.2
04G	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	103.7
04G	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	102.6
04G	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	102.5
04G	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	101.6
04G	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	100.6
04G	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	100.4
04G	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	110.3
04G	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	109.1
04G	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	101.3
04G	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	101.0
04G	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	100.8
04G	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	104.5
04G	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	104.2
04G	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	104.1
04G	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	107.3
04G	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	106.2
04G	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	106.1
04G	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	107.5
04G	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	107.2
04G	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	107.1
04G	EES-EES	97522 4TUBULAR 138 to 97453 4DOBBIN 138 CKT 1	109.8
04G	EES-EES	97522 4TUBULAR 138 to 97453 4DOBBIN 138 CKT 1	108.1
04G	EES-EES	97522 4TUBULAR 138 to 97453 4DOBBIN 138 CKT 1	107.1
04G	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	109.5
04G	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	109.2

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY YEAR	MODELED THIRD-PARTY OWNER	IDENTIFIED THIRD-PARTY NETWORK ELEMENT	TRANSFER CASE LOADING (%)
04G	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	108.0
04G	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	107.4
04G	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	108.2
04G	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	100.2
04G	EES-EES	97920 6PPG 23 230 to 98051 2PPC NO 69.0 CKT 1	109.3
04G	EES-EES	97920 6PPG 23 230 to 98052 2PPC SO 69.0 CKT 1	109.5
05SP	ALTW-MEC	34060 WNTRST 5 161 to 64068 GRENFLD5 161 CKT 1	101.3
05SP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	101.7
05SP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	101.7
05SP	CELE-CELE	50039 COUGH 4 138 to 50031 COCODR 6 230 CKT 1	100.5
05SP	CELE-CELE	50154 PINEV 4 138 to 50179 SHOAKS 4 138 CKT 1	101.8
05SP	SWPA-AECI	52690 CARTHG 269.0 to 96649 2JASPER 69.0 CKT 1	100.8
05SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	105.4
05SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	104.4
05SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	104.3
05SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	101.2
05SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	100.1
05SP	AECI-AECI	96071 5CLINTN 161 to 96692 2CLINTN 69.0 CKT 3	100.5
05SP	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	101.5
05SP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	100.6
05SP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	106.2
05SP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	103.2
05SP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	101.8
05SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	107.3
05SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	103.7
05SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	101.0
05SP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	108.4
05SP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	104.9
05SP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	102.1
05SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	116.9
05SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	116.8
05SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	108.0
05WP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	103.4
05WP	CELE-CELE	50031 COCODR 6 230 to 50039 COUGH 4 138 CKT 1	102.5
05WP	CELE-CELE	50039 COUGH 4 138 to 50031 COCODR 6 230 CKT 1	100.5

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY	MODELED	IDENTIFIED	TRANSFER
YEAR	THIRD-PARTY	THIRD-PARTY	CASE
	OWNER	NETWORK ELEMENT	LOADING
			(%)
05WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	102.6
05WP	EES-EES	97920 6PPG 23 230 to 98051 2PPC NO 69.0 CKT 1	104.6
05WP	EES-EES	97920 6PPG 23 230 to 98052 2PPC SO 69.0 CKT 1	104.7
05WP	EES-EES	99146 3STERL 115 to 99137 3WALGRV 115 CKT 2	101.7
05WP	EES-CELE	99167 3RINGLD 115 to 50024 CARROLL4 138 CKT 1	108.7
05WP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	107.3
05WP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	102.4
05WP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	120.7
05WP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	120.5
05WP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	104.2
08SP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	107.1
08SP	CELE-EES	50024 CARROLL4 138 to 99167 3RINGLD 115 CKT 1	106.7
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96649 2JASPER 69.0 CKT 1	102.0
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96649 2JASPER 69.0 CKT 1	101.4
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	101.8
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	101.6
08SP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	101.6
08SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	103.5
08SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	103.4
08SP	MIPU-AECI	59217 WINDSR 5 161 to 96071 5CLINTN 161 CKT 1	103.4
08SP	AECI-AECI	96081 5GAINES 161 to 97090 2GNSVL2 69.0 CKT 1	101.0
08SP	AECI-AECI	96110 5PITTSV 161 to 96331 2PITTSV 69.0 CKT 1	100.5
08SP	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	104.6
08SP	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	102.6
08SP	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	100.3
08SP	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	100.5
08SP	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	105.2
08SP	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	102.3
08SP	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	100.6
08SP	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	111.8
08SP	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	108.9
08SP	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	107.1
08SP	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 1	108.4
08SP	EES-EES	97513 7GRIMES 345 to 97514 4GRIMES 138 CKT 2	108.4
08SP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	109.5

