



Aggregate Facility Study

SPP-2011-AG2-AFS-10

9/16/2013

SPP Engineering, SPP Transmission Service Studies



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Executive Summary

Pursuant to Attachment Z1 of the Southwest Power Pool, Inc. (SPP) Open Access Transmission Tariff (OATT), 452 MW of long-term transmission service requests have been studied in this Aggregate Facility Study (AFS). 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. A highly tangible benefit of studying transmission requests aggregately under the SPP OATT Attachment Z1 is the sharing of costs among Transmission Customers using the same facility. Facility upgrade costs are allocated on a prorated basis to all requests positively impacting any individual overloaded facility.

Attachment Z2 further provides for facility upgrade cost recovery by stating: “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 AFS determined that the total assigned facility upgrade Engineering and Construction (E&C) cost is \$3,295. There are no E&C cost for third party facility upgrades are assignable to the customer.
- Total upgrade levelized revenue requirements for all transmission requests after consideration of potential base plan funding is \$9,087.

To accommodate the requested SPP Transmission Service, third-party facilities must be upgraded when the third-party transmission provider determines that they are constrained. Third-party facilities 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 E&C cost estimates for required third-party facility upgrades are applicable.

SPP will tender a Letter of Intent on May 24, 2013. This will open a 15-day window for Customer response. To remain in the Aggregate Transmission Service Study (ATSS), SPP must receive from the Customer by June 8, 2013, 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.

Introduction

Important milestones and dates in SPP's Aggregate Transmission Study process:

- In 2005, the Federal Energy Regulatory Commission (FERC) accepted SPP's proposed Aggregate Transmission Study procedures in Docket ER05-109.
- In 2008, in Docket ER08-1379-000 SPP filed with FERC to pair open seasons closing during January 2010 with an effective date of August 9, 2008.
- In January 2010, in Docket ER10-659-000 SPP filed with FERC to extend its current practice of pairing open seasons through January 31, 2011, with an effective date of January 28, 2010.
- In March 2010, in Docket ER10-659-000 FERC issued a letter order accepting SPP's proposal to continue to pair open seasons through January 31, 2011, effective January 28, 2010.
- All requests for long-term transmission service with a signed study agreement received before June 1, 2011 for 2011-AG2 have been included in this third Aggregate Transmission Service Study (ATSS) of 2011.

Approximately 452 MW of long-term Transmission Service was studied in this Aggregate Facility Study (AFS), and over \$3,295 in transmission upgrades is proposed. The results of the AFS are detailed in Tables 1 through 6. Detailed results depict individual upgrade costs by study and potential base plan allowances determined by Attachments J and Z1. The [OATT](#) may be accessed at SPP's website by going to [SPP.org>Org Groups>Governing Documents](#).

To understand the extent to which Base Plan Upgrades may be applied to both Point-to-Point (PTP) 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.”

Network and PTP 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, PTP 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 because SPP, 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.

Financial Analysis

The AFS utilizes the allocated Customer's 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 accelerated, with no additional upgrades, to accommodate a new request for Transmission Service, 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 accelerated.

In the case of a Base Plan Upgrade being displaced or deferred by an earlier in service date for a requested upgrade, achievable base plan avoided revenue requirements shall be determined per Attachment J, Section VII.B methodology. A deferred Base Plan Upgrade is 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 is defined as the same Network Upgrade being displaced by a requested upgrade needed at an earlier date.

A 40-year service life assumption is utilized for Base Plan funded projects, unless another assumption is provided 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.

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 E&C cost estimates for required third-party facility upgrades are applicable. 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 E&C cost estimates are not utilized to determine the present worth value of leveled 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 third party owner detailing the mitigation of the third 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 third party facilities for load that sinks outside the SPP footprint with the applicable Transmission Providers.

Study Methodology

Description

The facility study 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 performed to ensure current SPP Criteria and NERC Reliability Standards requirements are fulfilled.

SPP conforms to NERC Reliability Standards, which provide strict requirements related to voltage violations and thermal overloads during normal conditions and during a contingency. NERC Standards require all facilities to 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 Model Development Working Group (MDWG) models, respectively. The upper bound and lower bound of the normal voltage range monitored is 105% and 95%. The upper bound and lower bound of the emergency voltage range monitored is 105% 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 103.5% and 98.5% due to transmission operating procedure.

The contingency set includes all SPP control area branches and ties 69 kV 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 AECI, AMRN (Ameren), and ENTR (Entergy) control areas. A 2 % TDF cutoff was applied to WAPA. 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.

Model Development

SPP used five seasonal models to study the aggregate transfers of 452 MW over a variety of requested service periods. The following SPP Transmission Expansion Plan 2011 Build 2 Cases were used to study the impact of the requested service on the transmission system:

- 2013 Summer Peak (13SP)
- 2013/14 Winter Peak (13WP)
- 2017 Summer Peak (17SP)
- 2017/18 Winter Peak (17WP)
- 2022 Summer Peak (22SP)

The Summer Peak models apply to June through September and the Winter Peak models apply to December through March.

The chosen base case models were modified to reflect the current modeling information. One group of requests was developed from the aggregate of 452 MW to model the requested service. From the five seasonal models, two system scenarios were developed. Scenario 0 includes projected usage of transmission included in the SPP 2011 Series Cases. Scenario 5 includes transmission service not already included in the SPP 2011 Series Cases.

Transmission Request Modeling

Network Integration Transmission Service requests are modeled as Generation to Load transfers in addition to Generation to Generation transfers. 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. 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.

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 1st-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.

Curtailement and Redispatch Evaluation

During any period in which SPP determines that a transmission constraint exists on and may impair Transmission System reliability, SPP will take whatever actions are reasonably necessary to maintain reliability. If SPP determines Transmission System reliability can be maintained by redispatching resources, it will evaluate the 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. Transmission Customers can request SPP

to provide additional relief pairs beyond those determined. The potential relief pairs were not evaluated to determine impacts on limiting facilities in the SPP and first tier systems. The SPP Reliability Coordinator would call upon the redispatch requirements before implementing NERC TLR Level 5a.

Study Results

Study Analysis Results

Tables 1 through 6 contain the AFS steady-state analysis results. 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) and 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 the Customer but required for service to be confirmed, credits to be paid for previously assigned AFS or Generation Interconnection Network Upgrades, and any required third party upgrades.

