



*Aggregate Facility Study  
SPP-2007-AG2-AFS-8  
For Transmission Service  
Requested by  
Aggregate Transmission Customers*

*SPP Engineering, SPP Tariff Studies*

SPP AGGREGATE FACILITY STUDY (SPP-2007-AG2-AFS-8)

December 22, 2008

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## **1. Executive Summary**

Pursuant to Attachment Z1 of the Southwest Power Pool Open Access Transmission Tariff (OATT), 647 MW of long-term transmission service requests have been restudied in this Aggregate Facility Study (AFS). The first phase of the AFS consisted of a revision of the impact study to reflect the withdrawal of requests for which an Aggregate Facility Study Agreement was not executed. The principal objective of the AFS is to identify system problems and potential modifications necessary to facilitate these transfers while maintaining or improving system reliability as well as summarizing the operating limits and determination of the financial characteristics associated with facility upgrades. Facility upgrade costs are allocated on a prorated basis to all requests positively impacting any individual overloaded facility. Further, Attachment Z2 provides for facility upgrade cost recovery by stating that “Transmission Customers paying Directly Assigned Upgrade Costs for Service Upgrades or that are in excess of the Safe Harbor Cost Limit for Network Upgrades associated with new or changed Designated Resources and Project Sponsors paying Directly Assigned Upgrade Costs for Sponsored Upgrades shall receive revenue credits in accordance with Attachment Z2. Generation Interconnection Customers paying for Network Upgrades shall receive credits for new transmission service using the facility as specified in Attachment Z1.”

The total assigned facility upgrade Engineering and Construction (E &C) cost determined by the AFS is \$6 Million. Additionally an indeterminate amount of assigned E & C cost for 3<sup>rd</sup> party facility upgrades are assignable to the customer. The total upgrade levelized revenue requirement for all transmission requests is \$ 13 Million. This is based on full allocation of levelized revenue requirements for upgrades to customers without consideration of base plan funding. AFS data table 3 reflects the allocation of upgrade costs to each request without potential base plan funding based on either the requested reservation period or the deferred reservation period if

applicable. Total upgrade levelized revenue requirements for all transmission requests after consideration of potential base plan funding is \$11 Million.

Third-party facilities must be upgraded when it is determined they are constrained in order to accommodate the requested Transmission Service. These include both first-tier neighboring facilities outside SPP and Transmission Owner facilities within SPP that are not under the SPP OATT. In this AFS, third-party facilities were identified. Total engineering and construction cost estimates for required third-party facility upgrades are indeterminate. The SWPA upgrades require prepayments prior to construction. The Spearville-Knoll-Axtell 345kV Ckt 1 facility will be considered as a Balanced Portfolio project by the SPP BOD at their January 2009 meeting. If this line is approved, it will be considered a construction pending project and not assignable to 2007-AG2 customers.

The Transmission Provider will tender a Letter of Intent on December 17th, 2008. This will open a 15-day window for Customer response. To remain in the Aggregate Transmission Service Study (ATSS), the Transmission Provider must receive from the Transmission Customer (Customer) by January 1st, 2009, an executed Letter of Intent. The Letter of Intent will list options the Customer must choose to clarify their commitment to remain in the ATSS. The only action required on OASIS is to WITHDRAW the request or leave the request in STUDY mode.

At the conclusion of the ATSS, Service Agreements for each request for service will be tendered identifying the terms and conditions of the confirmed service.

If customers withdraw from the ATSS after posting of this AFS, the AFS will be re-performed to determine final cost allocation and Available Transmission Capability (ATC) in consideration of the remaining ATSS participants. All allocated revenue requirements for facility upgrades are assigned to the customer in the AFS data tables. Potential base plan funding allowable is contingent upon validation of designated resources meeting Attachment J, Section III B criteria.

## **2. Introduction**

On January 21, 2005, the Federal Energy Regulatory Commission accepted Southwest Power Pool's proposed aggregate transmission study procedures in Docket ER05-109 to become effective February 1, 2005. In compliance with this Order, the second open season of 2007 commenced on February 1, 2007. All requests for long-term transmission service received prior to June 1, 2007 with a signed study agreement were then included in this second Aggregate Transmission Service Study (ATSS) of 2007.

Approximately 647 MW of long-term transmission service has been restudied in this Aggregate Facility Study (AFS) with over \$6 Million in transmission upgrades being proposed. The results of the AFS are detailed in Tables 1 through 7. A highly tangible benefit of studying transmission requests aggregately under the SPP OATT Attachment Z1 is the sharing of costs among customers using the same facility. The detailed results show individual upgrade costs by study as well as potential base plan allowances as determined by Attachments J and Z1. The following URL can be used to access the SPP OATT: ([http://www.spp.org/Publications/SPP\\_Tariff.pdf](http://www.spp.org/Publications/SPP_Tariff.pdf)). In order to understand the extent to which base plan upgrades may be applied to both point-to-point and network transmission services, it is necessary to highlight the definition of Designated Resource. Per Section 1.9a of the SPP OATT, a Designated Resource is “[a]ny designated generation resource owned, purchased or leased by a Transmission Customer to serve load in the SPP Region. Designated Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Transmission Customer's load on a non-interruptible basis.” Therefore, not only network service, but also point-to-point service has potential for base plan funding if the conditions for classifying upgrades associated with designated resources as base plan upgrades as defined in Section III.B of Attachment J are met.

Pursuant to Attachment J, Section III B of the SPP OATT, the Transmission Customer must provide SPP information necessary to verify that the new or changed Designated Resource meets the following conditions:

1. Transmission Customer's commitment to the requested new or changed Designated Resource must have a duration of at least five years.
2. During the first year the Designated Resource is planned to be used by the Transmission Customer, the accredited capacity of the Transmission Customer's existing Designated Resources plus the lesser of (a) the planned maximum net dependable capacity applicable to the Transmission Customer or (b) the requested capacity; shall not exceed 125% of the Transmission Customer's projected system peak responsibility determined pursuant to SPP Criteria 2.

According to Attachment Z1 Section VI.A, Point-to-Point customers pay the higher of the monthly transmission access charge (base rate) or the monthly revenue requirement associated with the assigned facility upgrades including any prepayments for redispatch required during construction.

Network Integration Service customers pay the total monthly transmission access charges and the monthly revenue requirement associated with the facility upgrades including any prepayments for redispatch during construction.

Transmission Customers paying for a directly assigned network upgrade shall receive credits for new transmission service using the facility as specified in Attachment Z2.

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 allocated ATC within the requested reservation period will be offered to the Transmission Customer on an applicable annual basis as listed in Table 1. The ATC may be limited by transmission owner planned projects, expansion plan projects, or customer assigned upgrades.

Some constraints identified in the AFS were not assigned to the Customer as the Transmission Provider determined that upgrades are not required due to various reasons or the Transmission Owner has construction plans pending for these upgrades. These facilities are listed by reservation in Table 3. This table also includes constrained facilities in the current planning horizon that limit the rollover rights of the Transmission Customer. Table 6 lists possible redispatch pairs to allow start of service prior to completion of assigned network upgrades. Table 7 (if applicable) lists deferment of expansion plan projects with different upgrades with the new required in service date as a result of this AFS.

#### **A. Financial Analysis**

The AFS utilizes the allocated customer E & C cost in a present worth analysis to determine the monthly levelized revenue requirement of each facility upgrade over the term of the reservation. In some cases, network upgrades cannot be completed within the requested reservation period, thus deferred reservation periods will be utilized in the present worth analysis. If the Customer chose Option 2, Redispatch, in the Letter of Intent sent coincident with the initial AFS, the present worth analysis of revenue requirements will be based on the deferred term with

redispatch in the subsequent AFS. The upgrade levelized revenue requirement includes interest, depreciation, and carrying costs.

Each request for Transmission Service is evaluated independently as the cost associated with each Network Upgrade is assigned to a request. When facilities are upgraded throughout the reservation period, the Transmission Customer shall 1) pay the total E & C costs and other annual operating costs associated with the new facilities, and 2) receive credits associated with the depreciated book value of removed usable facilities, salvage value of removed non-usable facilities, and the carrying charges, excluding depreciation, associated with all removed usable facilities based on their respective book values.

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

Achievable Base Plan Avoided Revenue Requirements in the case of a Base Plan upgrade being displaced or deferred by an earlier in service date for a Requested Upgrade shall be determined per Attachment J, Section VII.B methodology. A deferred Base Plan upgrade being defined as a different requested network upgrade needed at an earlier date that negates the need for the initial

base plan upgrade within the planning horizon. A displaced Base Plan upgrade being defined as the same network upgrade being displaced by a requested upgrade needed at an earlier date. Assumption of a 40 year service life is utilized for Base Plan funded projects unless provided otherwise by the Transmission Owner. A present worth analysis of revenue requirements on a common year basis between the Base Plan and Requested Upgrades was performed to determine avoided Base Plan revenue requirements due to the displacement or deferral of the Base Plan upgrade by the Requested Upgrade. The difference in present worth between the Base Plan and Requested Upgrades is assigned to the transmission requests impacting this upgrade based on the displacement or deferral.

### **B. Third Party Facilities**

For third-party facilities listed in Table 3 and Table 5, the Transmission Customer is responsible for funding the necessary upgrades of these facilities per Section 21.1 of the Transmission Provider's OATT. In this AFS, third-party facilities were identified. Total engineering and construction cost estimates for required third-party facility upgrades are indeterminate. The SWPA upgrades require prepayments prior to construction. The Spearville-Knoll-Axtell 345kV Ckt 1 facility will be considered as a Balanced Portfolio project by the SPP BOD at their January 2009 meeting. If this line is approved, it will be considered a construction pending project and not assignable to 2007-AG2 customers. The Transmission Provider will undertake reasonable efforts to assist the Transmission Customer in making arrangements for necessary engineering, permitting, and construction of the third-party facilities. Third-party facility upgrade engineering and construction cost estimates are not utilized to determine the present worth value of levelized revenue requirements for SPP system network upgrades.

All modeled facilities within the Transmission Provider system were monitored during the development of this Study as well as certain facilities in first-tier neighboring systems. Third-party facilities must be upgraded when it is determined that they are overloaded while

accommodating the requested Transmission Service. An agreement between the Customer and 3<sup>rd</sup> Party Owner detailing the mitigation of the 3<sup>rd</sup> party impact must be provided to the Transmission Provider prior to tendering of a Transmission Service Agreement. These facilities also include those owned by members of the Transmission Provider who have not placed their facilities under the Transmission Provider's OATT. Upgrades on the Southwest Power Administration network requires prepayment of the upgrade cost prior to construction of the upgrade.

Third-party facilities are evaluated for only those requests whose load sinks within the SPP footprint. The Customer must arrange for study of 3<sup>rd</sup> party facilities for load that sinks outside the SPP footprint with the applicable Transmission Providers.

### **3. Study Methodology**

#### **A. Description**

The system impact analysis was conducted to determine the steady-state impact of the requested service on the SPP and first tier Non - SPP control area systems. The steady-state analysis was done to ensure current SPP Criteria and NERC Reliability Standards requirements are fulfilled. The Southwest Power Pool conforms to the NERC Reliability Standards, which provide the strictest requirements, related to voltage violations and thermal overloads during normal conditions and during a contingency. It requires that all facilities be within normal operating ratings for normal system conditions and within emergency ratings after a contingency. Normal operating ratings and emergency operating ratings monitored are Rate A and B in the SPP MDWG models, respectively. The upper bound and lower bound of the normal voltage range monitored is 110% and 90%. The upper bound and lower bound of the emergency voltage range monitored is 110% and 90%. Transmission Owner voltage monitoring criteria is used if more restrictive. The SPS Tuco 230 kV bus voltage is monitored at 92.5% due to pre-determined

system stability limitations. The WERE Wolf Creek 345 kV bus voltage is monitored at 98.5% due to transmission operating procedure.