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY	MODELED	IDENTIFIED	TRANSFER
YEAR	THIRD-PARTY	THIRD-PARTY	CASE
	OWNER	NETWORK ELEMENT	LOADING
			(%)
08SP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	107.2
08SP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	104.4
08SP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	110.4
08SP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	109.5
08SP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	108.0
08SP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	105.2
08SP	EES-EES	97698 4JASPER 138 to 97704 4RAYBURN 138 CKT 1	102.3
08SP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	106.6
08SP	EES-EES	97920 6PPG 23 230 to 98051 2PPC NO 69.0 CKT 1	100.3
08SP	EES-EES	97920 6PPG 23 230 to 98052 2PPC SO 69.0 CKT 1	100.4
08SP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	104.4
08SP	EES-EES	99167 3RINGLD 115 to 99168 3SAILES 115 CKT 1	104.2
08SP	EES-EES	99230 3COUCH 115 to 99310 3MCNEIL 115 CKT 1	100.5
08SP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	119.1
08SP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	119.0
08SP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	118.4
08SP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	118.4
08SP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	118.3
08SP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	117.0
08SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	122.9
08SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	118.9
08SP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	112.7
08SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	102.9
08SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	102.3
08SP	EES-SWPA	99825 5MIDWAY# 161 to 52660 BULL SH5 161 CKT 1	102.2
08SP	EES-EES	99825 5MIDWAY# 161 to 99827 5MT HOM 161 CKT 1	102.3
08SP	EES-EES	99825 5MIDWAY# 161 to 99827 5MT HOM 161 CKT 1	101.2
08WP	AMRN-AMRN	31408 OVERTON 345 to 31409 OVERTON 161 CKT 1	100.6
08WP	AMRN-AMRN	31408 OVERTON 345 to 31409 OVERTON 161 CKT 1	100.2
08WP	IP-MEC	32415 GALESBRG 138 to 64411 GALESBR5 161 CKT 2	101.0
08WP	CELE-CELE	50045 DOLHILL7 345 to 50046 DOLHILL6 230 CKT 1	100.8
08WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	104.1
08WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	103.9
08WP	SWPA-AECI	52690 CARTHG 269.0 to 96751 2REEDS 69.0 CKT 1	103.3
08WP	AECI-AMRN	96096 5MARIES 161 to 31024 MARIES 138 CKT 1	100.1