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, 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 on 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 request is for wind generation, the total requested capacity of wind generation plus existing wind generation capacity shall not exceed 20% of the customer's projected system peak responsibility in the first year the Designated Resource is planned to be used by the customer. If the five-year term and 125% resource to load criteria are met, (as well as the 20% wind resource to load criteria for wind generation requests) the requested capacity is multiplied by \$180,000 to determine the potential base plan funding allowable. 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 E&C funding allowable. Network Upgrades required for wind generation requests located in a zone other than the Customer POD shall be allocated as 67% base plan region-wide charge and 33% directly assigned to the Customer.

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 amount (so-called "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 \$86 million (\$140 million less \$54 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 amount of \$128 million revenue requirements to be paid back to the Transmission Owners, and the remaining revenue requirements of \$12 million (\$140 million less \$128 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 amount 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.

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.
- Total engineering and construction cost (E&C) is the upgrade solution cost as determined by the Transmission Owner.
- The Transmission Customer's allocation of the E&C cost is based on the request (1) having an impact of at least 3% on the limiting element, and (2) having a positive impact on the upgraded facility.
- Minimum ATC is the portion of the requested capacity that can be accommodated without 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.

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 May 24, 2013. 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) by June 8, 2013, 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 E&C costs assigned to the Customer. This letter of credit is not required for those facilities that are fully base plan funded. The amount of the letter of credit will be adjusted down on an annual basis to reflect cost recovery based on revenue allocation. The Transmission Provider will issue notifications to construct Network Upgrades to the constructing Transmission Owner after filing of necessary service agreements at FERC.

Appendix A

PSS/E CHOICES IN RUNNING LOAD FLOW PROGRAM AND ACCC

BASE CASE SETTINGS:

- 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 CASE SETTINGS:

- Solutions: AC contingency checking (ACCC)
- MW mismatch tolerance: 0.5
- System intact rating: Rate A
- 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 from 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 (Disabled for generator outages)
- Var limits: Apply immediately
- Solution options:
 - Phase shift adjustment
 - Flat start
 - Lock DC taps
 - Lock switched shunts

Appendix B

Common Acronyms:

• Southwest Power Pool Inc.	SPP
• Open Access Transmission Tariff	OATT
• Aggregate Facility Study	AFS
• Engineering and Construction	E&C
• Aggregate Transmission Service Study	ATSS
• Letter of Intent	LOI
• Available Transmission Capacity	ATC
• Federal Regulatory Service Commission	FERC
• Point-to-Point	PTP
• Model Development Working Group	MDWG
• Transfer Distribution Factor	TDF
• Managing and Utilizing System Transmission	MUST
• Date Upgrade Needed	DUN

Customer Acronyms:

• AECC	Arkansas Electric Cooperative
• AECI	Associated Electric Cooperative
• AEPM	American Electric Power
• APM	Associated Electric Cooperative
• BCPE	British Columbia Power Exchange
• BPAE	BP Wind Energy North America Inc.
• CALP	Calpine Energy Services
• CCG	Constellation Energy Commodities Group
• CMPL	City of Coffeyville
• CRGL	Cargill Power Markets
• CWEP	Carthage Water and Electric Power
• EDE/EDM	The Empire District Electric Company
• ETEC	East Texas Electric Cooperative
• EXGN	Excelon Generation Company, LLC.
• FPLP	Nextera Energy Resources, LLC.
• GRDA	Grand River Dam Authority
• GSEC	Golden Spread Electric Cooperative
• HCPD	Heartland Consumers Power District
• HZN	Horizon Wind Energy
• INDP	City of Independence Power and Light

Customer Acronyms (Continued):

- INF Infinity Wind Power
- JUWI JW Prairie Wind Power, LLC.
- KBPU Kansas Board of Public Utilities
- KCPL/KCPS Kansas City Power & Light
- KEPCO Kansas Electric Power Cooperative
- KMEA Kansas Municipal Energy Agency
- KPP Kansas Power Pool
- LES Lincoln Electric System
- MEAN Municipal Entergy Agency of Nebraska
- MIDW Midwest Energy Inc.
- MKEC Mid Kansas Electric
- MOWR Missouri Joint Municipal Utility Commission
- NPPD Nebraska Public Power District
- NTEC North Texas Electric Cooperative
- OGE Oklahoma Gas and Electric Services
- OMPA Oklahoma Municipal Power District
- OPPD Omaha Public Power District
- PEC People's Electric Cooperative
- PPM PPM Energy
- PRBZ Invengery, LLC.
- PSCM Public Service Company of Colorado
- SEPC Sunflower Electric Power Cooperation
- SPRM City Utilities of Springfield
- SPS Southwestern Public Service Company
- SWE Southern Company
- SUNC Sunflower Electric Cooperative
- TEA The Energy Authority
- TEXTL Tex-La Electric Cooperative of Texas Inc.
- TNSK Tenaska Power Services Co.
- TVAM Tennessee Valley Authority
- UCU Aquila Inc.
- WERE Westar Energy
- WFEC Western Farmers Electric Cooperative
- WIND enXco
- WRGS Western Resources Generation Services
- EDPR EDP Renewables
- KVEC KAW Valley Electrical Cooperative
- CHAN City of Chanute
- NMEC Nemaha-Marshall Electric

