AGGREGATE FACILITIES STUDY

SPP-2017-AG1-AFS1

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SPP Engineering, SPP Transmission Services

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EXECUTIVE SUMMARY

This study report provides preliminary results for Southwest Power Pool, Inc. (SPP) Aggregate Transmission Service Study (ATSS) SPP-2017-AG1. Pursuant to Attachment Z1 of the SPP Open Access Transmission Tariff (OATT), 4113 MW of long-term transmission service requests have been studied in this Aggregate Facilities 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. Facility upgrade costs are allocated on a prorated basis to all requests positively impacting any individual overloaded facility.

Transmission Customers (Customer) requesting service in this study specified five parameters under which they agreed to confirm service. The five parameters are:

1. Directly Assigned Upgrade Cost (E&C and Credit Payment Obligation)
2. Third-Party Upgrade Cost
3. Latest Deferred Start Date
4. Interim Re-dispatch Acceptance
5. Letter of Credit Amount

The report indicates for each request whether any of the five parameters were exceeded. The specific parameters defined by the Customer are kept confidential and are not included in this report.

SPP will tender an **AFS – Appendix 1 – Update** form on August 28, 2017 to the Customers with a request(s) that have one or more study parameters that were not met. This will open a 5-Business Day window for Customer response. To remain in the ATSS, SPP must receive from the Customer by September 5, 2017, the AFS – Appendix 1 – Update form with the adjusted parameters that were not met. The AFS Appendix 1 – Update will indicate the parameters that were not met and need to be adjusted by the Customer. If the Customer does not increase the exceeded parameter or does not respond within five Business Days, the request will be removed from study. There is no action required on OASIS by the Customer.

Following the end of the response period, SPP will conclude the study using the revised parameters. Any requests that cannot be provided under the parameters specified will be removed from study and the Customer may re-submit the request during the next open season. SPP will post a final study report within 165 days of the close of the open season which will detail the results for all requests, including those that are removed from study. 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.

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

All requests for long-term transmission service with a Completed Application received before June 1, 2017 have been included in this ATSS.

The results of the AFS are detailed in Tables 1 through 7. Detailed results depict individual upgrade costs by study and potential base plan allowances determined by Attachments J and Z1 of the SPP OATT.

To understand the extent to which Base Plan Upgrades may be applied to both Point-to-Point (PTP) and Network Integration Transmission Services (NITS), it is necessary to highlight the definition of Designated Resource. Per Section 1 of the SPP OATT, a Designated Resource is:

> "Any 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."

Both NITS and PTP service have 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 Customer must provide SPP information necessary to verify that the new or changed Designated Resource meets the following conditions:

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

According to Attachment Z1 Section V.A, PTP Customers pay the higher of the monthly transmission access charge (base rate) or the monthly revenue requirement associated with the directly assigned portion of the Service Upgrade, if any.

NITS Customers pay the total monthly transmission access charges and the monthly revenue requirement associated with the directly assigned portion of the Service Upgrade, if any.

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. 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. 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 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. Table 6 lists possible generation pairs that could be used to allow start of service prior to completion of assigned Network Upgrades by utilizing interim re-dispatch. Table 7 lists the costs allocated per request for each Service Upgrade assigned in this AFS.

By taking the transmission service subject to interim redispatch, the Customer agrees to any limitations to Auction Revenue Rights that may result. In the absence of implementation of interim redispatch as requested by SPP for Customer transactions resulting in overloads on limiting facilities, SPP may curtail the Customer's schedule.

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 5, Use of Interim Redispatch, in Appendix 1 of the Aggregate Facilities Study Agreement, 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 Customer will pay the total E&C costs and other annual operating costs associated with the new facilities.

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 though the reservation period of the new request, excluding depreciation, shall be assigned to the new request. These incremental expenses, excluding depreciation, include:

1. The levelized difference in present worth of the engineering and construction expenses given the change in date to complete construction to account for additional interest expense and reduced engineering and construction expense due to inflation,
2. The levelized present worth of all expediting fees, and
3. The levelized present worth of the incremental annual carrying charges, excluding depreciation and interest, during the new reservation period taking into account both:
    a. The reservation in which the project was originally assigned, and
    b. A reservation, if any, in which the project was previously accelerated.