The contingency set includes all SPP control area branches and ties 69kV and above, first tier Non - SPP control area branches and ties 115 kV and above, any defined contingencies for these control areas, and generation unit outages for the control areas with SPP reserve share program redispatch. The monitor elements include all SPP control area branches, ties, and buses 69 kV and above, and all first tier Non – SPP control area branches and ties 115 kV and above. Voltage monitoring was performed for SPP control area buses 69 kV and above.

A 3 % transfer distribution factor (TDF) cutoff was applied to all SPP control area facilities. For first tier Non – SPP control area facilities, a 3 % TDF cutoff was applied to AECl, AMRN, and ENTR and a 2 % TDF cutoff was applied to MEC, NPPD, and OPPD. For voltage monitoring, a 0.02 per unit change in voltage must occur due to the transfer or modeling upgrades to be considered a valid limit to the transfer.

## **B. Model Development**

SPP used twelve seasonal models to study the aggregate transfers of 647 MW over a variety of requested service periods. The SPP MDWG 2008 Series Quarter 4 Cases 2008/09 Winter Peak (08WP), 2009 April (09AP), 2009 Spring Peak (09G), 2008 Summer Peak (09SP), 2009 Summer Shoulder (09SH), 2009 Fall Peak (09FA), 2009/10 Winter Peak (09WP), 2010 Summer Peak (10SP), 2010/11 Winter Peak (10WP), 2013 Summer Peak (13SP), 2013/14 Winter Peak (13WP), and 2018 Summer Peak (18SP) were used to study the impact of the requested service on the transmission system. The Spring Peak models apply to April and May, the Summer Peak models apply to June through September, the Fall Peak models apply to October and November, and the Winter Peak models apply to December through March.

The chosen base case models were modified to reflect the most current modeling information. Five groups of requests were developed from the aggregate of 647 MW in order to minimize counter flows among requested service. Each request was included in at least two of the four groups depending on the requested path. All requests were included in group five. From the twelve seasonal models, five system scenarios were developed. Scenario 1 includes SWPP OASIS transmission requests not already included in the SPP 2008 Series Cases flowing in a West to East direction with ERCOTN HVDC Tie South to North, ERCOTE HVDC Tie East to West, SPS exporting, and SPS importing from the Lamar HVDC Tie. Scenario 2 includes transmission requests not already included in the SPP 2008 Series Cases flowing in an East to West direction with ERCOTN HVDC tie North to South, ERCOTE HVDC tie East to West, SPS importing, and SPS exporting to the Lamar HVDC Tie. Scenario 3 includes transmission requests not already included in the SPP 2008 Series Cases flowing in a South to North direction with ERCOTN HVDC tie South to North, ERCOTE HVDC tie East to West, SPS exporting, and SPS exporting to the Lamar HVDC Tie. Scenario 4 includes transmission requests not already included in the SPP 2008 Series Cases flowing in a North to South direction with ERCOTN HVDC tie North to South, ERCOTE HVDC tie East to West, SPS importing, and SPS importing from the Lamar HVDC tie. Scenario 5 include all transmission not already included in the SPP 2008 Series Cases with ERCOTN North to South, ERCOTE East to West, SPS importing and SPS exporting to the Lamar HVDC tie. The system scenarios were developed to minimize counter flows from previously confirmed, higher priority requests not included in the MDWG Base Case.

### **C. Transmission Request Modeling**

Network Integration Transmission Service requests are modeled as Generation to Load transfers in addition to Generation to Generation transfers. The Generation to Load modeling is accomplished by developing a pre-transfer case by redispatching the existing designated network resource(s) down by the new designated network resource request amount and scaling down the

applicable network load by the same amount proportionally. The post-transfer case for comparison is developed by scaling the network load back to the forecasted amount and dispatching the new designated network resource being requested. Network Integration Transmission Service requests are modeled as Generation to Load transfers in addition to Generation to Generation because the requested Network Integration Transmission Service is a request to serve network load with the new designated network resource and the impacts on transmission system are determined accordingly. If the Network Integration Transmission Service request application clearly documents that the existing designated network resource(s) is being replaced or undesignated by the new designated network resource then MW impact credits will be given to the request as is done for a redirect of existing transmission service. Point-To-Point Transmission Service requests are modeled as Generation to Generation transfers. Generation to Generation transfers are accomplished by developing a post-transfer case for comparison by dispatching the request source and redispatching the request sink.

#### **D. Transfer Analysis**

Using the selected cases both with and without the requested transfers modeled, the PSS/E Activity ACCC was run on the cases and compared to determine the facility overloads caused or impacted by the transfer. Transfer distribution factor cutoffs (SPP and 1<sup>st</sup>-Tier) and voltage threshold (0.02 change) were applied to determine the impacted facilities. The PSS/E options chosen to conduct the analysis can be found in Appendix A.

#### **E. Curtailment and Redispatch Evaluation**

During any period when SPP determines that a transmission constraint exists on the Transmission System, and such constraint may impair the reliability of the Transmission System, SPP will take whatever actions that are reasonably necessary to maintain the reliability of the Transmission System. To the extent SPP determines that the reliability of the Transmission System can be maintained by redispatching resources, SPP will evaluate interim curtailment of

existing confirmed service or interim redispatch of units to provide service prior to completion of any assigned network upgrades. Any redispatch may not unduly discriminate between the Transmission Owners' use of the Transmission System on behalf of their Native Load Customers and any Transmission Customer's use of the Transmission System to serve its designated load. Redispatch was evaluated to provide only interim service during the time frame prior to completion of any assigned network upgrades. Curtailment of existing confirmed service is evaluated to provide only interim service. Curtailment of existing confirmed service is only evaluated at the request of the transmission customer.

SPP determined potential relief pairs to relieve the incremental MW impact on limiting facilities as identified in Table 6. Using the selected cases where the limiting facilities were identified, potential incremental and decremental units were identified by determining the generation amount available for increasing and decreasing from the units generation amount, maximum generation amount, and minimum generation amount. If the incremental or decremental amount was greater than 1 MW, the unit was considered as a potential incremental or decremental unit. Generation shift factors were calculated for the potential incremental and decremental units using Managing and Utilizing System Transmission (MUST). Relief pairs from the generation shift factors for the incremental and decremental units with a greater than 3% TDF on the limiting constraint were determined from the incremental units with the lowest generation shift factors and decremental units with highest generation shift factors. If the aggregate redispatch amount for the potential relief pair was determined to be three times greater than the lower of the increment or decrement then the pair was determined not to be feasible and is not included. If transmission customer would like to see additional relief pairs beyond the relief pairs determined, the transmission customer can request SPP to provide the additional pairs. The potential relief pairs **were not** evaluated to determine impacts on limiting facilities in the SPP and 1st-Tier systems. The redispatch requirements would be called upon prior to implementing NERC TLR Level 5a.

#### **4. Study Results**

##### **A. Study Analysis Results**

Tables 1 through 6 contain the steady-state analysis results of the AFS. Table 1 identifies the participating long-term transmission service requests included in the AFS. This table lists deferred start and stop dates both with and without redispatch (based on customer selection of redispatch if available), the minimum annual allocated ATC without upgrades and season of first impact. Table 2 identifies total E & C cost allocated to each Transmission Customer, letter of credit requirements, third party E & C cost assignments, potential base plan E & C funding (lower of allocated E & C or Attachment J Section III B criteria) , total revenue requirements for assigned upgrades without consideration of potential base plan funding, point-to-point base rate charge, total revenue requirements for assigned upgrades with consideration of potential base plan funding, and final total cost allocation to the Transmission Customer. In addition, Table 2 identifies SWPA upgrade costs which require prepayment in addition to other allocated costs. Table 3 provides additional details for each request including all assigned facility upgrades required, allocated E & C costs, allocated revenue requirements for upgrades, upgrades not assigned to customer but required for service to be confirmed, credits to be paid for previously assigned AFS or GI network upgrades, and any third party upgrades required. Table 4 lists all upgrade requirements with associated solutions needed to provide transmission service for the AFS, Minimum ATC per upgrade with season of impact, Earliest Date Upgrade is required (DUN), Estimated Date the upgrade will be completed and in service (EOC), and Estimated E & C cost. Table 5 lists identified Third-Party constrained facilities. Table 6 identifies potential redispatch pairs available to relieve the aggregate impacts on identified constraints to prevent deferral of start of service. Table 7 (if applicable) identifies deferred expansion plan projects that were replaced with requested upgrades at earlier dates.

The potential base plan funding allowable is contingent upon meeting each of the conditions for classifying upgrades associated with designated resources as base plan upgrades as defined in

Section III.B of Attachment J. If the additional capacity of the new or changed designated resource exceeds the 125% resource to load forecast for the year of start of service, the requested resource is not eligible for base plan funding of required network upgrades and the full cost of the upgrades is assignable to the customer. If the 5 year term and 125% resource to load criteria are met, the lesser of the planned maximum net dependable capacity (NDC) or the requested capacity is multiplied by \$180,000 to determine the potential base plan funding allowable. When calculating Base Plan Funding amounts that include a wind farm, the amount used is 10% of the requested amount of service, or the NDC. The Maximum Potential Base Plan Funding Allowable may be less than the potential base plan funding allowable due to the E & C Cost allocated to the customer being lower than the potential amount allowable to the customer. The customer is responsible for any assigned upgrade costs in excess of Potential Base Plan Engineering and Construction Funding Allowable.

Regarding application of base plan funding for PTP requests, if PTP base rate exceeds upgrade revenue requirements without taking into effect the reduction of revenue requirements by potential base plan funding, then the base rate revenue pays back the Transmission Owner for upgrades and no base plan funding is applicable as the access charge must be paid as it is the higher of “OR” pricing.

However, if initially the upgrade revenue requirements exceed the PTP base rate, then potential base plan funding would be applicable. The test of the higher of “OR” pricing would then be made against the remaining assignable revenue requirements versus PTP base rate. Examples are as follows:

Example A:

E & C allocated for upgrades is 74 million with revenue requirements of 140 million and PTP base rate of 101 million. Potential base plan funding is 47 million with the difference of 27

million E & C assignable to the customer. If the revenue requirements for the assignable portion is 54 million and the PTP base rate is 101 million, the customer will pay the higher “OR” pricing of 101 million base rate of which 54 million revenue requirements will be paid back to the Transmission Owners for the upgrades and the remaining revenue requirements of (140-54) or 86 million will be paid by base plan funding.

Example B:

E & C allocated for upgrades is 74 million with revenue requirements of 140 million and PTP base rate of 101 million. Potential base plan funding is 10 million with the difference of 64 million E & C assignable to the customer. If the revenue requirements for this assignable portion is 128 million and the PTP base rate is 101 million the customer will pay the higher “OR” pricing of 128 million revenue requirements to be paid back to the Transmission Owners and the remaining revenue requirements of (140-128) or 12 million will be paid by base plan funding.

Example C:

E & C allocated for upgrades is 25 million with revenue requirements of 50 million and PTP base rate of 101 million. Potential base plan funding is 10 million. Base plan funding is not applicable as the higher “OR” pricing of PTP base rate of 101 million must be paid and the 50 million revenue requirements will be paid from this.