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
BPAE	AG2-2011-059	75722069	WR	AECI	100	11/1/2012	11/1/2017	10/1/2013	10/1/2018	10/1/2013	10/1/2018	100	17SP
CRGL	AG2-2011-041	75722256	NPPD	EES	200	12/1/2012	12/1/2032	10/1/2013	10/1/2033	10/1/2013	10/1/2033	200	13SP
CRGL	AG2-2011-042	75722270	NPPD	EES	200	12/1/2012	12/1/2032	10/1/2013	10/1/2033	10/1/2013	10/1/2033	0	13SP
CRGL	AG2-2011-044	75722323	SECI	EES	200	12/1/2012	12/1/2032	1/1/2018	1/1/2038	10/1/2013	10/1/2033	0	13SP
EDE	AG2-2011-064	75677330	KCPL	EDE	3	1/1/2012	1/1/2017	10/1/2013	10/1/2018	10/1/2013	10/1/2018	0	13WP
INDP	AG2-2011-004	75702691	KCPL	INDN	3	1/1/2012	1/1/2040	10/1/2013	10/1/2041	10/1/2013	10/1/2041	0	17SP
INF	AG2-2011-056	75722852	SECI	AMRN	200	12/31/2014	12/31/2019	1/1/2018	1/1/2023	12/31/2014	12/31/2019	0	17SP
KBPU	AG2-2011-005	75705418	MPS	KACY	5	6/1/2012	6/1/2024	10/1/2013	10/1/2025	10/1/2013	10/1/2025	0	17SP
KBPU	AG2-2011-009	75710066	MPS	KACY	100	1/1/2014	1/1/2034	6/1/2015	6/1/2035	1/1/2014	1/1/2034	69	22SP
KEPC	AG2-2011-065	75670817	KCPL	WR	2	1/1/2012	6/1/2030	10/1/2013	3/1/2032	10/1/2013	3/1/2032	2	13SP
LESM	AG2-2011-003	75665751	NPPD	LES	3	10/1/2012	10/1/2017	10/1/2013	10/1/2018	10/1/2013	10/1/2018	3	22SP
MOWR	AG2-2011-057	75723278	KCPL	AMRN	1	6/1/2012	6/1/2017	10/1/2013	10/1/2018	Note 4	Note 4	0	17SP
NPPM	AG2-2011-011	75691899	NPPD	NPPD	30	10/1/2012	10/1/2022	10/1/2013	10/1/2023	10/1/2013	10/1/2023	25	17WP
OPPM	AG2-2011-002	75681681	NPPD	OPPD	45	10/1/2012	10/1/2022	10/1/2013	10/1/2023	10/1/2013	10/1/2023	38	17WP
SPSM	AG2-2011-031	75723068	SPS	SPS	23	6/1/2013	6/1/2033	6/1/2015	6/1/2035	10/1/2013	10/1/2033	0	13SP
UCU	AG2-2011-010	75711368	MPS	MPS	2	12/1/2011	12/1/2016	10/1/2013	10/1/2018	10/1/2013	10/1/2018	1	22SP
WRGS	AG2-2011-066	75710756	SECI	WR	135	1/1/2016	1/1/2021	1/1/2016	1/1/2021	1/1/2016	1/1/2021	0	17SP
					452								

Note 1: 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.

Note 2: Start dates with and without redispatch are based on the assumed completion dates of previous Aggregate Transmission Service Studies currently being conducted. Actual start dates may differ from the potential start dates upon completion of the previous studies.

Note 3: Request is unable to be deferred due to fixed stop dates.

Note 4: Transmission customer did not select "remain in the study using interim redispatch" option.

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	¹ Letter of Credit Amount Required	² Potential Base Plan Engineering and Construction Funding Allowable	Notes	⁴ Additional Engineering and Construction Cost for 3rd Party Upgrades	^{3,5} Total Revenue Requirements for Assigned Upgrades Over Term of Reservation WITH Potential Base Plan Funding Allocation	Point-to-Point Base Rate Over Reservation Period	⁴ Total Cost of Reservation Assignable to Customer Contingent Upon Base Plan Funding
BPAE	AG2-2011-059	75722069	\$ -	\$ -	\$ -		\$ -	\$ -	\$ 5,262,000	\$ 5,262,000
CRGL	AG2-2011-041	75723256	\$ -	\$ -	\$ -	-6,7	\$ -	\$ -	\$ 61,440,000	\$ 61,440,000
CRGL	AG2-2011-042	75723270	\$ -	\$ -	\$ -	-6,7	\$ -	\$ -	\$ 61,440,000	\$ 61,440,000
CRGL	AG2-2011-044	75723223	\$ 1,010,930	\$ 1,010,930	\$ -		\$ -	\$ 3,177,468	\$ 61,440,000	\$ 61,440,000
EDE	AG2-2011-064	75677330	\$ -	\$ -	\$ -		\$ 2,500,000	\$ -	\$ -	Schedule 9 & 11 Charges
INDP	AG2-2011-004	75702691	\$ -	\$ -	\$ -		\$ -	\$ -	\$ 884,016	\$ 884,016
INF	AG2-2011-056	75722852	\$ -	\$ -	\$ -		\$ -	\$ -	\$ 10,524,000	\$ 10,524,000
KBPU	AG2-2011-005	75705418	\$ 215	\$ 215	\$ -		\$ -	\$ 453	\$ 631,440	\$ 631,440
KBPU	AG2-2011-009	75710066	\$ 3,065	\$ 3,065	\$ -		\$ -	\$ 8,634	\$ 21,048,000	\$ 21,048,000
KEPC	AG2-2011-065	75670817	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	Schedule 9 & 11 Charges
LESM	AG2-2011-003	75665751	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	Schedule 9 & 11 Charges
MOWR	AG2-2011-057	75723278	\$ -	\$ -	\$ -		\$ -	\$ -	\$ 52,620	\$ 52,620
NPPM	AG2-2011-011	75691899	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	Schedule 9 & 11 Charges
OPPM	AG2-2011-002	75681681	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	Schedule 9 & 11 Charges
SPSM	AG2-2011-031	75723068	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	Schedule 9 & 11 Charges
UCU	AG2-2011-010	75711368	\$ 15	\$ -	\$ 15		\$ -	\$ -	\$ -	Schedule 9 & 11 Charges
WRGS	AG2-2011-066	75710756	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	Schedule 9 & 11 Charges
Grand Total			\$ 3,295		\$ 15			\$ 9,087		
<p>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 required for upgrades assigned to PTP requests. The amount of the letter of credit will be adjusted down on an annual basis to reflect cost recovery based on revenue allocation. This letter of credit is not required for those facilities that are fully base plan funded. The Letter Of Credit Amount listed is based on meeting OATT Attachment J requirements for base plan funding.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Note 6: Mutually exclusive with request 75723256 and 75723270. System impacts identified by only modeling mutually exclusive request 75723256.</p> <p>Note 7: ATSS cost allocation includes all customers' mutually exclusive requests in SPP-2011-AG2.</p>										

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

Customer Study Number
BPAE AG2-2011-059

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
BPAE	75722069	WR	AECI	100	11/1/2012	11/1/2017	10/1/2013	10/1/2018	\$ -	\$ 5,262,000	\$ -	\$ -
									\$ -	\$ 5,262,000	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75722069	BLUE SPRING SOUTH - PRAIRIE LEE 161KV CKT 1 #1 Accelerate	6/1/2014	6/1/2015		Yes	\$ 494	\$ 3,418	\$ 821
	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 Start Date	Redispatch Available
75722069	IATAN - NASHUA 345KV CKT 1	6/1/2014	6/1/2015		Yes

Planned Projects

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75722069	GOODYEAR JUNCTION - MCVICAR3 115KV	6/1/2014	12/1/2013		
	MCVICAR3 - 17TH & FAIRLAWN 115KV	6/1/2014	12/1/2014		Yes

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75722069	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012		
	HUGO POWER PLANT - VALLIANT 345KV CKT 1 WFEC	7/1/2012	7/1/2012		
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	NORTHWEST - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		

*Credits may be required for applicable generation interconnection network upgrades.