In the case of a Base Plan Upgrade being deferred or displaced by an earlier in service date for a requested upgrade, the methodology for achievable base plan avoided revenue requirements shall be determined per Attachment J, Section VII.A or Section VII.B, respectively. 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 Customer is responsible for funding the necessary upgrades of these facilities per Section 21.1 of SPP's OATT. In this AFS, third-party facilities were identified. Total E&C cost estimates for required third-party facility upgrades are applicable. SPP will undertake reasonable efforts to assist the 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 levelized revenue requirements for SPP system Network Upgrades.

All modeled facilities within the SPP 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 SPP prior to tendering of a Transmission Service Agreement. These facilities also include those owned by members of SPP who have not placed their facilities under SPP's OATT. Upgrades on the Southwest Power Administration (SWPA) 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 with the applicable Transmission Providers for study of third party facilities for service that sinks outside the SPP footprint.

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 consistent with current SPP Criteria and NERC Reliability Standards requirements. 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 monitored 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. 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 the following 2016 Integrated Transmission Planning (ITP) models, used in the 2017 ITP Near Term, to study the aggregate transfers over a variety of requested service periods and to determine the impact of the requested service on the transmission system:

- 2017 Winter Peak (18WP)
- 2018 Summer Peak (18SP)
- 2018 Winter Peak (18WP)
- 2021 Summer Peak (21SP)
- 2021 Winter Peak (21WP)
- 2026 Summer Peak (26SP)
- 2026 Winter Peak (26WP)

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 to model the requested service. From the seasonal models, two system scenarios were developed. Scenario 0 includes projected usage of transmission included in the SPP 2016 Series Cases. Scenario 5 includes transmission service not already included in the SPP 2016 Series Cases.

TRANSMISSION REQUEST MODELING

NITS requests are modeled as Generation to Load transfers in addition to Generation to Generation transfers. NITS requests are modeled as Generation to Load transfers in addition to Generation to Generation because the requested NITS is a request to serve network load with the new designated network resource, and the impacts on Transmission System are determined accordingly. PTP 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. TDF 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.

CURTAILMENT 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 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 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.

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 the Siemens power flow analysis tool, Managing and Utilizing System Transmission (MUST). Relief pairs from the generation shift factors for the incremental and decremental units with a TDF greater than 3% 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. 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 AFS analyzes the most probable contingencies and does not account for every situation that may be encountered in real-time operation. Because of this, it is possible that the Customer may be curtailed under certain system conditions to allow system operators to maintain the reliability of the transmission network.

STUDY RESULTS

STUDY ANALYSIS RESULTS

Tables 1 through 7 contain the AFS steady-state analysis results.

TABLE 1

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, the season of first impact, and indicates which requests, if any, had parameters that were exceeded.

TABLE 2

Table 2 identifies total E&C cost allocated to each 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), PTP base rate charge, total revenue requirements for assigned upgrades with consideration of potential base plan funding, final total cost allocation to the Customer, and directly assigned upgrade cost to the Customer. In addition, Table 2 identifies SWPA upgrade costs which require prepayment in addition to other allocated costs.

TABLE 3

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

Table 4 lists all upgrade requirements with associated solutions needed to provide Transmission Service for the AFS, earliest date upgrade is required (DUN), estimated date the upgrade will be completed and in service (EOC), and estimated E&C cost.

TABLE 5

Table 5 lists identified third-party constrained facilities.

TABLE 6

Table 6 identifies potential redispatch pairs available to relieve the aggregate impacts on identified constraints to prevent deferral of start of service. MW amounts listed for redispatch are maximum values observed in a long term study and may only be available in a reduced amount or unavailable at any given time.

TABLE 7

Table 7 lists costs allocated per request for Service Upgrades assigned in this AFS.

BASE PLAN UPGRADES

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's Point of Delivery (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.

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.

SPP will tender an "Appendix 1 – Adjustment" form on August 28, 2017. This will open a 5 business day window for Customer response. To remain in the ATSS, SPP must receive from the Customer by September 5, 2017, the updated and signed AFS – Appendix 1 – Update form. The AFS – Appendix 1 – Update will indicate the parameters that were not met and need to be adjusted by the Customer. If the Customer does not increase the exceeded parameter or does not respond within five Business Days, the request will be removed from study. There is no action required on OASIS by the Customer.