The 125% resource to load determination is performed on a per request basis and is not based on a total of designated resource requests per Customer. A footnote will provide the maximum resource designation allowable for base plan funding consideration per Customer basis per year.

Base plan funding verification requires that each Transmission Customer with potential for base plan funding provide SPP attestation statements verifying that the firm capacity of the requested designated resource is committed for a minimum five year duration.

## **B. Study Definitions**

The Date Upgrade Needed Date (DUN) is the earliest date the upgrade is required to alleviate a constraint considering all requests. End of Construction (EOC) is the estimated date the upgrade will be completed and in service. The Total Engineering and Construction Cost (E & C) is the upgrade solution cost as determined by the transmission owner. The Transmission Customer Allocation Cost is the estimated engineering and construction cost based upon the allocation of costs to all Transmission Customers in the AFS who positively impact facilities by at least 3% subsequently overloaded by the AFS. Minimum ATC is the portion of the requested capacity that can be accommodated with out upgrading facilities. Annual ATC allocated to the Transmission Customer is determined by the least amount of allocated seasonal ATC within each year of a reservation period.

## **5. Conclusion**

The results of the AFS show that limiting constraints exist in many areas of the regional transmission system. Due to these constraints, transmission service cannot be granted unless noted in Table 3.

The Transmission Provider will tender a Letter of Intent on December 17th, 2008. This will open a 15-day window for Customer response. To remain in the Aggregate Transmission Service Study (ATSS), the Transmission Provider must receive from the Transmission Customer (Customer) by January 1st, 2009, an executed Letter of Intent. The Letter of Intent will list options the Customer must choose to clarify their commitment to remain in the ATSS. The only action required on OASIS is to WITHDRAW the request or leave the request in STUDY mode.

The Transmission Provider must receive an unconditional and irrevocable letter of credit in the amount of the total allocated Engineering and Construction costs assigned to the Customer. This letter of credit is not required for those facilities that are base plan funded. This amount is for all assignable Network Upgrades less pre-payment requirements. The amount of the letter of credit will be adjusted down on an annual basis to reflect amortization of these costs. The Transmission Provider will issue notifications to construct facility upgrades to the constructing Transmission Owner. This date is determined by the engineering and construction lead time provided for each facility upgrade.

## 6. Appendix A

### PSS/E CHOICES IN RUNNING LOAD FLOW PROGRAM AND ACCC

#### BASE CASES:

Solutions - Fixed slope decoupled Newton-Raphson solution (FDNS)  
Tap adjustment – Stepping  
Area interchange control – Tie lines and loads  
Var limits – Apply immediately  
Solution options -  Phase shift adjustment  
                   Flat start  
                   Lock DC taps  
                   Lock switched shunts

#### ACCC CASES:

Solutions – AC contingency checking (ACCC)  
MW mismatch tolerance – 0.5  
Contingency case rating – Rate B  
Percent of rating – 100  
Output code – Summary  
Min flow change in overload report – 3mw  
Excl'd cases w/ no overloads form report – YES  
Exclude interfaces from report – NO  
Perform voltage limit check – YES  
Elements in available capacity table – 60000  
Cutoff threshold for available capacity table – 99999.0  
Min. contng. case Vltg chng for report – 0.02  
Sorted output – None  
Newton Solution:  
Tap adjustment – Stepping  
Area interchange control – Tie lines and loads  
Var limits - Apply automatically  
Solution options -  Phase shift adjustment  
                   Flat start  
                   Lock DC taps  
                   Lock switched shunts

**Table 1 - Long-Term Transmission Service Requests Included in Aggregate Facility Study**

Customer	Study Number	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date without interim redispatch	Deferred Stop Date without interim redispatch	Start Date with interim redispatch	Stop Date with interim redispatch	Minimum Allocated ATC (MW) within reservation period	Season of Minimum Allocated ATC within reservation period
AEPM	AG2-2007-049	1283585	WFEC	CSWS	15	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
AEPM	AG2-2007-051	1283682	WFEC	CSWS	152	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
AEPM	AG2-2007-107	1286446	CSWS	CSWS	100	1/1/2009	1/1/2010	6/1/2011	6/1/2012	2/1/2009	2/1/2010	0	09SP
CWEP	AG2-2007-047	1283676	EES	SPA	12	6/1/2010	6/1/2040	6/1/2010	6/1/2040	6/1/2010	6/1/2040	0	10SP
KCPS	AG2-2007-109	1286498	KCPL	EES	82	1/1/2009	6/1/2010	6/1/2011	11/1/2012	2/1/2009	7/1/2010	0	09SP
KEPC	AG2-2007-028	1281648	WR	EDE	6	1/1/2008	1/1/2019	6/1/2011	6/1/2022	2/1/2009	2/1/2020	0	08SP
KPP	AG2-2007-072	1285893	WR	WR	8	11/1/2007	11/1/2017	6/1/2011	6/1/2021	2/1/2009	2/1/2019	0	08SP
MIDW	AG2-2007-012	1268955	WR	WR	5	6/1/2008	6/1/2013	6/1/2013	6/1/2018	6/1/2013	6/1/2018	0	08SP
MIDW	AG2-2007-013	1268959	WR	WR	1	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-014	1268965	WR	WR	1	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-034	1281706	WR	WR	25	3/1/2008	3/1/2027	6/1/2013	6/1/2032	6/1/2013	6/1/2032	0	08SP
MIDW	AG2-2007-069	1285864	WR	WR	4	6/1/2008	6/1/2013	6/1/2013	6/1/2018	6/1/2013	6/1/2018	0	08SP
MIDW	AG2-2007-069	1285865	WR	WR	3	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-069	1285866	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-069	1285867	WR	WR	1	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-070	1285869	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-071	1285872	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-071	1285873	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-078	1285946	WR	WR	3	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-078	1285947	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-078	1285948	WR	WR	1	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-079	1285949	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-079	1285950	WR	WR	1	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-080	1285951	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-080	1285952	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
MIDW	AG2-2007-080	1285953	WR	WR	1	6/1/2008	6/1/2013	6/1/2011	6/1/2016	2/1/2009	2/1/2014	0	08SP
SPRM	AG2-2007-110	1286502	WR	SPA	25	12/1/2008	12/1/2028	6/1/2011	6/1/2031	2/1/2009	2/1/2029	0	09SP
WFEC	AG2-2007-016	1278401	WFEC	WFEC	19	12/15/2007	12/15/2032	6/1/2011	6/1/2036	2/1/2009	2/1/2034	0	08SP
WRGS	AG2-2007-011D	1268638	KCPL	AMRN	20	6/1/2010	6/1/2015	6/1/2010	6/1/2015	6/1/2010	6/1/2015	0	10SP
WRGS	AG2-2007-017D	1278809	EES	SPA	20	3/1/2010	3/1/2040	6/1/2011	6/1/2041	3/1/2010	3/1/2040	0	10SP
WRGS	AG2-2007-018D	1278811	EES	SPA	20	3/1/2010	3/1/2040	3/1/2010	3/1/2040	3/1/2010	3/1/2040	0	10SP
WRGS	AG2-2007-019D	1278813	EES	SPA	7	3/1/2010	3/1/2040	3/1/2010	3/1/2040	3/1/2010	3/1/2040	0	10SP
WRGS	AG2-2007-092D	1286201	SECI	WR	99	3/1/2009	3/1/2019	6/1/2011	6/1/2021	3/1/2009	3/1/2019	0	09SP

**Note 1:** Disregard Redispatch shown in Table 6 for limitations identified earlier than the start date with redispatch with the exception of limitations identified in the 2009 Summer Shoulder, and 2009 Fall Peak

**Note 2:** Start and Stop Dates with interim redispatch are determined based on customers choosing option to pursue redispatch to start service at Requested Start and Stop Dates or earliest date possible.

**Table 2 - Total Revenue Requirements Associated with Long-Term Transmission Service Requests**

Customer	Study Number	Reservation	Engineering and Construction Cost of Upgrades Allocated to Customer for Revenue Requirements	<sup>1</sup> Letter of Credit Amount Required	<sup>2</sup> Potential Base Plan Engineering and Construction Funding Allowable	Notes	<sup>4</sup> Additional Engineering and Construction Cost for 3rd Party Upgrades	<sup>3</sup> Total Revenue Requirements for Assigned Upgrades Over Term of Reservation WITHOUT Potential Base Plan Funding Allocation	<sup>3,5</sup> Total Revenue Requirements for Assigned Upgrades Over Term of Reservation WITH Potential Base Plan Funding Allocation	Point-to-Point Base Rate Over Reservation Period	<sup>4</sup> Total Cost of Reservation Assignable to Customer Contingent Upon Base Plan Funding
AEPM	AG2-2007-049	1283585	\$ 2,227,058	\$ 1,951,015	\$ 270,000		\$ -	\$ 3,886,762	\$ 3,415,546	\$ -	\$ 3,415,546
AEPM	AG2-2007-051	1283682	\$ 560,056	\$ -	\$ 560,056		\$ -	\$ 849,054	\$ -	\$ -	Schedule 9 Charges
AEPM	AG2-2007-107	1286446	\$ 115,205	\$ 41,780	\$ -		\$ -	\$ 148,238	\$ 148,238	\$ -	\$ 148,238
CWEP	AG2-2007-047	1283676	\$ -	\$ -	\$ -	6	\$ 351,364	\$ -	\$ -	\$ 3,888,000	\$ 4,239,364
KCPS	AG2-2007-109	1286498	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 1,254,600	\$ 1,254,600
KEPC	AG2-2007-028	1281648	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	Schedule 9 Charges
KPP	AG2-2007-072	1285893	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	Schedule 9 Charges
MIDW	AG2-2007-012	1268955	\$ -	\$ -	\$ -	7	\$ 73,929,066	\$ -	\$ -	\$ 472,500	\$ 74,401,566
MIDW	AG2-2007-013	1268959	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 94,500	\$ 94,500
MIDW	AG2-2007-014	1268965	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 94,500	\$ 94,500
MIDW	AG2-2007-034	1281706	\$ -	\$ -	\$ -	7	\$ 106,927,681	\$ -	\$ -	\$ -	\$ 106,927,681
MIDW	AG2-2007-069	1285864	\$ -	\$ -	\$ -	7	\$ 59,143,253	\$ -	\$ -	\$ 378,000	\$ 59,521,253
MIDW	AG2-2007-069	1285865	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 283,500	\$ 283,500
MIDW	AG2-2007-069	1285866	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 189,000	\$ 189,000
MIDW	AG2-2007-069	1285867	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 94,500	\$ 94,500
MIDW	AG2-2007-070	1285869	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 189,000	\$ 189,000
MIDW	AG2-2007-071	1285872	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 189,000	\$ 189,000
MIDW	AG2-2007-071	1285873	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 189,000	\$ 189,000
MIDW	AG2-2007-078	1285946	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 283,500	\$ 283,500
MIDW	AG2-2007-078	1285947	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 189,000	\$ 189,000
MIDW	AG2-2007-078	1285948	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 94,500	\$ 94,500
MIDW	AG2-2007-079	1285949	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 189,000	\$ 189,000
MIDW	AG2-2007-079	1285950	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 94,500	\$ 94,500
MIDW	AG2-2007-080	1285951	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 189,000	\$ 189,000
MIDW	AG2-2007-080	1285952	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 189,000	\$ 189,000
MIDW	AG2-2007-080	1285953	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 94,500	\$ 94,500
SPRM	AG2-2007-110	1286502	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	\$ 7,193,014
WFEC	AG2-2007-016	1278401	\$ 3,270,987	\$ -	\$ 342,000		\$ -	\$ 8,416,457	\$ 7,536,469	\$ -	\$ 7,536,469
WRGS	AG2-2007-011D	1268638	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ 1,080,000	\$ 1,080,000
WRGS	AG2-2007-017D	1278809	\$ -	\$ -	\$ -	6	Indeterminate	\$ -	\$ -	\$ 6,480,000	\$ 6,480,000
WRGS	AG2-2007-018D	1278811	\$ -	\$ -	\$ -		Indeterminate	\$ -	\$ -	\$ 6,480,000	\$ 6,480,000
WRGS	AG2-2007-019D	1278813	\$ -	\$ -	\$ -		Indeterminate	\$ -	\$ -	\$ 2,268,000	\$ 2,268,000
WRGS	AG2-2007-092D	1286201	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	Schedule 9 Charges
Grand Total			\$ 6,173,306					\$ 13,300,511	\$ 11,100,253		

## Table 2 - Total Revenue Requirements Associated with Long-Term Transmission Service Requests

**Note 1:** Letter of Credit required for financial security for transmission owner for network upgrades is determined by allocated engineering and construction costs less engineering and construction costs for upgrades when network customer is the transmission owner less the E & C allocation of expedited projects. Letter of Credit is not required for base plan funded upgrades. The Letter Of Credit Amount listed is based on meeting OATT Attachment J requirements for base plan funding.