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

Customer	Study Number											
CRGL	AG2-2011-041											
Customer	Reservation	POR	POD	Requested-Amount	Requested-Start-Date	Requested-Stop-Date	Deferred-Start-Date-Without-Redispatch	Deferred-Stop-Date-Without-Redispatch	Potential-Basic-Plan-Funding-Allowable	Point-to-Point-Base-Rate	Allocated-E-&-C-Cost	Total-Revenue-Requirements
CRGL	75723256	NPPD	EE5	200	12/1/2012	12/1/2032	10/1/2013	10/1/2033	\$	\$ 61,440,000	\$	\$
									\$	\$ 61,440,000	\$	\$
Reservation	Upgrade-Name	DUN	EOC	Earliest-Start-Date	Redispatch-Available	Allocated-E-&-C-Cost	Total-E-&-C-Cost	Total-Revenue-Requirements				
75723256	None					\$	\$	\$				
					Total	\$	\$	\$				
Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.												
Reservation	Upgrade-Name	DUN	EOC	Earliest-Start-Date	Redispatch-Available							
75723256	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012									
	HUGO POWER PLANT - VALLIANT 345KV CKT 1 WFEC	7/1/2012	7/1/2012									
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006									
	NORTHWEST - TATONGA 345KV CKT 1	1/1/2010	1/1/2010									
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010									
*Credits may be required for applicable generation interconnection network upgrades.												

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

Customer	Study Number											
CRGL	AG2-2011-042											
Customer	Reservation	PQR	POD	Requested-Amount	Requested-Start-Date	Requested-Stop-Date	Deferred-Start-Date-Without-Redispatch	Deferred-Stop-Date-Without-Redispatch	Potential-Basic-Plan-Funding-Allowable	Point-to-Point-Base-Rate	Allocated-E-&-C-Cost	Total-Revenue-Requirements
CRGL	75723270	NPPD	EE5	200	12/1/2012	12/1/2032	10/1/2013	10/1/2033	\$	\$ 61,440,000	\$	\$
									\$	\$ 61,440,000	\$	\$
Reservation	Upgrade-Name	DUN	EOC	Earliest-Start-Date	Redispatch-Available	Allocated-E-&-C-Cost	Total-E-&-C-Cost	Total-Revenue-Requirements				
75723270	None					\$	\$	\$				
					Total	\$	\$	\$				
Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.												
Reservation	Upgrade-Name	DUN	EOC	Earliest-Start-Date	Redispatch-Available							
75723270	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012									
	HUGO POWER PLANT - VALLIANT 345KV CKT 1 WFEC	7/1/2012	7/1/2012									
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006									
	NORTHWEST - TATONGA 345KV CKT 1	1/1/2010	1/1/2010									
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010									
*Credits may be required for applicable generation interconnection network upgrades.												

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

Customer	Study Number	PQR	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
CRGL	AG2-2011-044	SECI	EE5	200	12/1/2012	12/1/2032	1/1/2018	1/1/2038	\$	\$ 61,440,000	\$ 1,010,930	\$ 3,177,468
									\$	\$ 61,440,000	\$ 1,010,930	\$ 3,177,468

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75723323	CLEARWATER - MILAN TAP 138KV CKT 1 MKEC Accelerate	10/1/2013	6/1/2017		Yes	\$ 177,672	\$ 724,235	\$ 601,108
	CLEARWATER - MILAN TAP 138KV CKT 1 WERE Accelerate	10/1/2013	6/1/2017		Yes	\$ 414,728	\$ 1,690,536	\$ 1,160,369
	HARPER - MILAN TAP 138KV CKT 1 #2 Accelerate	10/1/2013	6/1/2017		Yes	\$ 418,530	\$ 1,706,036	\$ 1,415,991
	Total					\$ 1,010,930	\$ 4,120,807	\$ 3,177,468

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 Start Date	Redispatch Available
75723323	HARPER - MILAN TAP 138KV CKT 1 #1	10/1/2013	12/1/2014		Yes
	Line - Clark County - Thistle 345 kV dbI Ckt	10/1/2013	1/1/2015		Yes
	Line - Hitchland - Woodward 345 kV dbI Ckt OKGE	10/1/2013	7/1/2014		Yes
	Line - Hitchland - Woodward 345 kV dbI Ckt SPS	10/1/2013	7/1/2014		Yes
	Line - Spearville - Clark County 345 kV dbI Ckt	10/1/2013	1/1/2015		Yes
	Line - Thistle - Wichita 345 kV dbI Ckt PW	10/1/2013	1/1/2015		Yes
	Line - Thistle - Wichita 345 kV dbI Ckt WERE	10/1/2013	1/1/2015		Yes
	Line - Thistle - Woodward 345 kV dbI Ckt OKGE	10/1/2013	1/1/2015		Yes
	Line - Thistle - Woodward 345 kV dbI Ckt PW	10/1/2013	1/1/2015		Yes
	Line - Tucco - Woodward 345 kV line OKGE	10/1/2013	6/1/2014		Yes
	Line - Tucco - Woodward 345 kV line SPS	10/1/2013	6/1/2014		Yes
	MOUNDRIIDGE 138/115KV TRANSFORMER CKT 2	10/1/2013	12/1/2014		Yes
	XFR - Thistle 345/138 kV	10/1/2013	1/1/2015		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 Start Date	Redispatch Available
75723323	Cherry Co - Gentleman 345 kV Ckt1	10/1/2013	1/1/2018		Yes
	Cherry Co - Holt Co 345 kV Ckt1	10/1/2013	1/1/2018		Yes
	Cherry Co 345 kV Terminal Upgrades	10/1/2013	1/1/2018		Yes

Planned Projects

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75723323	GOODYEAR JUNCTION - MCVICAR3 115KV	10/1/2013	12/1/2013		Yes
	MCVICAR3 - 17TH & FAIRLAWN 115KV	10/1/2013	12/1/2014		Yes