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY	MODELED	IDENTIFIED	TRANSFER
YEAR	THIRD-PARTY	THIRD-PARTY	CASE
	OWNER	NETWORK ELEMENT	LOADING
			(%)
08WP	EES-EES	97453 4DOBBIN 138 to 97457 4LONGMIR 138 CKT 1	105.1
08WP	EES-EES	97453 4DOBBIN 138 to 97457 4LONGMIR 138 CKT 1	103.2
08WP	EES-EES	97453 4DOBBIN 138 to 97457 4LONGMIR 138 CKT 1	102.1
08WP	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	107.2
08WP	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	107.2
08WP	EES-EES	97454 4WALDEN 138 to 97469 4APRIL 138 CKT 1	107.2
08WP	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	109.3
08WP	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	109.2
08WP	EES-EES	97469 4APRIL 138 to 97470 4LFOREST 138 CKT 1	108.1
08WP	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	108.4
08WP	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	108.2
08WP	EES-EES	97470 4LFOREST 138 to 97539 4WDHAVN 138 CKT 1	107.1
08WP	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	111.3
08WP	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	110.5
08WP	EES-EES	97480 L558T485 138 to 97484 4HUNTSVL 138 CKT 1	109.3
08WP	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	110.0
08WP	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	107.5
08WP	EES-EES	97487 4MT.ZION 138 to 97480 L558T485 138 CKT 1	106.9
08WP	EES-EES	97510 4SOTA 1 138 to 97508 4NAVSOTA 138 CKT 1	105.2
08WP	EES-EES	97510 4SOTA 1 138 to 97508 4NAVSOTA 138 CKT 1	104.1
08WP	EES-EES	97510 4SOTA 1 138 to 97508 4NAVSOTA 138 CKT 1	103.6
08WP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	108.0
08WP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	107.9
08WP	EES-EES	97514 4GRIMES 138 to 97454 4WALDEN 138 CKT 1	107.8
08WP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	108.9
08WP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	108.0
08WP	EES-EES	97514 4GRIMES 138 to 97487 4MT.ZION 138 CKT 1	108.0
08WP	EES-EES	97514 4GRIMES 138 to 97526 4MAG AND 138 CKT 1	105.8
08WP	EES-EES	97514 4GRIMES 138 to 97526 4MAG AND 138 CKT 1	105.3
08WP	EES-EES	97514 4GRIMES 138 to 97526 4MAG AND 138 CKT 1	105.2
08WP	EES-EES	97526 4MAG AND 138 to 97510 4SOTA 1 138 CKT 1	106.3
08WP	EES-EES	97526 4MAG AND 138 to 97510 4SOTA 1 138 CKT 1	105.2
08WP	EES-EES	97526 4MAG AND 138 to 97510 4SOTA 1 138 CKT 1	104.7
08WP	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	107.2
08WP	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	107.0

Identified Third-Party Network Upgrades & Required In-Service Dates

To Accommodate This Request For Transmission Service

For Request 212202 From AEP To Entergy

STUDY YEAR	MODELED THIRD-PARTY OWNER	IDENTIFIED THIRD-PARTY NETWORK ELEMENT	TRANSFER CASE LOADING (%)
08WP	EES-EES	97539 4WDHAVN 138 to 97459 4CONROE 138 CKT 1	105.9
08WP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	107.9
08WP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	107.9
08WP	EES-EES	97686 4LEACH 138 to 97618 4NEWTONB 138 CKT 1	107.3
08WP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	108.7
08WP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	108.6
08WP	EES-EES	97708 4TOLEDO 138 to 97686 4LEACH 138 CKT 1	108.0
08WP	EES-EES	97920 6PPG 23 230 to 97919 6VERDINE 230 CKT 1	101.8
08WP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	125.4
08WP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	125.2
08WP	EES-EES	99263 3LEWIS # 115 to 99230 3COUCH 115 CKT 1	114.7
08WP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	117.5
08WP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	110.6
08WP	EES-EES	99303 3PATMOS# 115 to 99263 3LEWIS # 115 CKT 1	110.2
08WP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	107.0
08WP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	104.3
08WP	EES-EES	99389 4MURFRE 138 to 99387 3MURF-S 115 CKT 1	104.1
		-	

Table 27 – Option C

SPA's Estimated Network Upgrade Costs, In-Service Dates & Pre-Payment Dates For Facilities Assigned To Only This Request For Transmission Service For Request 212202 From AEP To Entergy