**Note 2.** If potential base plan funding is applicable, this value is the lesser of the Engineering and Construction costs of assignable upgrades or the value of base plan funding calculated pursuant to Attachment J, Section III B criteria. Allocation of base plan funding is contingent upon verification of customer agreements meeting Attachment J, Section II B criteria. Not applicable if Point-to-Point base rate exceeds revenue requirements.

**Note 3:** Revenue Requirements (RR) are based upon deferred end dates if applicable. Deferred dates are based upon customer's choice to pursue redispatch. Achievable Base Plan Avoided RR in the case of a Base Plan upgrade being displaced or deferred by an earlier in service date for a Requested Upgrade shall be determined per Attachment J, Section VII.C methodology. Assumption of a 40 year service life is utilized for Base Plan funded projects. A present worth analysis of RR on a common year basis between the Base Plan and Requested Upgrades was performed to determine avoided Base Plan RR due to the displacement or deferral of the Base Plan upgrade by the Requested Upgrade. The incremental increase in present worth of a Requested Upgrade on a common year basis as a Base Plan upgrade is assigned to the transmission requests impacting the upgrade based on the displacement or deferral. If the displacement analysis results in lower RR due to the shorter amortization period of the requested upgrade when compared to a base plan amortization period, then no direct assignment of the upgrade cost is made due to the displacement to an earlier start date.

**Note 4.** For Point-to-Point requests, total cost is based on the higher of the base rate or assigned upgrade revenue requirements. For Network requests, the total cost is based on the assigned upgrade revenue requirement. Allocation of base plan funding will be determined after verification of designated resource meeting Attachment J, Section II B Criteria. Additionally E & C of 3rd Party upgrades is assignable to Customer. This includes prepayments required for any SWPA upgrades. Revenue requirements for 3rd Party facilities are not calculated. Total cost to customer is based on assumption of Revenue Requirements with confirmation of base plan funding. Customer is responsible for negotiating redispatch costs if applicable. Customer is also responsible to pay credits for previously assigned upgrades that are impacted by their request. Credits can be paid from base plan funding if applicable.

**Note 5:** RR with base plan funding may increase or decrease even if no base plan funding is applicable to a particular request if another request that shares the upgrade is now full base plan funded resulting in a different amortization period for the upgrade and thus different RR.

**Note 6:** SWPA Upgrade Cost Prepayments are required in addition to Total Cost of Reservation.

**Note 7:** The Spearville-Knoll-Axtell 345kV Ckt 1 facility will be considered as a Balanced Portfolio project by the SPP BOD at their January 2009 meeting. If this line is approved, it will be considered a construction pending project and not assignable to 2007-AG2 customers.

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
 AEPM AG2-2007-049

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
AEPM	1283585	WFEC	CSWS	15	6/1/2008	6/1/2013	6/1/2010	6/1/2016	\$ 270,000	\$ -	\$ 2,227,058	\$ 3,886,762
									\$ 270,000	\$ -	\$ 2,227,058	\$ 3,886,762

  

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1283585	DIANA - LONE STAR SOUTH 138KV CKT 1	2/1/2009	6/1/2010			\$ 6,876	\$ 150,000	\$ 10,418
	FARGOJCT2 69.000 - FT SUPPLY 69KV CKT 1	4/1/2009	6/1/2011			\$ 2,138,746	\$ 5,350,000	\$ 3,743,269
	FARGOJCT2 69.000 - WOODWARD 69KV CKT 1	4/1/2009	6/1/2010			\$ 40,267	\$ 100,000	\$ 70,658
	MAUD - FIXICO - WELEETKA 138KV CKT 1 Displacement	2/1/2009	6/1/2011			41,169	573,306	62,418
	<b>Total</b>					\$ 2,227,058	\$ 6,173,306	\$ 3,886,763

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283585	BUFFALO - FT SUPPLY 69KV CKT 1	6/1/2010	6/1/2010		
	BUFFALO - WEST 69KV CKT 1	2/1/2009	6/1/2010		Yes
	IODINE - MOORELAND 138KV CKT 1	2/1/2009	6/1/2010		Yes
	MCELROY - STILLWATER 138KV CKT 1	6/1/2010	6/1/2011		Yes
	MOORELAND - MOREWOOD SW 138KV CKT 1	2/1/2009	6/1/2010		Yes
	Multi-Dover-Twin Lake Crescent 138 kV	6/1/2014	6/1/2014		
	RIVERSIDE STATION - TULSA POWER STATION 138KV CKT 1	6/1/2010	6/1/2011		Yes
	SILLOAM CITY - SILOAM SPRINGS 161KV CKT 1	6/1/2009	6/1/2011		

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283585	BROKEN BOW - CRAIG JUNCTION 138KV CKT 1	2/1/2009	6/1/2009		Yes
	SOUTHWEST SHREVEPORT (SW SHV 1) 345/138/13.8KV TRANSFORMER CKT 1	2/1/2009	6/1/2009		Yes

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283585	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012		
	HUGO POWER PLANT - VALLIANT 345 KV WFEC	7/1/2012	7/1/2012		
	KNOBHILL (KNOBHIL4) 138/69/13.2KV TRANSFORMER CKT 1	6/1/2006	6/1/2008		
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
 AEPM AG2-2007-051

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
AEPM	1283682	WFEC	CSWS	152	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ 560,056	\$ -	\$ 560,056	\$ 849,053
									\$ 560,056	\$ -	\$ 560,056	\$ 849,053

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1283682	DIANA - LONE STAR SOUTH 138KV CKT 1	2/1/2009	6/1/2010			\$ 69,699	\$ 150,000	\$ 105,598
	MAUD - FIXICO - WELEETKA 138KV CKT 1 Displacement	2/1/2009	6/1/2011			490,357	573,306	743,455
						Total	\$ 560,056	\$ 723,306

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283682	ANADARKO - CYRIL 69KV CKT 1	4/1/2009	6/1/2009		Yes

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283682	RIVERSIDE STATION - TULSA POWER STATION 138KV CKT 1	6/1/2010	6/1/2011		Yes
	SILOAM CITY - SILOAM SPRINGS 161KV CKT 1	6/1/2009	6/1/2011		

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283682	BROKEN BOW - CRAIG JUNCTION 138KV CKT 1	2/1/2009	6/1/2009		Yes
	SOUTHWEST SHREVEPORT (SW SHV 1) 345/138/13.8KV TRANSFORMER CKT 1	2/1/2009	6/1/2009		Yes

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283682	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012		
	HUGO POWER PLANT - VALLIANT 345 KV WFEC	7/1/2012	7/1/2012		

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
 AEPM AG2-2007-107

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
AEPM	1286446	CSWS	CSWS	100	1/1/2009	1/1/2010	6/1/2011	6/1/2012	-	-	\$ 115,205	\$ 148,238
									\$	-	\$ 115,205	\$ 148,238

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1286446	DIANA - LONE STAR SOUTH 138KV CKT 1	2/1/2009	6/1/2010			\$ 73,425	\$ 150,000	\$ 95,029
	MAUD - FIXICO - WELEETKA 138KV CKT 1 Displacement	2/1/2009	6/1/2011			41,780	573,306	53,209
Total						\$ 115,205	\$ 723,306	\$ 148,238

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286446	MOORELAND - MOREWOOD SW 138KV CKT 1	2/1/2009	6/1/2010		Yes
	RIVERSIDE STATION - TULSA POWER STATION 138KV CKT 1	6/1/2010	6/1/2011		
	SILOAM CITY - SILOAM SPRINGS 161KV CKT 1	6/1/2009	6/1/2011		Yes

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286446	BARTLESVILLE SOUTHEAST - NORTH BARTLESVILLE 138KV CKT 1	6/1/2009	6/1/2011		Yes
	BROKEN BOW - CRAIG JUNCTION 138KV CKT 1	2/1/2009	6/1/2009		Yes
	COFFEYVILLE TAP - DEARING 138KV CKT 1 AEPW	2/1/2009	6/1/2010		Yes
	COFFEYVILLE TAP - DEARING 138KV CKT 1 WERE	2/1/2009	6/1/2010		Yes
	COFFEYVILLE TAP - DEARING 138KV CKT 1 WERE #2	6/1/2010	6/1/2010		
	COFFEYVILLE TAP - NORTH BARTLESVILLE 138KV CKT 1	6/1/2009	6/1/2011		Yes
	SOUTHWEST SHREVEPORT (SW SHV 1) 345/138/13.8KV TRANSFORMER CKT 1	2/1/2009	6/1/2009		Yes

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
CWEP AG2-2007-047

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
CWEP	1283676	EES	SPA	12	6/1/2010	6/1/2040			\$ -	\$ 3,888,000	\$ -	\$ -
									\$ -	\$ 3,888,000	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1283676	LYDIA - WELSH 345KV CKT 1	6/1/2010	6/1/2010		Yes	\$ -	\$ -	\$ -
						Total	\$ -	\$ -

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283676	3RDST - ARKOMA 161KV CKT 1	6/1/2017	6/1/2017		
	ASHDOWN WEST - CRAIG JUNCTION 138KV CKT 1	6/1/2013	6/1/2013		
	Multi - Stateline - Joplin - Reinmiller conversion	6/1/2016	6/1/2016		

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283676	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012		
	HUGO POWER PLANT - VALLIANT 345 KV WFEC	7/1/2012	7/1/2012		
	SUB 110 - ORONOGO JCT. - SUB 167 - RIVERTON 161KV CKT 1	6/1/2011	6/1/2011		

Third Party Limitations.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost
1283676	HUBEN 345/161KV TRANSFORMER CKT 1	6/1/2017	6/1/2017			\$ 351,364	\$ 6,500,000
						Total	\$ 351,364 \$ 6,500,000

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
 KCPS AG2-2007-109

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
KCPS	1286498	KCPL	EES	82	1/1/2009	6/1/2010	6/1/2011	11/1/2012	\$ -	\$ 1,254,600	\$ -	\$ -
									\$ -	\$ 1,254,600	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1286498	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286498	Grandview East - Sampson - Longview 161kV Ckt 1			6/1/2012	6/1/2009
	Loma Vista - Montrose 161kV Tap into K.C. South			6/1/2009	6/1/2011
					Yes