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:	
	X 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
• Excld 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:	X 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 (Parameter)	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	[5]One or More Study Parameters Exceeded
AEPE	AG1-2017-001	84604894	NPPD	NPPD	7	1/1/2018	1/1/2023	1/1/2018	1/1/2023	Note 4	Note 4	0	18SP	NO
AEPE	AG1-2017-002	84606580	WAUE	NPPD	1	1/1/2018	1/1/2023	1/1/2018	1/1/2023	Note 4	Note 4	0	18SP	YES
AEPE	AG1-2017-003	84606716	NPPD	NPPD	5	1/1/2018	1/1/2022	1/1/2018	1/1/2022	Note 4	Note 4	0	18SP	NO
AEPE	AG1-2017-004	84727067	NPPD	NPPD	7	1/1/2018	1/1/2023	1/1/2018	1/1/2023	Note 4	Note 4	0	18SP	NO
AEPE	AG1-2017-005	84729062	MPS	SPS	37	6/1/2019	1/1/2026	6/1/2019	1/1/2026	Note 4	Note 4	0	21SP	NO
AEPE	AG1-2017-006	84740127	MPS	SPS	37	6/1/2019	1/1/2026	12/31/2022	7/31/2029	Note 4	Note 4	0	21SP	YES
AEPE	AG1-2017-007	84740859	NPPD	NPPD	36	1/1/2019	1/1/2024	1/1/2019	1/1/2024	Note 4	Note 4	0	21SP	NO
AEPE	AG1-2017-008	84746514	NPPD	NPPD	32	1/1/2019	1/1/2022	1/1/2019	1/1/2022	Note 4	Note 4	0	21SP	YES
AEPE	AG1-2017-009	84746608	WAUE	NPPD	3	1/1/2019	1/1/2024	1/1/2019	1/1/2024	Note 4	Note 4	0	21SP	YES
AEPE	AG1-2017-010	84755770	LES	NPPD	18	1/1/2019	1/1/2022	1/1/2019	1/1/2022	Note 4	Note 4	0	21SP	YES
AEPM	AG1-2017-011	84903862	CSWS	CSWS	400	6/1/2022	6/1/2027	6/1/2022	6/1/2027	6/1/2022	6/1/2027	0	26SP	YES
AEPM	AG1-2017-012	84904082	CSWS	CSWS	610	6/1/2022	6/1/2027	6/1/2022	6/1/2027	6/1/2022	6/1/2027	0	26SP	YES
AEPM	AG1-2017-013	84904145	OKGE	CSWS	612	6/1/2022	6/1/2027	6/1/2022	6/1/2027	6/1/2022	6/1/2027	0	26SP	YES
AEPM	AG1-2017-014	84904230	OKGE	CSWS	450	6/1/2022	6/1/2027	6/1/2022	6/1/2027	6/1/2022	6/1/2027	0	26SP	YES
AEPM	AG1-2017-015	84904264	CSWS	CSWS	435	6/1/2022	6/1/2027	6/1/2022	6/1/2027	6/1/2022	6/1/2027	0	26SP	YES
AEPM	AG1-2017-016	84904431	OKGE	CSWS	500	6/1/2022	6/1/2027	6/1/2022	6/1/2027	6/1/2022	6/1/2027	0	26SP	YES
AEPM	AG1-2017-017	84904909	CSWS	CSWS	147	12/1/2017	12/1/2022	6/1/2020	6/1/2025	12/1/2017	12/1/2022	0	18SP	YES
BEPM	AG1-2017-018	84885588	WAUE	WAUE	140	12/1/2017	10/1/2023	10/1/2018	10/1/2023	Note 4	Note 4	0	18SP	YES
BEPM	AG1-2017-019	84885627	WAUE	WAUE	5	4/1/2018	1/1/3000	4/1/2018	1/1/3000	Note 4	Note 4	0	18SP	YES
BEPM	AG1-2017-020	84885635	WAUE	WAUE	45	12/1/2017	10/1/2023	12/1/2017	10/1/2023	Note 4	Note 4	0	18SP	YES
BRPS	AG1-2017-021	84912692	NPPD	NPPD	19	1/1/2018	1/1/2028	1/1/2018	1/1/2028	1/1/2018	1/1/2028	0	18SP	NO
FREM	AG1-2017-022	84911097	OPPD	OPPD	5	10/1/2018	10/1/2028	10/1/2018	10/1/2028	Note 4	Note 4	0	21SP	NO
KCPS	AG1-2017-023	84873359	WPEK	KCPL	50	12/1/2017	12/1/2031	6/1/2021	12/1/2031	Note 4	Note 4	0	18SP	YES