SPA NETWORK UPGRADE REQUIRING PRE-PAYMENT	ENGINEERING & CONSTRUCTION COSTS (\$2002)	SCHEDULED DATE IN SERVICE (M/D/Y)	PRE- PAYMENT DATE (M/D/Y)
Eureka Springs To Beaver Dam 161KV: SWPA: Reconnect CT's to 1000:5 Tap on Bkrs 42 32 & half or 22. Replace metering & reset relays for Line 2 & Line 3 by SPA.	22,500	6/1/2004	10/1/2003
Eureka Springs To Beaver Dam 161KV: Reconductor 6 miles of 795 ACSR with 1590 ACSR and develop Environmental Study by SPA.	1,860,000	6/1/2004	10/1/2003
Gore To Sallisaw 161KV: Increase clearances of approximately ten spans by SPA.	500,000	6/1/2004	10/1/2003
Muskogee Tap To Gore 161KV: Recond. 16 miles with 795 ACSR by SPA.	4,000,000	6/1/2006	9/30/2005
Midway To Bull Shoals 161KV: Replace disconnect switches, metering CTs and wave trap at Bull Shoals by SPA.	150,000	4/1/2004	8/1/2003
NORFORK TO BUFORD TAP 161KV: Resag conductor and replace structures as necessary by SPA	250,000	6/1/2006	9/30/2005
Van Buren - VBI 161KV: SPA: Replace metering CTs, disc sw, bkrs, and bus differential relaying at Van Buren by SPA.	1,000,000	6/1/2007	9/30/2006
Logan - Clay 161KV: SPA: Replace transmission line structures to allow operation at 100C by SPA	250,000	6/1/2004	10/1/2003
Springfield 161/69KV Transformer #3: Replace 25MVA transformer #3 with 80MVA transformer by SPA	1,300,000	12/1/2004	4/1/2004
Clay - Springfield 161KV: SPA: Replace disconnect switches at Springfield by SPA.	200,000	12/1/2004	4/1/2004
Total pre-payment due SPA.	9,532,500		

Table 28 Estimate Of Transmission Service Costs By Option

Option: A B C

Description Of Transfers:		620MW AEP-EES & OMW ERCOTE-EES	620MW AEP-EES & 165MW ERCOTE-EES	620MW AEP-EES & 465MW ERCOTE-EES
Term (4/1/2003-4/1/2013)	(Years)	10	10	10
Network Upgrades Only For 620MW AEP-EES				
Total Assigned Engineering & Construction Costs	(\$)	66,379,470	78,434,826.00	73,924,826.00
Expedited Engineering & Construction Costs	(\$)	5,128,000	5,128,000.00	5,101,000.00
Total Estimated Cost	(\$)	97,763,520	116,674,920.00	109,375,680.00
Average Rate Based On Estimated Total Cost	(\$/MW-Month)	1,314.03	1,568.21	1,470.10
Average Indirect Cost Multiplier	Per-Unit	1.4728	1.4875	1.4796
SPA Pre-Payment Credit	(\$)	7,363,920	8,014,320.00	11,574,240.00
Total - SPA Pre-Payment Credit (Basis For Monthly Payments)	(\$)	90,399,600	108,660,600.00	97,801,440.00

Table 28 (Cont.)

Option:		А	В	С		
Description Of Transfers:	-	620MW AEP-EES & 0MW ERCOTE-EES	620MW AEP-EES & 165MW ERCOTE-EES	620MW AEP-EES & 465MW ERCOTE-EES		
Sum Of Pre-Payments To SPA Due 8 Months Prior To In-Service Date For Eng. & Construction (Required By Project In Addition To Monthly Payments)	(\$)	6,172,500	6,172,500.00	9,532,500.00		
Wolf Creek Generation Reduction Expense Estimated Total Cost	(\$)	2,000,000	2,000,000	2,000,000		
Network Upgrades & Wolf Creek Expense						
Total Estimated Cost	(\$)	99,763,520	118,674,920	111,375,680		
Average Rate Based On Estimated Total Cost	(\$/MW-Month)	1,340.91	1,595.09	1,496.98		
Base Rate Revenues Only For 620MW AEP-EES						
Total	(\$)	51,336,000	51,336,000	51,336,000		