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286498	LACYGNE - WEST GARDNER 345KV CKT 1			6/1/2006	6/1/2006
	NORTHWEST - WOODWARD 345KV CKT 1			1/1/2010	1/1/2010
	RENO 345/115KV CKT 1			6/1/2009	6/1/2009
	RENO 345/115KV CKT 2			6/1/2010	6/1/2010
	SUMMIT - RENO 345KV			6/1/2010	6/1/2010
	WICHITA - RENO 345KV			6/1/2009	6/1/2009

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
KEPC AG2-2007-028

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
KEPC	1281648	WR	EDE	6	1/1/2008	1/1/2019	6/1/2011	6/1/2022	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1281648	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
						Total	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281648	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281648	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		Yes
	MCELROY - STILLWATER 138KV CKT 1	6/1/2010	6/1/2011		Yes
	Multi - Stateline - Joplin - Reinmill conversion	6/1/2016	6/1/2016		
	PLATTE CITY - SMITHVILLE 161KV CKT 1	12/1/2010	12/1/2010		
	SILLOAM CITY - SILOAM SPRINGS 161KV CKT 1	6/1/2009	6/1/2011		Yes
	South Harper 161 kV cut-in to Stilwell-Archie JCT 161 kV line	6/1/2009	6/1/2014		Yes
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281648	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	REDEL - STILWELL 161KV CKT 1	6/1/2009	6/1/2011		Yes

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281648	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUB 110 - ORONOGO JCT. - SUB 167 - RIVERTON 161KV CKT 1	6/1/2011	6/1/2011		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
KPP AG2-2007-072

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
KPP	1285893	WR	WR	8	11/1/2007	11/1/2017	6/1/2011	6/1/2021	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1285893	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285893	BPLJ - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON SWITCHING STATION 115KV CKT 1			6/1/2009	6/1/2011
	Summit - NE Saline 115 kV			6/1/2009	12/1/2009

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285893	AQUARIUS - HUDSON JUNCTION 69KV CKT 1			6/1/2018	6/1/2018
	AQUARIUS - LITCHFIELD 69KV CKT 1			6/1/2018	6/1/2018
	AUBURN ROAD (AUBRN77X) 230/115/13.8KV TRANSFORMER CKT 2			6/1/2013	6/1/2013
	CHISHOLM - RIPLEY 69KV CKT 1			6/1/2009	6/1/2011
	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1 #1			6/1/2010	6/1/2010
	FORT JUNCTION SWITCHING STATION - WEST JUNCTION CITY JUNCTION 115KV CKT 1			6/1/2010	6/1/2011
	HUDSON JUNCTION - PITTSBURG 69KV CKT 1			6/1/2018	6/1/2018
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1			6/1/2009	6/1/2011
	LITCHFIELD - AQUARIUS - HUDSON JUNCTION 69KV CKT 1			6/1/2013	6/1/2013
	SEVENTEENTH (I) 138/69/11.295KV TRANSFORMER CKT 2			6/1/2009	6/1/2011
	STRANGER CREEK - NW LEAVENWORTH 115KV			6/1/2010	6/1/2011
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2			6/1/2010	6/1/2010

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285893	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1 Displacement			6/1/2009	6/1/2011
	EAST MANHATTAN - NW MANHATTAN 230/115KV Displacement			6/1/2009	6/1/2011
	East Manhattan to Mcdowell 230 kV Displacement			6/1/2009	6/1/2011
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement			4/1/2009	6/1/2011

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285893	LACYGNE - WEST GARDNER 345KV CKT 1			6/1/2006	6/1/2006
	RENO 345/115KV CKT 1			6/1/2009	6/1/2009
	RENO 345/115KV CKT 2			6/1/2010	6/1/2010
	SUMMIT - RENO 345KV			6/1/2010	6/1/2010
	WICHITA - RENO 345KV			6/1/2009	6/1/2009

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
MIDW AG2-2007-012

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1268955	WR	WR	5	6/1/2008	6/1/2013	6/1/2013	6/1/2018	\$ -	\$ 472,500	\$ -	\$ -
									\$ -	\$ 472,500	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1268955	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268955	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		
	Knob Hill - Steele City 115 kV	6/1/2009	6/1/2013		

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268955	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	KINSLEY 115KV Capacitor	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	South Harper 161 kV cut-in to Stilwell-Archie JCT 161 kV line	6/1/2009	6/1/2014		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268955	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	REDEL - STILWELL 161KV CKT 1	6/1/2009	6/1/2011		

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268955	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

Third Party Limitations.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost
1268955	SPEARVILLE - KNOLL - AXTELL 345KV CKT 1	6/1/2009	6/1/2013		Yes	\$ 73,929,066	\$ 240,000,000
Total						\$ 73,929,066	\$ 240,000,000

\*34.5 kV System Impacts and Upgrades have yet to be determined by Midwest Energy

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
MIDW AG2-2007-013

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1268959	WR	WR	1	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 94,500	\$ -	\$ -
									\$ -	\$ 94,500	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1268959	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
						Total	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268959	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		
	Knob Hill - Steele City 115 kV	6/1/2009	6/1/2013		

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268959	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	KINSLY 115KV Capacitor	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268959	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268959	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

\*34.5 kV System Impacts and Upgrades have yet to be determined by Midwest Energy

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
MIDW AG2-2007-014

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1268965	WR	WR	1	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 94,500	\$ -	\$ -
									\$ -	\$ 94,500	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1268965	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268965	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		
	Knob Hill - Steele City 115 kV	6/1/2009	6/1/2013		

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268965	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	KINSLY 115KV Capacitor	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268965	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268965	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

\*34.5 kV System Impacts and Upgrades have yet to be determined by Midwest Energy

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
MIDW AG2-2007-034

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1281706	WR	WR	25	3/1/2008	3/1/2027	6/1/2013	6/1/2032	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1281706	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281706	BPU - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		Yes

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281706	AQUARIUS - HUDSON JUNCTION 69KV CKT 1	6/1/2018	6/1/2018		
	AQUARIUS - LITCHFIELD 69KV CKT 1	6/1/2018	6/1/2018		
	AUBURN ROAD (AUBRN77X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2013	6/1/2013		
	CHISHOLM - RIPLEY 69KV CKT 1	6/1/2009	6/1/2011		Yes
	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1 #1	6/1/2010	6/1/2010		
	FORT JUNCTION SWITCHING STATION - WEST JUNCTION CITY JUNCTION 115KV CKT 1	6/1/2010	6/1/2011		Yes
	HUDSON JUNCTION - PITTSBURG 69KV CKT 1	6/1/2018	6/1/2018		
	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1 MIDW	6/1/2018	6/1/2018		
	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1 WERE	6/1/2018	6/1/2018		
	HUNTSVILLE - ST JOHN 115KV CKT 1	6/1/2018	6/1/2018		
	KINSLEY 115KV Capacitor	6/1/2015	6/1/2015		
	LITCHFIELD - AQUARIUS - HUDSON JUNCTION 69KV CKT 1	6/1/2013	6/1/2013		
	LYONS - WHEATLAND 115KV CKT 1 MIDW	6/1/2018	6/1/2018		
	LYONS - WHEATLAND 115KV CKT 1 WERE	6/1/2018	6/1/2018		
	SEVENTEENTH () 138/69/11.295KV TRANSFORMER CKT 2	6/1/2009	6/1/2011		
	STRANGER CREEK - NW LEAVENWORTH 115KV	6/1/2010	6/1/2011		Yes
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010		

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281706	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1 Displacement	6/1/2009	6/1/2011		Yes
	EAST MANHATTAN - NW MANHATTAN 230/115KV Displacement	6/1/2009	6/1/2011		Yes
	East Manhattan to McDowell 230 kv Displacement	6/1/2009	6/1/2011		Yes
	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	4/1/2009	6/1/2011		Yes

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281706	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

Third Party Limitations.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost
1281706	SPEARVILLE - KNOLL - AXTELL 345KV CKT 1	6/1/2009	6/1/2013		Yes	\$ 106,927,681	\$ 240,000,000
Total						\$ 106,927,681	\$ 240,000,000

\*34.5 kV System Impacts and Upgrades have yet to be determined by Midwest Energy

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
MIDW AG2-2007-069

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1285864	WR	WR	4	6/1/2008	6/1/2013	6/1/2013	6/1/2018	\$ -	\$ 378,000	\$ -	\$ -
MIDW	1285865	WR	WR	3	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 283,500	\$ -	\$ -
MIDW	1285866	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 189,000	\$ -	\$ -
MIDW	1285867	WR	WR	1	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 94,500	\$ -	\$ -
									\$ -	\$ 945,000	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1285864	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
						Total	\$ -	\$ -
1285865	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
						Total	\$ -	\$ -
1285866	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
						Total	\$ -	\$ -
1285867	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
						Total	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285864	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		
	Knob Hill - Steele City 115 kv	6/1/2009	6/1/2013		
1285865	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		
	Knob Hill - Steele City 115 kv	6/1/2009	6/1/2013		
1285866	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		
	Knob Hill - Steele City 115 kv	6/1/2009	6/1/2013		
1285867	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		
	Knob Hill - Steele City 115 kv	6/1/2009	6/1/2013		

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285864	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	KINSLEY 115KV Capacitor	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	South Harper 161 kV cut-in to Stilwell-Archie JCT 161 kV line	6/1/2009	6/1/2014		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		
1285865	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	KINSLEY 115KV Capacitor	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	South Harper 161 kV cut-in to Stilwell-Archie JCT 161 kV line	6/1/2009	6/1/2014		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		
1285866	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	KINSLEY 115KV Capacitor	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	South Harper 161 kV cut-in to Stilwell-Archie JCT 161 kV line	6/1/2009	6/1/2014		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		
1285867	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		Yes
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		Yes
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	KINSLEY 115KV Capacitor	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	South Harper 161 kV cut-in to Stilwell-Archie JCT 161 kV line	6/1/2009	6/1/2014		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285864	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	REDEL - STILWELL 161KV CKT 1	6/1/2009	6/1/2011		
1285865	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	REDEL - STILWELL 161KV CKT 1	6/1/2009	6/1/2011		
1285866	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	REDEL - STILWELL 161KV CKT 1	6/1/2009	6/1/2011		
1285867	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	REDEL - STILWELL 161KV CKT 1	6/1/2009	6/1/2011		

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285864	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
1285865	WICHITA - RENO 345KV	6/1/2009	6/1/2009		
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
1285866	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
1285867	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

Third Party Limitations.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost
1285864	SPEARVILLE - KNOLL - AXTELL 345KV CKT 1	6/1/2009	6/1/2013		Yes	\$ 59,143,253	\$ 240,000,000
				Total		\$ 59,143,253	\$ 240,000,000

\*34.5 kV System Impacts and Upgrades have yet to be determined by Midwest Energy

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
MIDW AG2-2007-070

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1285869	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 189,000	\$ -	\$ -
									\$ -	\$ 189,000	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1285869	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
						Total	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285869	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		
	Knob Hill - Steele City 115 kV	6/1/2009	6/1/2013		

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285869	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	KINSLEY 115KV Capacitor	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285869	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285869	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

\*34.5 kV System Impacts and Upgrades have yet to be determined by Midwest Energy