KCPS	AG1-2017-024	84885455	WR	KCPL	1	12/1/2017	6/1/2030	12/1/2017	6/1/2030	Note 4	Note 4	0	18SP	NO
KMEA	AG1-2017-025	84875443	MPS	SECI	30	3/1/2018	3/1/2038	3/1/2018	3/1/2038	3/1/2018	3/1/2038	0	18SP	NO
KMEA	AG1-2017-026	84877536	MPS	SECI	5	1/1/2019	1/1/2029	1/1/2019	1/1/2029	1/1/2019	1/1/2029	0	21SP	NO
KMEA	AG1-2017-027	84884608	SPA	WR	1	12/1/2017	6/1/2028	12/1/2017	6/1/2028	12/1/2017	6/1/2028	0	18SP	NO
KMEA	AG1-2017-028	84885203	NPPD	WR	1	12/1/2017	10/1/2054	12/1/2017	10/1/2054	12/1/2017	10/1/2054	0	18SP	NO
KMEA	AG1-2017-029	84885381	MPS	KCPL	5	3/1/2018	3/1/2028	3/1/2018	3/1/2028	3/1/2018	3/1/2028	0	18SP	NO
KMEA	AG1-2017-030	84885945	MPS	KCPL	20	1/1/2019	1/1/2029	1/1/2019	1/1/2029	1/1/2019	1/1/2029	0	21SP	NO
KMEA	AG1-2017-031	84906139	MPS	WR	1	1/1/2020	1/1/2040	1/1/2020	1/1/2040	1/1/2020	1/1/2040	0	26SP	NO
KMEA	AG1-2017-032	84906152	MPS	WR	1	1/1/2020	1/1/2040	1/1/2020	1/1/2040	1/1/2020	1/1/2040	0	26SP	NO
MEAN	AG1-2017-033	84903949	NPPD	MEC	10	1/1/2018	1/1/2019	1/1/2018	1/1/2019	1/1/2018	1/1/2019	0	18SP	NO
MIDW	AG1-2017-034	84911381	SPA	WR	1	1/1/2018	6/1/2034	1/1/2018	6/1/2034	1/1/2018	6/1/2034	0	18SP	NO
MIDW	AG1-2017-035	84912544	WR	WR	1	1/1/2018	6/1/2034	1/1/2018	6/1/2034	1/1/2018	6/1/2034	0	18SP	NO
MIDW	AG1-2017-036	84912549	SPA	WR	1	1/1/2018	6/1/2034	1/1/2018	6/1/2034	1/1/2018	6/1/2034	0	18SP	NO
NPPM	AG1-2017-037	84863769	NPPD	NPPD	32	1/1/2018	4/1/2025	6/1/2020	9/1/2027	1/1/2018	4/1/2025	0	18SP	NO
NPPM	AG1-2017-038	84863943	NPPD	NPPD	36	1/1/2018	4/1/2025	6/1/2020	9/1/2027	1/1/2018	4/1/2025	0	18SP	NO
OTPW	AG1-2017-039	84906479	OTP	WAUE	49	1/1/2018	1/1/3000	1/1/2018	1/1/3000	Note 4	Note 4	0	18SP	NO
OTPW	AG1-2017-040	84906636	OTP	WAUE	49	1/1/2018	1/1/2023	1/1/2018	1/1/2023	Note 4	Note 4	0	18SP	NO
OTPW	AG1-2017-041	84906754	OTP	WAUE	15	1/1/2018	1/1/3000	1/1/2018	1/1/3000	Note 4	Note 4	0	18SP	NO
OTPW	AG1-2017-042	84910586	OTP	WAUE	15	1/1/2018	1/1/2023	1/1/2018	1/1/2023	Note 4	Note 4	0	18SP	NO
PEC	AG1-2017-043	84885681	WFEC	WFEC	50	1/1/2018	1/1/2023	1/1/2018	1/1/2023	Note 4	Note 4	0	18SP	YES
SPSM	AG1-2017-044	84730363	SPS	SPS	16	6/1/2019	7/1/2024	6/1/2019	7/1/2024	6/1/2019	7/1/2024	0	21SP	NO
SPSM	AG1-2017-045	84734700	SPS	SPS	17	6/1/2019	7/1/2024	6/1/2019	7/1/2024	6/1/2019	7/1/2024	0	21SP	NO
SPSM	AG1-2017-046	84734856	SPS	SPS	21	6/1/2019	7/1/2024	6/1/2019	7/1/2024	6/1/2019	7/1/2024	0	21SP	NO
SPSM	AG1-2017-047	84734992	SPS	SPS	58	6/1/2019	7/1/2024	6/1/2019	7/1/2024	6/1/2019	7/1/2024	0	21SP	NO
WRGS	AG1-2017-048	84877548	WR	WR	50	12/1/2017	1/1/2024	10/1/2019	11/1/2025	12/1/2017	1/1/2024	0	18SP	YES
WRGS	AG1-2017-049	84877556	WR	WR	26	12/1/2017	12/1/2023	10/1/2019	10/1/2025	12/1/2017	12/1/2023	0	18SP	YES
					4113									