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT--

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75723323	FLATRDG3 - 138.00 - MEDICINE LODGE 138KV CKT 1	12/1/2009	6/1/2013		
	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012		
	HUGO POWER PLANT - VALLIANT 345KV CKT 1 WFEG	7/1/2012	7/1/2012		
	MEDICINE LODGE 138/115KV TRANSFORMER CKT 1 Displacement	12/1/2009	6/1/2013		
	NORTHWEST - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		

*Credits may be required for applicable generation interconnection network upgrades--

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

Customer Study Number
EDE AG2-2011-064

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
EDE	75677330	KCPL	EDE	3	1/1/2012	1/1/2017	10/1/2013	10/1/2018	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75677330	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 Start Date	Redispatch Available
75677330	MIDWAY - ST JOE 161KV CKT 1 Reactor	6/1/2014	6/1/2014		
	MOUNDRIDGE 138/115KV TRANSFORMER CKT 2	10/1/2013	12/1/2014		

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75677330	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	NORTHWEST - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	SUB 110 - ORONOGO JCT. - SUB 167 - RIVERTON 161KV CKT 1	6/1/2011	6/1/2011		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		

Third Party Limitations.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	*Allocated E & C Cost	*Total E & C Cost
75677330	LAMAR 161/69KV TRANSFORMER CKT 1	10/1/2013	6/1/2016		No	\$ 2,500,000	\$ 2,500,000
Total						\$ -	\$ -

*Estimated cost allocation as a percentage of total cost is shown for third-party limitations when costs have not yet been established by the third-party.

*Credits may be required for applicable generation interconnection network upgrades.

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

Customer Study Number
 INDP AG2-2011-004

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
INDP	75702691	KCPL	INDN	3	1/1/2012	1/1/2040	10/1/2013	10/1/2041	\$ -	\$ 884,016	\$ -	\$ -
									\$ -	\$ 884,016	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75702691	BLUE SPRING SOUTH - PRAIRIE LEE 161KV CKT 1 #1 Accelerate	6/1/2014	6/1/2015			\$ 18	\$ 3,418	\$ 64
	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 Start Date	Redispatch Available
75702691	JATAN - NASHUA 345KV CKT 1	6/1/2014	6/1/2015		
	MIDWAY - ST JOE 161KV CKT 1 Reactor	6/1/2014	6/1/2014		

*Credits may be required for applicable generation interconnection network upgrades.

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

Customer	Study Number											
INF	AG2-2011-056											
Customer	Reservation	PQR	PQD	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
INF	75722852	SECI	AMRN	200	12/31/2014	12/31/2019	1/1/2018	1/1/2023	\$	\$ 10,524,000	\$	\$
									\$	\$ 10,524,000	\$	\$
Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements				
75722852	CLEARWATER - MILAN TAP 138KV CKT 1 MKEC Accelerate	10/1/2013	6/1/2017		Yes	\$ 230,685	\$ 724,235	\$ 504,566				
	CLEARWATER - MILAN TAP 138KV CKT 1 WERE Accelerate	10/1/2013	6/1/2017		Yes	\$ 538,474	\$ 1,690,536	\$ 1,038,787				
	HARPER - MILAN TAP 138KV CKT 1 #2 Accelerate	10/1/2013	6/1/2017		Yes	\$ 543,411	\$ 1,706,036	\$ 1,188,575				
	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 Start Date	Redispatch Available							
75722852	HARPER - MILAN TAP 138KV CKT 1 #1	12/31/2014	12/1/2014									
	HAYS PLANT - SOUTH HAYS 115KV CKT 1 #2	12/31/2014	6/1/2016		Yes							
	Line - Clark County - Thistle 345 kV dbI Ckt	12/31/2014	1/1/2015									
	Line - Hitchland - Woodward 345 kV dbI Ckt OKGE	12/31/2014	7/1/2014									
	Line - Hitchland - Woodward 345 kV dbI Ckt SP5	12/31/2014	7/1/2014									
	Line - Spearville - Clark County 345 kV dbI Ckt	12/31/2014	1/1/2015									
	Line - Thistle - Wichita 345 kV dbI Ckt PW	12/31/2014	1/1/2015									
	Line - Thistle - Wichita 345 kV dbI Ckt WERE	12/31/2014	1/1/2015									
	Line - Thistle - Woodward 345 kV dbI Ckt OKGE	12/31/2014	1/1/2015									
	Line - Thistle - Woodward 345 kV dbI Ckt PW	12/31/2014	1/1/2015									
	Line - Tucco - Woodward 345 kV line OKGE	12/31/2014	6/1/2014									
	Line - Tucco - Woodward 345 kV line SP5	12/31/2014	6/1/2014									
	XFR - Thistle 345/138 kV	12/31/2014	1/1/2015									
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 Start Date	Redispatch Available							
75722852	Cherry Co - Gentleman 345 kV Ckt1	10/1/2014	1/1/2018		Yes							
	Cherry Co - Holt Co 345 kV Ckt1	10/1/2014	1/1/2018		Yes							
	Cherry Co 345 kV Terminal Upgrades	10/1/2014	1/1/2018		Yes							
Planned Projects												
Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available							
75722852	GOODYEAR JUNCTION - MCVICAR3 115KV	6/1/2014	12/1/2013									
	MCVICAR3 - 17TH & FAIRLAWN 115KV	6/1/2014	12/1/2014									
Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP QATT.												
Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available							
75722852	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012									
	HUGO POWER PLANT - VALLIANT 345KV CKT 1 WFEC	7/1/2012	7/1/2012									
	NORTHWEST - TATONGA 345KV CKT 1	1/1/2010	1/1/2010									
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010									
*Credits may be required for applicable generation interconnection network upgrades.												

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

Customer Study Number
KBPU AG2-2011-005

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
KBPU	75705418	MPS	KACY	5	6/1/2012	6/1/2024	10/1/2013	10/1/2025	\$ -	\$ 631,440	\$ 215	\$ 453
									\$ -	\$ 631,440	\$ 215	\$ 453

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75705418	BLUE SPRING SOUTH - BLUE SPRINGS EAST 161KV CKT 1 #1 Accelerate	6/1/2014	6/1/2015			\$ 215	\$ 3,296	\$ 453
	BLUE SPRING SOUTH - PRAIRIE LEE 161KV CKT 1 #1 Accelerate	6/1/2014	6/1/2015		Yes	\$ 190	\$ 3,418	\$ 412
	Total					\$ 215	\$ 3,296	\$ 453

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 Start Date	Redispatch Available
75705418	IATAN - NASHUA 345KV CKT 1	6/1/2014	6/1/2015		Yes
	MIDWAY - ST JOE 161KV CKT 1 Reactor	6/1/2014	6/1/2014		

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75705418	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		

*Credits may be required for applicable generation interconnection network upgrades.