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
MIDW AG2-2007-071

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1285872	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 189,000	\$ -	\$ -
MIDW	1285873	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 189,000	\$ -	\$ -
									\$ -	\$ 378,000	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1285872	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
						\$ -	\$ -	\$ -
					Total	\$ -	\$ -	\$ -
1285873	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
						\$ -	\$ -	\$ -
					Total	\$ -	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285872	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		
	Knob Hill - Steele City 115 kV	6/1/2009	6/1/2013		
1285873	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		
	Knob Hill - Steele City 115 kV	6/1/2009	6/1/2013		

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285872	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	KINSLEY 115KV Capacitor	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		
1285873	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	KINSLEY 115KV Capacitor	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285872	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
1285873	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285872	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		
1285873	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

\*34.5 kV System Impacts and Upgrades have yet to be determined by Midwest Energy

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
MIDW AG2-2007-078

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1285946	WR	WR	3	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 283,500	\$ -	\$ -
MIDW	1285947	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 189,000	\$ -	\$ -
MIDW	1285948	WR	WR	1	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 94,500	\$ -	\$ -
									\$ -	\$ 567,000	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1285946	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
						Total	\$ -	\$ -
1285947	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
						Total	\$ -	\$ -
1285948	JEWELL 3 - SMITH CENTER 115KV CKT 1	6/1/2009	10/1/2009			\$ -	\$ -	\$ -
	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
						Total	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285946	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		Yes
	Summit - NE Saine 115 kv	6/1/2009	12/1/2009		Yes
1285947	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		Yes
	Summit - NE Saine 115 kv	6/1/2009	12/1/2009		Yes
1285948	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	KELLY - SOUTH SENECA 115KV CKT 1	6/1/2009	6/1/2011		Yes
	Summit - NE Saine 115 kv	6/1/2009	12/1/2009		Yes

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	
1285946	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		Yes	
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		Yes	
	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1 #1	6/1/2010	6/1/2010			
	KINSLEY 115KV Capacitor	6/1/2015	6/1/2015			
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011			
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010			
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013			
	1285947	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		Yes
		27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		Yes
		EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1 #1	6/1/2010	6/1/2010		
KINSLEY 115KV Capacitor		6/1/2015	6/1/2015			
LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1		6/1/2009	6/1/2011			
SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2		6/1/2010	6/1/2010			
TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1		6/1/2013	6/1/2013			
1285948		27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		Yes
		27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		Yes
		EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1 #1	6/1/2010	6/1/2010		
	KINSLEY 115KV Capacitor	6/1/2015	6/1/2015			
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011			
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010			
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013			

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285946	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	4/1/2009	6/1/2011		Yes
1285947	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	4/1/2009	6/1/2011		Yes
1285948	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	4/1/2009	6/1/2011		Yes

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285946	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
1285947	WICHITA - RENO 345KV	6/1/2009	6/1/2009		
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
1285948	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

\*34.5 kV System Impacts and Upgrades have yet to be determined by Midwest Energy



**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285949	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	4/1/2009	6/1/2011		Yes
1285950	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	4/1/2009	6/1/2011		Yes

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285949	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		
1285950	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

\*34.5 kV System Impacts and Upgrades have yet to be determined by Midwest Energy

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
 MIDW AG2-2007-080

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1285951	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 189,000	\$ -	\$ -
MIDW	1285952	WR	WR	2	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 189,000	\$ -	\$ -
MIDW	1285953	WR	WR	1	6/1/2008	6/1/2013	6/1/2011	6/1/2016	\$ -	\$ 94,500	\$ -	\$ -
									\$ -	\$ 472,500	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1285951	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
					Total	\$ -	\$ -	\$ -
1285952	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
					Total	\$ -	\$ -	\$ -
1285953	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	2/1/2009	10/1/2009		Yes	\$ -	\$ -	\$ -
					Total	\$ -	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285951	BPU - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		Yes
	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	Summit - NE Saline 115 kv	6/1/2009	12/1/2009		Yes
1285952	BPU - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		Yes
	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	Summit - NE Saline 115 kv	6/1/2009	12/1/2009		Yes
1285953	BPU - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		Yes
	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2010	6/1/2010		
	Summit - NE Saline 115 kv	6/1/2009	12/1/2009		Yes

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285951	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		Yes
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		Yes
	FORT JUNCTION SWITCHING STATION - WEST JUNCTION CITY JUNCTION 115KV CKT 1	6/1/2010	6/1/2011		Yes
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		
1285952	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		Yes
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		Yes
	FORT JUNCTION SWITCHING STATION - WEST JUNCTION CITY JUNCTION 115KV CKT 1	6/1/2010	6/1/2011		Yes
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		
1285953	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2011		Yes
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	6/1/2011		Yes
	FORT JUNCTION SWITCHING STATION - WEST JUNCTION CITY JUNCTION 115KV CKT 1	6/1/2010	6/1/2011		Yes
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	6/1/2015	6/1/2015		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285951	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1 Displacement	6/1/2009	6/1/2011		Yes
	EAST MANHATTAN - NW MANHATTAN 230/115KV Displacement	6/1/2009	6/1/2011		Yes
	East Manhattan to Mcdowell 230 kV Displacement	6/1/2009	6/1/2011		Yes
	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
1285952	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1 Displacement	6/1/2009	6/1/2011		Yes
	EAST MANHATTAN - NW MANHATTAN 230/115KV Displacement	6/1/2009	6/1/2011		Yes
	East Manhattan to Mcdowell 230 kV Displacement	6/1/2009	6/1/2011		Yes
	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
1285953	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1 Displacement	6/1/2009	6/1/2011		Yes
	EAST MANHATTAN - NW MANHATTAN 230/115KV Displacement	6/1/2009	6/1/2011		Yes
	East Manhattan to Mcdowell 230 kV Displacement	6/1/2009	6/1/2011		Yes
	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285951	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		
1285952	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		
1285953	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

\*34.5 kV System Impacts and Upgrades have yet to be determined by Midwest Energy

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
SPRM AG2-2007-110

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
SPRM	1286502	WR	SPA	25	12/1/2008	12/1/2028	6/1/2011	6/1/2031	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1286502	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286502	NEERGARD - NORTON 69KV CKT 1			6/1/2009	6/1/2010
	Summit - NE Saline 115 kV			6/1/2009	12/1/2009

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286502	AUBURN ROAD (AUBRN77X) 230/115/13.8KV TRANSFORMER CKT 2			6/1/2013	6/1/2013
	BROOKLINE - JUNCTION 161KV CKT 1			6/1/2017	6/1/2017
	SILQAM CITY - SILOAM SPRINGS 161KV CKT 1			6/1/2009	6/1/2011
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2			6/1/2010	6/1/2010

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286502	RENO 345/115KV CKT 1			6/1/2009	6/1/2009
	RENO 345/115KV CKT 2			6/1/2010	6/1/2010
	SUMMIT - RENO 345KV			6/1/2010	6/1/2010
	WICHITA - RENO 345KV			6/1/2009	6/1/2009

Third Party Limitations.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost
1286502	HUBEN 345/161KV TRANSFORMER CKT 1			6/1/2017	6/1/2017	\$ 5,693,014	\$ 6,500,000
	SPRINGFIELD (SPF X1) 161/69/13.8KV TRANSFORMER CKT 1			6/1/2016	6/1/2016	\$ 1,500,000	\$ 1,500,000
Total						\$ 7,193,014	\$ 8,000,000

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
WFEC AG2-2007-016

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
WFEC	1278401	WFEC	WFEC	19	12/15/2007	12/15/2032	6/1/2011	6/1/2036	\$ 342,000	\$ -	\$ 3,270,987	\$ 8,416,456
									\$ 342,000	\$ -	\$ 3,270,987	\$ 8,416,456

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1278401	FARGOJCT2 69.000 - FT SUPPLY 69KV CKT 1	4/1/2009	6/1/2011			\$ 3,211,254	\$ 5,350,000	\$ 8,262,369
	FARGOJCT2 69.000 - WOODWARD 69KV CKT 1	4/1/2009	6/1/2010			\$ 59,733	\$ 100,000	\$ 154,087
				Total		\$ 3,270,987	\$ 5,450,000	\$ 8,416,456

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1278401	Norman Area Voltage Conversion	6/1/2010	6/1/2010		

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1278401	BUFFALO - WEST 69KV CKT 1	2/1/2009	6/1/2010		
	IODINE - MOORELAND 138KV CKT 1	2/1/2009	6/1/2010		
	MOORELAND - MOREWOOD SW 138KV CKT 1	2/1/2009	6/1/2010		
	Multi-Dover-Twin Lake, Cresnet 138 kV	6/1/2014	6/1/2014		

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1278401	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012		
	HUGO POWER PLANT - VALLIANT 345 KV WFEC	7/1/2012	7/1/2012		
	KNOBHILL (KNOBHIL4) 138/69/13.2KV TRANSFORMER CKT 1	6/1/2006	6/1/2008		
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
 WRGS AG2-2007-011D

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
WRGS	1268638	KCPL	AMRN	20	6/1/2010	6/1/2015			\$ -	\$ 1,080,000	\$ -	\$ -
									\$ -	\$ 1,080,000	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1268638	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268638	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012		
	HUGO POWER PLANT - VALLIANT 345 KV WFEC	7/1/2012	7/1/2012		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
 WRGS AG2-2007-017D

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
WRGS	1278809	EES	SPA	20	3/1/2010	3/1/2040	6/1/2011	6/1/2041	\$ -	\$ 6,480,000	\$ -	\$ -
									\$ -	\$ 6,480,000	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1278809	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Third Party Limitations.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost
1278809	SCAPE GIR 161.00 - 5JOPPA SR 161.00 161KV CKT 1	6/1/2015	6/1/2015			\$ -	\$ -
	ASHERVILLE - IDALIA 161KV CKT 1	6/1/2010	6/1/2011			\$ -	\$ -
	ASHERVILLE - POPLAR BLUFF 161KV CKT 1 AECI	6/1/2011	6/1/2011			\$ -	\$ -
	ASHERVILLE - POPLAR BLUFF 161KV CKT 1 SWPA	6/1/2011	6/1/2011			\$ -	\$ -
	NEW MADRID - NEW MADRID 161KV CKT 1	6/1/2016	6/1/2016			\$ -	\$ -
	POPLAR BLUFF (PBL X2) 161/69/13.8KV TRANSFORMER CKT 1	6/1/2010	6/1/2011			\$ 1,500,000	\$ 1,500,000
Total						\$ 1,500,000	\$ 1,500,000

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
 WRGS AG2-2007-018D

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
WRGS	1278811	EES	SPA	20	3/1/2010	3/1/2040			\$ -	\$ 6,480,000	\$ -	\$ -
									\$ -	\$ 6,480,000	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1278811	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Third Party Limitations.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost
1278811	SCAPE GIR 161.00 - 5JOPPA SR 161.00 161KV CKT 1	6/1/2015	6/1/2015			\$ -	\$ -
	HERGETT - JONESBORO 161KV CKT 1	6/1/2013	6/1/2013			\$ -	\$ -
	MALDEN - NEW MADRID 69KV CKT 1	6/1/2013	6/1/2013			\$ -	\$ -
	MALDEN - PIGGOTT 69KV CKT 1	6/1/2016	6/1/2016			\$ 2,000,000	\$ 2,000,000
	NEW MADRID - NEW MADRID 161KV CKT 1	6/1/2016	6/1/2016			\$ -	\$ -
	NEW MADRID (NMA X1) 161/69/13.8KV TRANSFORMER CKT 1	6/1/2018	6/1/2018			\$ 354,661	\$ 1,500,000
	NEW MADRID (NMA X2) 161/69/13.8KV TRANSFORMER CKT 1	6/1/2017	6/1/2017			\$ 354,650	\$ 1,500,000
Total						\$ 2,709,311	\$ 5,000,000