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.

Note 5: Request paramaters have been exceeded.

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 (Parameter)	[2]Potential Base Plan Engineering and Construction Funding Allowable	Notes	[4]Additional Engineering and Construction Cost for 3rd Party Upgrades (Parameter)	[3 5]Total Revenue Requirements for Assigned Upgrades Over Term of Reservation WITH Potential Base Plan Funding Allocation	[6,7]Total Gross CPOs Over Reservation Period	[9]Point-to-Point Base Rate Over Reservation Period	[4]Total Cost of Reservation Assignable to Customer Contingent Upon Base Plan Funding	Directly Assigned Upgrade Cost (DAUC) (Parameter)	[9]Total Estimated Point-To-Point Base Rate With Applicable Schedules Included.
AEPE	AG1-2017-001	84604894	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$0.00	Schedule 9 & 11 Charges	$0.00	
AEPE	AG1-2017-002	84606580	$184.28	$184.28	$0.00		$0.00	$0.00	$237.00	$0.00	$237.00	$184.28	
AEPE	AG1-2017-003	84606716	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$0.00	Schedule 9 & 11 Charges	$0.00	
AEPE	AG1-2017-004	84727067	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$0.00	Schedule 9 & 11 Charges	$0.00	
AEPE	AG1-2017-005	84729062	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$0.00	Schedule 9 & 11 Charges	$0.00	
AEPE	AG1-2017-006	84740127	$347,199.59	$0.00	$347,199.59	8	$0.00	$0.00	$836,384.06	$0.00	Schedule 9 & 11 Charges	$0.00	
AEPE	AG1-2017-007	84740859	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$0.00	Schedule 9 & 11 Charges	$0.00	
AEPE	AG1-2017-008	84746514	$23,600.28	$23,600.28	$0.00		$0.00	$0.00	$68,540.40	$0.00	$68,540.40	$23,600.28	
AEPE	AG1-2017-009	84746608	$2,785.63	$2,785.63	$0.00		$0.00	$0.00	$3,588.00	$0.00	$3,588.00	$2,785.63	
AEPE	AG1-2017-010	84755770	$10,131.22	$10,131.22	$0.00		$0.00	$0.00	$43,107.84	$0.00	$43,107.84	$10,131.22	
AEPM	AG1-2017-011	84903862	$1,777,778.70	$1,777,778.70	$0.00		$0.00	$2,854,522.00	$1,052,002.20	$0.00	$3,906,524.20	$1,777,778.70	
AEPM	AG1-2017-012	84904082	$7,675,532.00	$7,675,532.00	$0.00	8	$0.00	$4,550,804.00	$7,968,576.00	$0.00	$12,519,380.00	$7,675,532.00	
AEPM	AG1-2017-013	84904145	$6,280,881.73	$6,269,007.66	$11,874.07		$0.00	$4,393,033.00	$17,609,298.60	$0.00	$22,002,331.60	$6,269,007.66	
AEPM	AG1-2017-014	84904230	$3,416,183.64	$3,416,183.64	$0.00	8	$0.00	$3,540,997.00	$7,488,517.80	$0.00	$11,029,514.80	$3,416,183.64	
AEPM	AG1-2017-015	84904264	$5,677,660.70	$5,677,660.70	$0.00	8	$0.00	$3,096,347.00	$6,318,005.40	$0.00	$9,414,352.40	$5,677,660.70	
AEPM	AG1-2017-016	84904431	$11,640,871.31	$11,620,871.31	$20,000.00		$0.00	$0.00	$19,964,007.90	$0.00	$19,929,708.05	$11,620,871.31	
AEPM	AG1-2017-017	84904909	$44,521,888.00	$18,061,888.00	$26,460,000.00		$0.00	$22,170,310.46	$1,147,242.00	$0.00	$23,317,552.46	$18,061,888.00	
BEPM	AG1-2017-018	84885588	$617,236.00	$537,236.00	$80,000.00		$0.00	$401,987.94	$200,419.20	$0.00	$602,407.14	$537,236.00	
BEPM	AG1-2017-019	84885627	$24,364.54	$24,364.54	$0.00		$0.00	$0.00	$912,556.26	$0.00	$912,556.26	$24,364.54	
BEPM	AG1-2017-020	84885635	$136,079.64	$136,079.64	$0.00		$0.00	$135,928.39	$19,118.40	$0.00	$155,046.79	$136,079.64	
BRPS	AG1-2017-021	84912692	$1,331,706.13	$0.00	$1,331,706.13		$0.00	$0.00	$1,632,432.00	$0.00	Schedule 9 & 11 Charges	$0.00	