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

Customer Study Number
KBPU AG2-2011-009

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
KBPU	75710066	MPS	KACY	100	1/1/2014	1/1/2034	6/1/2015	6/1/2035	\$ -	\$ 21,048,000	\$ 3,065	\$ 8,634
									\$ -	\$ 21,048,000	\$ 3,065	\$ 8,634

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75710066	BLUE SPRING SOUTH - BLUE SPRINGS EAST 161KV CKT 1 #1 Accelerate	6/1/2014	6/1/2015		Yes	\$ 3,065	\$ 3,296	\$ 8,634
	BLUE SPRING SOUTH - PRAIRIE LEE 161KV CKT 1 #1 Accelerate	6/1/2014	6/1/2015		Yes	\$ 2,702	\$ 3,418	\$ 7,842
	Total					\$ 3,065	\$ 3,296	\$ 8,634

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 Start Date	Redispatch Available
75710066	IATAN - NASHUA 345KV CKT 1	6/1/2014	6/1/2015		Yes

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75710066	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		

*Credits may be required for applicable generation interconnection network upgrades.

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

Customer Study Number
KEPC AG2-2011-065

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	75670817	KCPL	WR	2	1/1/2012	6/1/2030	10/1/2013	3/1/2032	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75670817	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75670817	FLATRDG3 138.00 - HARPER 138KV CKT 1	12/1/2009	6/15/2013		
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		

*Credits may be required for applicable generation interconnection network upgrades.

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

Customer Study Number
LESM AG2-2011-003

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
LESM	75665751	NPPD	LES	3	10/1/2012	10/1/2017	10/1/2013	10/1/2018	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75665751	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75665751	ALBION - PETERSBURG 115KV CKT 1	1/1/2013	1/1/2013		
	FT RANDAL - MADISONCO 230.00 230KV CKT 1	10/1/2013	11/1/2014		
	KELLY - MADISONCO 230.00 230KV CKT 1	10/1/2013	11/1/2014		
	NELIGH - PETERSBURG 115KV CKT 1	1/1/2013	1/1/2013		

*Credits may be required for applicable generation interconnection network upgrades.

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

Customer Study Number
MOWR AG2-2011-057

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
MOWR	75723278	KCPL	AMRN	1	6/1/2012	6/1/2017	10/1/2013	10/1/2018	\$ -	\$ 52,620	\$ -	\$ -
									\$ -	\$ 52,620	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75723278	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 Start Date	Redispatch Available
75723278	MIDWAY - ST JOE 161KV CKT 1 Reactor	6/1/2014	6/1/2014		

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75723278	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		

*Credits may be required for applicable generation interconnection network upgrades.

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

Customer Study Number
NPPM AG2-2011-011

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
NPPM	75691899	NPPD	NPPD	30	10/1/2012	10/1/2022	10/1/2013	10/1/2023	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75691899	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 Start Date	Redispatch Available
75691899	Cherry Co - Gentleman 345 kV Ckt1	10/1/2014	1/1/2018		
	Cherry Co - Holt Co 345 kV Ckt1	10/1/2014	1/1/2018		
	Cherry Co 345 kV Terminal Upgrades	10/1/2014	1/1/2018		

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75691899	ALBION - PETERSBURG 115KV CKT 1	1/1/2013	1/1/2013		
	NELIGH - PETERSBURG 115KV CKT 1	1/1/2013	1/1/2013		

*Credits may be required for applicable generation interconnection network upgrades.

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

Customer Study Number
OPPM AG2-2011-002

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
OPPM	75681681	NPPD	OPPD	45	10/1/2012	10/1/2022	10/1/2013	10/1/2023	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75681681	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 Start Date	Redispatch Available
75681681	Cherry Co - Gentleman 345 kV Ckt1	10/1/2014	1/1/2018		
	Cherry Co - Holt Co 345 kV Ckt1	10/1/2014	1/1/2018		
	Cherry Co 345 kV Terminal Upgrades	10/1/2014	1/1/2018		

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75681681	ALBION - PETERSBURG 115KV CKT 1	1/1/2013	1/1/2013		
	NELIGH - PETERSBURG 115KV CKT 1	1/1/2013	1/1/2013		

*Credits may be required for applicable generation interconnection network upgrades.

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

Customer Study Number
SPSM AG2-2011-031

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
SPSM	75723068	SPS	SPS	23	6/1/2013	6/1/2033	6/1/2015	6/1/2035	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75723068	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 Start Date	Redispatch Available
75723068	BAILEY COUNTY INTERCHANGE - CURRY COUNTY INTERCHANGE 115KV CKT 1	10/1/2013	6/1/2015		Yes
	HITCHLAND INTERCHANGE (1-230/115/115.2KV TRANSFORMER CKT 2)	6/1/2018	6/1/2018		
	NEWHART INTERCHANGE PROJECT	10/1/2013	4/30/2015		Yes

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75723068	CHERRY6 230.00 - Harrington Station East Bus 230KV CKT 1	6/1/2015	6/1/2015		

*Credits may be required for applicable generation interconnection network upgrades.

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

Customer Study Number
UCU AG2-2011-010

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
UCU	75711368	MPS	MPS	2	12/1/2011	12/1/2016	10/1/2013	10/1/2018	\$ 15	\$ -	\$ 15	\$ 24
									\$ 15	\$ -	\$ 15	\$ 24

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75711368	BLUE SPRING SOUTH - BLUE SPRINGS EAST 161KV CKT 1 #1 Accelerate	6/1/2014	6/1/2015			\$ 15	\$ 3,296	\$ 24
	BLUE SPRING SOUTH - PRAIRIE LEE 161KV CKT 1 #1 Accelerate	6/1/2014	6/1/2015			\$ 14	\$ 3,418	\$ 23
	Total					\$ 15	\$ 3,296	\$ 24

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 Start Date	Redispatch Available
75711368	IATAN - NASHUA 345KV CKT 1	6/1/2014	6/1/2015		

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75711368	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		

*Credits may be required for applicable generation interconnection network upgrades.