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
 WRGS AG2-2007-019D

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
WRGS	1278813	EES	SPA	7	3/1/2010	3/1/2040			\$ -	\$ 2,268,000	\$ -	\$ -
									\$ -	\$ 2,268,000	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1278813	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Third Party Limitations.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost
1278813	SCAPE GIR 161.00 - 5JOPPA SR 161.00 161KV CKT 1	6/1/2015	6/1/2015			\$ -	\$ -
	HERGETT - JONESBORO 161KV CKT 1	6/1/2013	6/1/2013			\$ -	\$ -
	MALDEN - NEW MADRID 69KV CKT 1	6/1/2013	6/1/2013			\$ -	\$ -
	NEW MADRID - NEW MADRID 161KV CKT 1	6/1/2016	6/1/2016			\$ -	\$ -
	NEW MADRID (NMA X1) 161/69/13.8KV TRANSFORMER CKT 1	6/1/2018	6/1/2018			\$ 1,145,339	\$ 1,500,000
	NEW MADRID (NMA X2) 161/69/13.8KV TRANSFORMER CKT 1	6/1/2017	6/1/2017			\$ 1,145,350	\$ 1,500,000
Total						\$ 2,290,689	\$ 3,000,000

**Table 3 - Additional Details for Each Request Including All Facility Upgrades Required and Allocated Costs for Each Upgrade**

Customer Study Number  
WRGS AG2-2007-092D

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
WRGS	1286201	SEC	WR	99	3/1/2009	3/1/2019	6/1/2011	6/1/2021	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1286201	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Expansion Plan - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286201	BPU - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2011		

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286201	AQUARIUS - HUDSON JUNCTION 69KV CKT 1	6/1/2018	6/1/2018		
	AQUARIUS - LITCHFIELD 69KV CKT 1	6/1/2018	6/1/2018		
	AUBURN ROAD (AUBRN77X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2013	6/1/2013		
	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1 #1	6/1/2010	6/1/2010		
	FINNEY SWITCHING STATION - HITCHLAND 7 345.00 345KV CKT 1	12/1/2010	12/1/2010		
	FORT JUNCTION SWITCHING STATION - WEST JUNCTION CITY JUNCTION 115KV CKT 1	6/1/2010	6/1/2011		
	GILL ENERGY CENTER WEST - WACO 138KV CKT 1	6/1/2010	6/1/2011		
	HUDSON JUNCTION - PITTSBURG 69KV CKT 1	6/1/2018	6/1/2018		
	KINSLEY 115KV Capacitor	6/1/2015	6/1/2015		
	LITCHFIELD - AQUARIUS - HUDSON JUNCTION 69KV CKT 1	6/1/2013	6/1/2013		
	SEVENTEENTH () 138/69/11.295KV TRANSFORMER CKT 2	6/1/2009	6/1/2011		
	STRANGER CREEK - NW LEAVENWORTH 115KV	6/1/2010	6/1/2011		
	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010		

Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286201	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1 Displacement	6/1/2009	6/1/2011		
	EAST MANHATTAN - NW MANHATTAN 230/115KV Displacement	6/1/2009	6/1/2011		
	East Manhattan to Mcdowell 230 kv Displacement	6/1/2009	6/1/2011		
	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2010	6/1/2009	
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	4/1/2009	6/1/2011		

Credits may be required for the following network upgrades directly assigned to transmission customers in previous aggregate study.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286201	RENO 345/115KV CKT 1	6/1/2009	6/1/2009		
	RENO 345/115KV CKT 2	6/1/2010	6/1/2010		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

**Table 4 - Upgrade Requirements and Solutions Needed to Provide Transmission Service for the Aggregate Study**

Transmission Owner	Upgrade	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)	Estimated Engineering & Construction Cost
AEPW	DIANA - LONE STAR SOUTH 138KV CKT 1	Replace switches and reset CT	2/1/2009	6/1/2010	\$ 150,000
AEPW	LYDIA - WELSH 345KV CKT 1	Interim Redispatch	6/1/2010	6/1/2010	\$
MKEC	JEWELL 3 - SMITH CENTER 115KV CKT 1	Interim Redispatch	6/1/2009	10/1/2009	\$
OKGE	MAUD - FIXICO - WELEETKA 138KV CKT 1 Displacement	Build another 1.43 mile line from Fixico to the location of Fixico Tap and install dead end structures in the area of Fixico Tap. Install another breaker in Fixico and remove Fixico Tap. This will loop the 138kV line through Fixico and eliminate the tap.	2/1/2009	6/1/2011	\$ 573,306
WERE	MEDICINE LODGE (MED-LDG4) 138/115/2.72KV TRANSFORMER CKT 1	Interim Redispatch	2/1/2009	10/1/2009	\$
WFEC	FARGOJCT2 69.000 - FT SUPPLY 69KV CKT 1	upgrade line between Ft supply Switchyard and Woodward Switchyard (through Fargo Jct) to 795ACSR	4/1/2009	6/1/2011	\$ 5,350,000
WFEC	FARGOJCT2 69.000 - WOODWARD 69KV CKT 1	upgrade the terminal equipment at Woodward to 1200A	4/1/2009	6/1/2010	\$ 100,000

**Construction Pending Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.**

Transmission Owner	Upgrade	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)
AEPW	BARTLESVILLE SOUTHEAST - NORTH BARTLESVILLE 138KV CKT 1	Rebuild 8.37 miles of 795 ACSR with 1590 ACSR & reset relays @ BSE	6/1/2009	6/1/2011
AEPW	BROKEN BOW - CRAIG JUNCTION 138KV CKT 1	Rebuild 7.66 miles of 3/0 CW CU with 795 ACSR	2/1/2009	6/1/2009
AEPW	COFFEYVILLE TAP - DEARING 138KV CKT 1 AEPW	Tie Line, Reconductor 1.09 miles of 795 ACSR with 1590 ACSR.	2/1/2009	6/1/2010
AEPW	COFFEYVILLE TAP - NORTH BARTLESVILLE 138KV CKT 1	Rebuild 13.11 miles of 795 ACSR with 1590 ACSR.	6/1/2009	6/1/2011
AEPW	SOUTHWEST SHREVEPORT (SW SHV 1) 345/138/13.8KV TRANSFORMER CKT 1	Using IEEE Guide for Loading of Mineral-Oil Immersed Power Transformers (C57.91-2000) Re-rate the autos. Replace two 138 kV breakers and five 138 kV switches. Reset relays and CTs	2/1/2009	6/1/2009
KACP	REDEL - STILWELL 161KV CKT 1	Reconductor line with 1192 ACSR and upgrade terminal equipment for 2000 amps	6/1/2009	6/1/2011
WERE	COFFEYVILLE TAP - DEARING 138KV CKT 1 WERE	Tie Line, Rebuild 3.93 miles of 795 ACSR with 1590 ACSR.	2/1/2009	6/1/2010
WERE	COFFEYVILLE TAP - DEARING 138KV CKT 1 WERE #2	Replace Terminal Equipment.	6/1/2010	6/1/2010
WERE	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1 Displacement	Upgrade JEC- E.Manhattan 230 kV line to 100 deg C operation by raising structures	6/1/2009	6/1/2011
WERE	EAST MANHATTAN - NW MANHATTAN 230/115KV Displacement	Tap the Concordia - East Manhattan 230kV line and add a new substation "NW Manhattan"; Add a 230kV/115kV transformer and tap the KSU - Wildcat 115kV line into NW Manhattan	6/1/2009	6/1/2011
WERE	East Manhattan to McDowell 230 kV Displacement	The East Manhattan-McDowell 115 kV is built as a 230 kV line, but is operated at 115 kV. Substation work will have to be performed in order to convert this line.	6/1/2009	6/1/2011
WERE	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	Replace bus and Jumpers at NE Parsons 138 kV substation	6/1/2010	6/1/2010
WERE	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	Add third 345-138 kV transformer at Rose Hill	4/1/2009	6/1/2011

**Expansion Plan Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.**

Transmission Owner	Upgrade	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)
SPRM	NEERGARD - NORTON 69KV CKT 1	Transfer load & Reconductor 336.4 kcmil ACSR with 477 ACSS/TW	6/1/2009	6/1/2010
WERE	BPU - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON SWITCHING STATION 115KV CKT 1	Rebuild Line	6/1/2009	6/1/2011
WERE	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	Rebuild Circle - HEC GT 115 kV line.	6/1/2010	6/1/2010
WERE	KELLY - SOUTH SENECA 115KV CKT 1	Rebuild 10.28 mile line with 1192.5 kcmil ACSR and replace CTs.	6/1/2009	6/1/2011
WERE	Knob Hill - Steele City 115 kV	New 115 kV Line from Knob Hill to Kansas/Nebraska state line.	6/1/2009	6/1/2013
WERE	Summit - NE Saline 115 kV	Build 6.5-mile Summit-Southgate 115 kV, 1192.5 kcmil ACSR Tear down Northview-South Gate 115 kV	6/1/2009	12/1/2009
WFEC	ANADARKO - CYRIL 69KV CKT 1	UPGRADE TO 795 ACSR FROM ANADARKO SW TO CYRIL , Anadarko-Cyril 12.9	4/1/2009	6/1/2009
WFEC	Norman Area Voltage Conversion	Convert Canadian - OU - Cole - Criner to 138 KV and Canadian-Goldsby-OU-W Norman-Acme-Franklin	6/1/2010	6/1/2010