FREM	AG1-2017-022	84911097	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$1,631,073.60	$1,631,073.60	$0.00	$1,921,455.36
KCPS	AG1-2017-023	84873359	$1,917,459.43	$1,917,459.43	$0.00		$0.00	$0.00	$3,568,742.10	$0.00	$3,568,742.10	$1,917,459.43	
KCPS	AG1-2017-024	84885455	$3,380.61	$0.00	$3,380.61		$0.00	$0.00	$17,166.00	$0.00	Schedule 9 & 11 Charges	$0.00	
KMEA	AG1-2017-025	84875443	$98,340.08	$0.00	$98,340.08		$0.00	$0.00	$630,470.40	$0.00	Schedule 9 & 11 Charges	$0.00	
KMEA	AG1-2017-026	84877536	$148,604.75	$0.00	$148,604.75		$0.00	$0.00	$359,114.40	$0.00	Schedule 9 & 11 Charges	$0.00	
KMEA	AG1-2017-027	84884608	$52,644.63	$0.00	$52,644.63		$0.00	$0.00	$11,900.70	$0.00	Schedule 9 & 11 Charges	$0.00	
KMEA	AG1-2017-028	84885203	$21,169.04	$0.00	$21,169.04		$0.00	$0.00	$1,237.60	$0.00	Schedule 9 & 11 Charges	$0.00	
KMEA	AG1-2017-029	84885381	$868.70	$0.00	$868.70		$0.00	$0.00	$6,908.40	$0.00	Schedule 9 & 11 Charges	$0.00	
KMEA	AG1-2017-030	84885945	$3,118.46	$0.00	$3,118.46		$0.00	$0.00	$26,688.00	$0.00	Schedule 9 & 11 Charges	$0.00	
KMEA	AG1-2017-031	84906139	$91.29	$0.00	$91.29		$0.00	$0.00	$741.60	$0.00	Schedule 9 & 11 Charges	$0.00	
KMEA	AG1-2017-032	84906152	$91.29	$0.00	$91.29		$0.00	$0.00	$741.60	$0.00	Schedule 9 & 11 Charges	$0.00	
MEAN	AG1-2017-033	84903949	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$392,493.96	$392,493.96	$0.00	$449,129.71
MIDW	AG1-2017-034	84911381	$2,183.53	$0.00	$2,183.53		$0.00	$0.00	$13,405.85	$0.00	Schedule 9 & 11 Charges	$0.00	
MIDW	AG1-2017-035	84912544	$2,013.32	$0.00	$2,013.32		$0.00	$0.00	$12,265.22	$0.00	Schedule 9 & 11 Charges	$0.00	
MIDW	AG1-2017-036	84912549	$1,411.51	$0.00	$1,411.51		$0.00	$0.00	$8,642.39	$0.00	Schedule 9 & 11 Charges	$0.00	
NPPM	AG1-2017-037	84863769	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$0.00	Schedule 9 & 11 Charges	$0.00	
NPPM	AG1-2017-038	84863943	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$0.00	Schedule 9 & 11 Charges	$0.00	
OTPW	AG1-2017-039	84906479	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$0.00	Schedule 9 & 11 Charges	$0.00	
OTPW	AG1-2017-040	84906636	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$0.00	Schedule 9 & 11 Charges	$0.00	
OTPW	AG1-2017-041	84906754	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$0.00	Schedule 9 & 11 Charges	$0.00	
OTPW	AG1-2017-042	84910586	$0.00	$0.00	$0.00		$0.00	$0.00	$0.00	$0.00	Schedule 9 & 11 Charges	$0.00	
PEC	AG1-2017-043	84885681	$8,865,717.61	$8,865,539.09	$178.52		$0.00	$8,367,436.73	$1,331,964.48	$0.00	$9,698,401.21	$8,865,539.09	
SPSM	AG1-2017-044	84730363	$16,121.51	$0.00	$16,121.51	8	$0.00	$0.00	$20,336.79	$0.00	Schedule 9 & 11 Charges	$0.00	
SPSM	AG1-2017-045	84734700	$9,749.82	$0.00	$9,749.82	8	$0.00	$0.00	$13,096.09	$0.00	Schedule 9 & 11 Charges	$0.00	
SPSM	AG1-2017-046	84734856	$12,127.61	$0.00	$12,127.61	8	$0.00	$0.00	$16,283.95	$0.00	Schedule 9 & 11 Charges	$0.00	
SPSM	AG1-2017-047	84734992	$33,492.73	$0.00	$33,492.73	8	$0.00	$0.00	$44,971.03	$0.00	Schedule 9 & 11 Charges	$0.00	
WRGS	AG1-2017-048	84877548	$9,483,991.90	$9,480,667.38	$3,324.52		$0.00	$0.00	$6,541,640.96	$0.00	$14,614,136.74	$9,480,667.38	
WRGS	AG1-2017-049	84877556	$3,478,625.26	$3,475,185.83	$3,439.43		$0.00	$0.00	$1,717,295.04	$0.00	$5,906,198.74	$3,475,185.83	
Grand Total			**$107,635,286.47**	**$78,972,155.33**	**$28,591,914.14**		**$0.00**	**$49,511,366.53**	**$79,607,645.66**			**$78,972,155.33**	