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

Customer Study Number
WRGS AG2-2011-066

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	75710756	SECI	WR	135	1/1/2016	1/1/2021			\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
75710756	CLEARWATER - MILAN TAP 138KV CKT 1 MKEC Accelerate	10/1/2013	6/1/2017		Yes	\$ 211,638	\$ 104,240	\$ 315,878	\$ 724,235	\$ 756,181
	CLEARWATER - MILAN TAP 138KV CKT 1 WERE Accelerate	10/1/2013	6/1/2017		Yes	\$ 737,334	\$ -	\$ 737,334	\$ 1,690,536	\$ 1,529,731
	HARPER - MILAN TAP 138KV CKT 1 #2 Accelerate	10/1/2013	6/1/2017		Yes	\$ 498,544	\$ 245,551	\$ 744,095	\$ 1,706,036	\$ 1,781,290
	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 Start Date	Redispatch Available
75710756	HARPER - MILAN TAP 138KV CKT 1 #1	12/31/2014	12/1/2014		
	HAYS PLANT - SOUTH HAYS 115KV CKT 1 #2	12/31/2014	6/1/2016		Yes
	Line - Clark County - Thistle 345 kV dbI Ckt	12/31/2014	1/1/2015		
	Line - Hitchland - Woodward 345 kV dbI Ckt OKGE	12/31/2014	7/1/2014		
	Line - Hitchland - Woodward 345 kV dbI Ckt SPS	12/31/2014	7/1/2014		
	Line - Spearville - Clark County 345 kV dbI Ckt	12/31/2014	1/1/2015		
	Line - Thistle - Wichita 345 kV dbI Ckt PW	12/31/2014	1/1/2015		
	Line - Thistle - Wichita 345 kV dbI Ckt WERE	12/31/2014	1/1/2015		
	Line - Thistle - Woodward 345 kV dbI Ckt OKGE	12/31/2014	1/1/2015		
	Line - Thistle - Woodward 345 kV dbI Ckt PW	12/31/2014	1/1/2015		
	Line - Tuco - Woodward 345 kV line OKGE	12/31/2014	6/1/2014		
	Line - Tuco - Woodward 345 kV line SPS	12/31/2014	6/1/2014		
	XFR - Thistle 345/138 kV	12/31/2014	1/1/2015		

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 Start Date	Redispatch Available
75710756	Cherry Co - Gentleman 345 kV Ckt1	10/1/2014	1/1/2018		
	Cherry Co - Holt Co 345 kV Ckt1	10/1/2014	1/1/2018		
	Cherry Co 345 kV Terminal Upgrades	10/1/2014	1/1/2018		

Credits may be required for the following Network Upgrades in accordance with Attachment Z2 of the SPP OATT.

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available
75710756	FLATRDG3 138.00 - HARPER 138KV CKT 1	12/1/2009	6/15/2013		
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	NORTHWEST - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		

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
MIPU	BLUE SPRING SOUTH - BLUE SPRINGS EAST 161KV CKT 1 #1 Accelerate	Replace 800 amp wavetrap	6/1/2014	6/1/2015	\$3,296.00
MIPU	BLUE SPRING SOUTH - PRAIRIE LEE 161KV CKT 1 #1 Accelerate	Upgrade Prairie Lee wavetrap to at least 1200 A.	6/1/2014	6/1/2015	\$3,418.00
MKEC	CLEARWATER - MILAN TAP 138KV CKT 1 MKEC Accelerate	Rebuild MKEC portion of the 5.6 mile Clearwater-Milan Tap 115 kV with bundled 1192.5 kcmil ACSR conductor (Bunting)	10/1/2013	6/1/2017	\$724,235.00
MKEC	HARPER - MILAN TAP 138KV CKT 1 #2 Accelerate	Reconductor 22.1 mile Harper to Milan Tap 138 kV line.	10/1/2013	6/1/2017	\$1,706,036.00
WERE	CLEARWATER - MILAN TAP 138KV CKT 1 WERE Accelerate	Rebuild Westar portion of the Clearwater-Milan tap 115 kV with bundled 1192.5 kcmil ACSR conductor (Bunting)	10/1/2013	6/1/2017	\$1,690,536.00

Planned 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)
WERE	GOODYEAR JUNCTION - MCVICAR3 115KV	Build 3.25 miles of 115kV from Goodyear to MacVicar. 223 MVA Rate A-245 MVA Rate B.	6/1/2014	12/1/2013
WERE	MCVICAR3 - 17TH & FAIRLAWN 115KV	Build 3.6 miles of 115kV from MacVicar to 17th & Fairlawn. 223 MVA Rate A-245 MVA Rate B.	6/1/2014	12/1/2014

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

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)
ITCGP	Line - Clark County - Thistle 345 kV dbl Ckt	Build a new 86 mile double circuit 345 kV line with at least 3000 A capacity from the Thistle 345 kV substation to the new Clark County substation. Build a new 345 kV substation at Thistle with a ring bus and necessary terminal equipment.	12/31/2014	1/1/2015
ITCGP	Line - Spearville - Clark County 345 kV dbl Ckt	Build a new 36 mile double circuit 345 kV line with at least 3000 A capacity from the Spearville substation to the new Clark County substation. Build the Clark County 345 kV substation with a ring bus and necessary terminal equipment.	12/31/2014	1/1/2015
ITCGP	XFR - Thistle 345/138 kV	Install a 400 MVA 345/138 kV transformer at the new 345 kV Thistle substation.	12/31/2014	1/1/2015
KACP	IATAN - NASHUA 345KV CKT 1	Tap Nashua 245kV bus in Hawthorn - St. Joseph 245 kV line. Build new 345 kV line from Iatan to Nashua, Add Nashua 345/161 kV	6/1/2014	6/1/2015
MIDW	HAYS PLANT - SOUTH HAYS 115KV CKT 1 #2	Tear down and rebuild of existing South Hays - Hays Plant 115 kV line. Tentative plans include rebuilding on existing right-of-way with the possibility of re-routing a portion of the line to new right-of-way as necessary.	12/31/2014	6/1/2016
MKEC	HARPER - MILAN TAP 138KV CKT 1 #1	Replace Wave Trap at Harper Substation	12/31/2014	12/1/2014
MIPU	MIDWAY - ST JOE 161KV CKT 1 Reactor	Install 6% series reactors on the Midway - St. Joseph 161KV line. Reactor will be installed at the St. Joseph bus.	6/1/2014	6/1/2014
OKGE	Line - Hitchland - Woodward 345 kV dbl Ckt OKGE	Build a new 92 mile double circuit 345 kV line with at least 3000 A capacity from the Woodward District EHV substation to the SPS interception from the Hitchland substation. Upgrade the Woodward District EHV substation with the necessary breakers and term	12/31/2014	7/1/2014
OKGE	Line - Thistle - Woodward 345 kV dbl Ckt OKGE	Build a new 79 mile double circuit 345 kV line with at least 3000 A capacity from the Woodward District EHV substation to the Kansas/Oklahoma state border towards the Thistle substation. Upgrade the Woodward Distric EHV substation with the necessary brea	12/31/2014	1/1/2015
OKGE	Line - Tuco - Woodward 345 kV line OKGE	Build new 345 kV line from Woodward EHV to Border - Project costs now include Border reactor substation	12/31/2014	6/1/2014