**Table 4 - Upgrade Requirements and Solutions Needed to Provide Transmission Service for the Aggregate Study**

Reliability Projects - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.					
Transmission Owner	Upgrade	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)	
AEPW	ASHDOWN WEST - CRAIG JUNCTION 138KV CKT 1	Rebuild 2.45 miles of 795 ACSR with 1590 ACSR and reset relays	6/1/2013	6/1/2013	
AEPW	RIVERSIDE STATION - TULSA POWER STATION 138KV CKT 1	Rebuild 5.82 miles with 1272 ACSR. Replace TPS wavetraps & jumpers. Reset TPS CTs	6/1/2010	6/1/2011	
AEPW	SILOAM CITY - SILOAM SPRINGS 161KV CKT 1	Rebuild 2.06 miles of 2-397 ACSR with 2156 ACSR. Replace breaker, wavetraps, switches, & jumpers @ AEP Siloam Springs.	6/1/2009	6/1/2011	
EMDE	Multi - Stalene - Joplin - Reinmiller conversion	Tear down the Riverton to Joplin 59 69 kV line, rebuilding the line to 161 kV from Stalene to outside Joplin 59 sub. Tear down and rebuild Joplin 59 to Gateway to Pillsbury to Reinmiller, converting those 69 kV lines to 161 kV. Tap the 161 kV line between Joplin 59 and Gateway at Joplin 422.	6/1/2016	6/1/2016	
MIDW	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1 MIDW	Tear down and rebuild 73.4% Ownership 28.79 mile HEC-Huntsville 115 kV line and replace CT, wavetraps and relays.	6/1/2018	6/1/2018	
MIDW	HUNTSVILLE - ST. JOHN 115KV CKT 1	Rebuild 26.5 miles Huntsville - St. John 115 kV line and replace CT, wavetraps, breakers, and relays.	6/1/2018	6/1/2018	
MIDW	KINSLEY 115KV Capacitor	Install 10MVAR capacitors at Kinsley 115 kV	6/1/2015	6/1/2015	
MIDW	LYONS - WHEATLAND 115KV CKT 1 MIDW	Rebuild 98.5% ownership of 19.4 miles	6/1/2018	6/1/2018	
MIPU	Grandview East - Sampson - Longview 161KV Ckt 1	Replace wavetraps at Grandview East and Longview	6/1/2012	6/1/2009	
MIPU	Loma Vista - Montrose 161KV Tap into K.C. South	To tap the Montrose-LomaVista 161 kV Line into KC South 161 kV sub.	6/1/2009	6/1/2011	
MIPU	PLATTE CITY - SMITHVILLE 161KV CKT 1	Replace wavetraps	12/1/2010	12/1/2010	
MIPU	South Harper 161 kV cut-in to Stilwell-Archie JCT 161 kV line	To tap Stilwell-Archie JCT 161 kV line into South Harper 161 kV sub and make it two new 161 kV sections: Stilwell-South Harper and Archie JCT-South Harper .	6/1/2009	6/1/2014	
OKGE	3RDST - ARKOMA 161KV CKT 1	Replace 8-1200A switches & 2-wave traps.	6/1/2017	6/1/2017	
OKGE	MCELROY - STILLWATER 138KV CKT 1	Reconductor 1.91 of 477AS33 to 795AS33	6/1/2010	6/1/2011	
SPRM	BROOKLINE - JUNCTION 161KV CKT 1	Reconductor 1192 AAC with 1158.4 ACSS/TW 3.4 miles	6/1/2017	6/1/2017	
SPS	FINNEY SWITCHING STATION - HITCHLAND 7 345.00 345KV CKT 1	Replace Terminal Equipment	12/1/2010	12/1/2010	
WERE	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	Tear down and rebuild 2.72 mile Tecumseh Hill-27th & Croco 115 kV line as a single circuit.	6/1/2010	6/1/2011	
WERE	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	Tear down and rebuild 3.43 mile 27th & Croco-41ST & CALIFORNIA 115 kV line as a single circuit.	6/1/2010	6/1/2011	
WERE	AQUARIUS - HUDSON JUNCTION 69KV CKT 1	Rebuild 0.72 miles	6/1/2018	6/1/2018	
WERE	AQUARIUS - LITCHFIELD 69KV CKT 1	Rebuild 5.54 miles	6/1/2018	6/1/2018	
WERE	AUBURN ROAD (AUBRN77X) 230/115/13.8KV TRANSFORMER CKT 2	Add second Auburn 230-115 kV transformer.	6/1/2013	6/1/2013	
WERE	CHISHOLM - RIPLEY 69KV CKT 1	Tear down and rebuild 2.40 miles using single 1192.5 ACSR operated at 69 kV.	6/1/2009	6/1/2011	
WERE	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1 #1	Replace Disconnect Switches, Wavetraps, Breaker, Jumpers	6/1/2010	6/1/2010	
WERE	FORT JUNCTION SWITCHING STATION - WEST JUNCTION CITY JUNCTION 115KV CKT 1	Build new Ft Jct. - W. Jct City line that follows the path of the JEC - Summit 345kV. Remove old double circuit and WJCTYE - WJCTCTY 115 kV	6/1/2010	6/1/2011	
WERE	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1	Rebuild 5.56-mile line, 954 ACSR	6/1/2015	6/1/2015	
WERE	GILL ENERGY CENTER WEST - WACO 138KV CKT 1	Tear down and rebuild Gill - Waco with bundled 1192.5 ACSR conductor	6/1/2010	6/1/2011	
WERE	HUDSON JUNCTION - PITTSBURG 69KV CKT 1	Rebuild 1.41 miles	6/1/2018	6/1/2018	
WERE	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1 WERE	Tear down and rebuild 26.6% Ownership 28.79 mile HEC-Huntsville 115 kV line and replace CT, wavetraps and relays.	6/1/2018	6/1/2018	
WERE	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	Rebuild 5.49 miles	6/1/2009	6/1/2011	
WERE	LITCHFIELD - AQUARIUS - HUDSON JUNCTION 69KV CKT 1	Replace 69 kV disconnect switches at Aquarius.	6/1/2013	6/1/2013	
WERE	LYONS - WHEATLAND 115KV CKT 1 WERE	Rebuild 1.5% ownership of 19.4 miles	6/1/2018	6/1/2018	
WERE	SEVENTEENTH ( ) 138/69/11.295KV TRANSFORMER CKT 2	Install second 17th St. 138-69 kV transformer	6/1/2009	6/1/2011	
WERE	STRANGER CREEK - NW LEAVENWORTH 115KV	Rebuild 11.62-mile Jarbalo-NW Leavenworth 115 kV line and tap in & out of Stranger 115 kV	6/1/2010	6/1/2011	
WERE	SUMMIT (SUMMIT2X) 230/115/13.8KV TRANSFORMER CKT 2	Install Second Summit 230/115 kV Transformer	6/1/2010	6/1/2010	
WERE	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	Uprate 0.24 mile TEC-Tecumseh Hill 115 kV line to 100 degree operation.	6/1/2013	6/1/2013	
WFEC	BUFFALO - FT SUPPLY 69KV CKT 1	Upgrade CT's at Buffalo SW (Ft Supply Branch) to 400A	6/1/2010	6/1/2010	
WFEC	BUFFALO - WEST 69KV CKT 1	Upgrade terminal equipment at Buffalo to 600A	2/1/2009	6/1/2010	
WFEC	IODINE - MOORELAND 138KV CKT 1	Upgrade CT's at Mooreland (Iodine Branch) to 1200A; new rating will be the conductor	2/1/2009	6/1/2010	
WFEC	MOORELAND - MOREWOOD SW 138KV CKT 1	Upgrade CT's at Mooreland (Morewood Branch) to 800A,	2/1/2009	6/1/2010	
WFEC	Multi-Dover-Twin Lake _Cresent 138 kv	Convert 69 kV to 138 kV and install terminal equipment at Dover SW; Instal 7 miles of new 138 kv fro WFEC Twin Lakes to OGE Cresent substation	6/1/2014	6/1/2014	

**Table 4 - Upgrade Requirements and Solutions Needed to Provide Transmission Service for the Aggregate Study**

**Previously Assigned Aggregate Study Upgrades requiring credits to Previous Aggregate Study Customers.**

Transmission Owner	Upgrade	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)
AEPW	HUGO POWER PLANT - VALLIANT 345 KV AEPW	Valliant 345 KV line terminal	7/1/2012	7/1/2012
EMDE	SUB 110 - ORONOGO JCT. - SUB 167 - RIVERTON 161KV CKT 1	Reconductor Oronogo 59467 to Riverton 59469 with Bundled 556 ACSR	6/1/2011	6/1/2011
KACP	LACYGNE - WEST GARDNER 345KV CKT 1	KCPL Sponsored Project to Reconductor Line to be In-Service by 6/1/2006	6/1/2006	6/1/2006
OKGE	KNOBHILL (KNOBHIL4) 138/69/13.2KV TRANSFORMER CKT 1	Replace bus tie with 100MVA transformer	6/1/2006	6/1/2008
OKGE	NORTHWEST - WOODWARD 345KV CKT 1	Build 120 miles of 345 kV	1/1/2010	1/1/2010
WERE	RENO 345/115KV CKT 1	New stepdown transformer at a new substation in Reno County east northeast of Hutchinson	6/1/2009	6/1/2009
WERE	RENO 345/115KV CKT 2	Install 2nd stepdown transformer at Reno County substation east northeast of Hutchinson	6/1/2010	6/1/2010
WERE	SUMMIT - RENO 345KV	Install new 50.55-mile 345 kV line from Reno county to Summit; 31 miles of 115 kV line between Circle and S Philips would be rebuilt as double circuit with the 345 kV line to minimize ROW impacts; Substation work required at Summit for new 345 kV terminal and completion of ring bus.	6/1/2010	6/1/2010
WERE	WICHITA - RENO 345KV	40 mile 345 kV transmission line from existing Wichita 345 kV substation to a new 345-115 kV substation in Reno County east northeast of Hutchinson (Wichita to Reno)	6/1/2009	6/1/2009
WFEC	HUGO POWER PLANT - VALLIANT 345 KV WFEC	New 19 miles 345 KV	7/1/2012	7/1/2012

**Table 5 - Third Party Facility Constraints**

Transmission Owner	UpgradeName	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)	Estimated Engineering & Construction Cost
AECI	5ELDON 161.00 - BARNETT 161KV CKT 1	Indeterminate	4/1/2009	4/1/2009	Indeterminate
AECI	ASHERVILLE - POPLAR BLUFF 161KV CKT 1 AEC	Indeterminate	6/1/2011	6/1/2011	Indeterminate
AECI	HUBEN 345/161KV TRANSFORMER CKT 1	Install a second Huben 345/161kv transformer	6/1/2017	6/1/2017	\$ 6,500,000
AECI	NEW MADRID - NEW MADRID 161KV CKT 1	Indeterminate	6/1/2016	6/1/2016	Indeterminate
AMMO	5CAPE GIR 161.00 - 5JOPPA SR 161.00 161KV CKT 1	Indeterminate	6/1/2015	6/1/2015	Indeterminate
AMMO	5ELDON 161.00 161/138KV TRANSFORMER CKT 1	Indeterminate	2/1/2009	2/1/2009	Indeterminate
SWPA	ASHERVILLE - IDALIA 161KV CKT 1	Reconductor line	6/1/2010	6/1/2011	Indeterminate
SWPA	ASHERVILLE - POPLAR BLUFF 161KV CKT 1 SWPA	Replace disconnect switches, replace some structures and resag line	6/1/2011	6/1/2011	Indeterminate
SWPA	BULL SHOALS - BULL SHOALS HES 161KV CKT 1	Replace buswork in Bull Shoals switchyard	6/1/2010	6/1/2011	Indeterminate
SWPA	HERGETT - JONESBORO 161KV CKT 1	Reconductor line	6/1/2013	6/1/2013	Indeterminate
SWPA	MALDEN - NEW MADRID 69KV CKT 1	Reconductor line, replace disconnect switches	6/1/2013	6/1/2013	\$ 2,000,000
SWPA	MALDEN - PIGGOTT 69KV CKT 1	Reconductor line, replace disconnect switches	6/1/2016	6/1/2016	\$ 2,000,000
SWPA	NEW MADRID (NMA X1) 161/69/13.8KV TRANSFORMER CKT 1	Replace transformer	6/1/2018	6/1/2018	\$ 1,500,000
SWPA	NEW MADRID (NMA X2) 161/69/13.8KV TRANSFORMER CKT 1	Replace transformer	6/1/2017	6/1/2017	\$ 1,500,000
SWPA	POPLAR BLUFF (PBL X2) 161/69/13.8KV TRANSFORMER CKT 1	Replace Poplar Bluff Xfmr 2	6/1/2010	6/1/2011	\$ 1,500,000
SWPA	SPRINGFIELD (SPF X1) 161/69/13.8KV TRANSFORMER CKT 1	Replace Springfield Xfmr 3	6/1/2016	6/1/2016	\$ 1,500,000
TBD	SPEARVILLE - KNOLL - AXTELL 345KV CKT 1	Build a new 345kV line from Spearville - Knoll - Axtell	6/1/2009	6/1/2013	\$ 240,000,000