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 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.
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: RR for creditable upgrades.
Note 7: CPOs may be calculated based on estimated upgrade cost and are subject to change.
Note 8: CPOs for creditable upgrade(s) may be required based on completion of GI review.
Note 9: Point-To-Point rates are calculated using the available rate(s). These rate(s) are subject to change.

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

Customer	**Study Number**
AEPE	AG1-2017-001

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**
AEPE	84604894	NPPD	NPPD	7	1/1/2018	1/1/2023	1/1/2018	1/1/2023	$ -	$ -	$ -	$ -
									$ -	$ -	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84604894	None					$ -	$ -	$ -
					Total	$ -	$ -	$ -

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
AEPE	AG1-2017-002

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**
AEPE	84606580	WAUE	NPPD	1	1/1/2018	1/1/2023	1/1/2018	1/1/2023	$ -	$ -	$ 184	$ 237
									$ -	$ -	$ 184	$ 237

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84606580	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	Allocated E & C Cost	Total Revenue Requirements
84606580	Albion - Petersburg 115kV Ckt 1 Hansford Upgrade	12/31/2012	12/31/2012			$ 184	$ 237
					Total	$ 184	$ 237

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
AEPE	AG1-2017-003

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**
AEPE	84606716	NPPD	NPPD	5	1/1/2018	1/1/2022	1/1/2018	1/1/2022	$ -	$ -	$ -	$ -
									$ -	$ -	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84606716	None					$ -	$ -	$ -
					Total	$ -	$ -	$ -