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

PW	Line - Thistle - Wichita 345 kV dbl Ckt PW	Build a new 78 mile double circuit 345 kV line with at least 3000 A capacity from the Wichita substation to the new Thistle 345 kV substation.	12/31/2014	1/1/2015
PW	Line - Thistle - Woodward 345 kV dbl Ckt PW	Build a new 30 mile double circuit 345 kV line with at least 3000 A capacity from the Thistle substation to the Kansas/Oklahoma state border towards the Woodward District EHV substation.	12/31/2014	1/1/2015
SPS	BAILEY COUNTY INTERCHANGE - CURRY COUNTY INTERCHANGE 115KV CKT 1	40 miles 115 kV between Bailey and Curry.	10/1/2013	6/1/2015
SPS	HITCHLAND INTERCHANGE (I) 230/115/13.2KV TRANSFORMER CKT 2	Install 2nd 230/115 kV, 150 MVA Autotransformer at Hitchland Interchange	6/1/2018	6/1/2018
SPS	Line - Hitchland - Woodward 345 kV dbl Ckt SPS	Build 30 mile double circuit 345 kV line with at least 3000 A capacity from the Hitchland substation to the OGE interception point from the Woodward District EHV substation. Upgrade the Hitchland substation with the necessary breakers and terminal equipme	12/31/2014	7/1/2014
SPS	Line - Tuco - Woodward 345 kV line SPS	Build new 345 kV line from Tuco to OGEs Border station near TX/OK Stateline. Install line reactor outside Border station and line reactors at Tuco.	12/31/2014	6/1/2014
SPS	NEWHART INTERCHANGE PROJECT	Tap the Potter Interchange - Plant X Station 230 kV line for new Newhart Substation and install 230/115 kV, 150/173 MVA transformer. New 15 mile Lampton Interchange - Hart Industrial Substation 115 kV line. New 19 mile Swisher County Interchange - Newhart	10/1/2013	4/30/2015
WERE	Line - Thistle - Wichita 345 kV dbl Ckt WERE	Upgrade the Wichita substation with the necessary breakers and terminal equipment to accommodate two new 345 kV circuits from the new Thistle 345 kV substation	12/31/2014	1/1/2015
WERE	MOUNDRIDGE 138/115KV TRANSFORMER CKT 2	Install second 138/115 kV transformer at Moundridge. Operate both 138/115 kV transformers normally closed.	10/1/2013	12/1/2014

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)
NPPD	Cherry Co - Gentleman 345 kV Ckt1	Build new 345 kV Transmission Line from GGS 345 kV Substation to a new Cherry County 345 kV Substation (76 miles).	10/1/2014	1/1/2018
NPPD	Cherry Co - Holt Co 345 kV Ckt1	Build new 345 kV Transmission Line from new Cherry County 345 kV Substation to new 345 kV Holt County Substation. (Estimated 146 miles).	10/1/2014	1/1/2018
NPPD	Cherry Co 345 kV Terminal Upgrades	Build new Cherry County 345 kV Substation.	10/1/2014	1/1/2018

Network Upgrades requiring credits per Attachment Z2 of the SPP OATT.

Transmission Owner	Upgrade	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)
AEPW	HUGO POWER PLANT - VALLIANT 345 KV AEPW	Vallient 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
MKEC	FLATRDG3 138.00 - MEDICINE LODGE 138KV CKT 1	Rebuild 8.05 mile line	40148.00	41426.00
MKEC	FLATRDG3 138.00 - HARPER 138KV CKT 1	Rebuild 24.15 mile line	12/1/2009	6/15/2013
MKEC	MEDICINE LODGE 138/115KV TRANSFORMER CKT 1 Displacement	Upgrade transformer	40148.00	41426.00
NPPD	ALBION - PETERSBURG 115KV CKT 1	Replace Breaker Switch 1106-D and jumpers at Albion. Replace main bus at Petersburg. Upgrade and replace transmission structures on 115 kV line to facilitate 100 degrees Centigrade line operation.	1/1/2013	1/1/2013
NPPD	FT RANDAL - MADISONCO 230.00 230KV CKT 1	Raise structures and line clearances as necessary to re-rate the transmission line to 320MVA	10/1/2013	11/1/2014
NPPD	KELLY - MADISONCO 230.00 230KV CKT 1	Raise structures and line clearances as necessary to re-rate the transmission line to 320MVA	10/1/2013	11/1/2014
NPPD	NELIGH - PETERSBURG 115KV CKT 1	Replace Breaker 1106, jumpers, and 115 kV Switch 1106-D2 at Neligh. Replace main bus at Petersburg. Upgrade and replace transmission structures on 115 kV line to facilitate 100 degrees Centigrade line operation.	1/1/2013	1/1/2013
OKGE	NORTHWEST - TATONGA 345KV CKT 1	Build 345 kV line	1/1/2010	1/1/2010
OKGE	TATONGA - WOODWARD 345KV CKT 1	Build 345 kV line	1/1/2010	1/1/2010
SPS	CHERRY6 230.00 - Harrington Station East Bus 230KV CKT 1	Replace wavetrap at Harrington East	6/1/2015	6/1/2015
WFEC	HUGO POWER PLANT - VALLIANT 345KV CKT 1 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	LAMAR 161/69KV TRANSFORMER CKT 1	Replace with 112 MVA unit	10/1/2013	6/1/2016	\$2,500,000.00