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
AEPE	AG1-2017-004

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**
AEPE	84727067	NPPD	NPPD	7	1/1/2018	1/1/2023	1/1/2018	1/1/2023	$ -	$ -	$ -	$ -
									$ -	$ -	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84727067	None					$ -	$ -	$ -
					Total	$ -	$ -	$ -

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
AEPE	AG1-2017-005

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**
AEPE	84729062	MPS	SPS	37	6/1/2019	1/1/2026	6/1/2019	1/1/2026	$ -	$ -	$ -	$ -
									$ -	$ -	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84729062	None					$ -	$ -	$ -
					Total	$ -	$ -	$ -

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
AEPE	AG1-2017-006

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**
AEPE	84740127	MPS	SPS	37	6/1/2019	1/1/2026	12/31/2022	7/31/2029	$ 347,200	$ -	$ 347,200	$ 836,384
									$ 347,200	$ -	$ 347,200	$ 836,384

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84740127	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
84740127	CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1	10/1/2022	10/1/2022		
	DENVER CITY INTERCHANGE N. - XTO_RUSSEL 3115.00 115KV CKT 1	10/1/2022	10/1/2022		
	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	6/1/2022	6/1/2022		
	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1	6/1/2022	12/31/2022		

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	Allocated E & C Cost	Total Revenue Requirements
84740127	Harrington Mid - Nichols 230 kV Ckt 2	12/1/2012	12/1/2012			$ 5,863	$ 9,060
	Harrington West - Nichols 230kV Ckt 1	12/1/2012	12/1/2012			$ 6,177	$ 9,545
	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012			$ 9,418	$ 51,326
	Kingfisher Co Tap - Mathewson 345kV CKT 1	3/1/2018	3/1/2018			$ 29,558	$ 40,799
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ 60,343	$ 397,102
	TUCO Interchange 345/230kV CKT 1 Replacement	6/1/2018	6/1/2018			$ 233,988	$ 319,804
	Valliant 345 kV (AEP)	4/17/2012	4/17/2012			$ 1,852	$ 8,748
					Total	$ 347,200	$ 836,384

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

**Note: CPOs for creditable upgrade(s) may be required based on completion of GI review.

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

Customer	**Study Number**
AEPE	AG1-2017-007

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**
AEPE	84740859	NPPD	NPPD	36	1/1/2019	1/1/2024	1/1/2019	1/1/2024	$ -	$ -	$ -	$ -
									$ -	$ -	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84740859	None					$ -	$ -	$ -
					Total	$ -	$ -	$ -

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
AEPE	AG1-2017-008

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**
AEPE	84746514	NPPD	NPPD	32	1/1/2019	1/1/2022	1/1/2019	1/1/2022	$ -	$ -	$ 23,600	$ 68,540
									$ -	$ -	$ 23,600	$ 68,540

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84746514	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	Allocated E & C Cost	Total Revenue Requirements
84746514	CLIFTON - GREENLEAF 115KV CKT 1	6/1/2011	6/1/2013			$ 11,659	$ 49,610
	GREENLEAF - KNOB HILL 115KV CKT 1 (MKEC)	6/1/2013	6/1/2013			$ 1,203	$ 5,117
	Neligh - Petersburg North 115kV Ckt 1	11/9/2012	11/9/2012			$ 10,738	$ 13,813
					Total	$ 23,600	$ 68,540

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
AEPE	AG1-2017-009

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**
AEPE	84746608	WAUE	NPPD	3	1/1/2019	1/1/2024	1/1/2019	1/1/2024	$ -	$ -	$ 2,786	$ 3,588
									$ -	$ -	$ 2,786	$ 3,588

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84746608	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
84746608	STORLA (KV1A) 230/115/13.2KV TRANSFORMER CKT 1	10/1/2018	10/1/2019		

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	Allocated E & C Cost	Total Revenue Requirements
84746608	Albion - Petersburg 115kV Ckt 1 Hansford Upgrade	12/31/2012	12/31/2012			$ 538	$ 714
	Kelly - Madison County 230kV Ckt 1	11/1/2014	11/1/2014			$ 2,248	$ 2,874
					Total	$ 2,786	$ 3,588

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
AEPE	AG1-2017-010

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**
AEPE	84755770	LES	NPPD	18	1/1/2019	1/1/2022	1/1/2019	1/1/2022	$ -	$ -	$ 10,131	$ 43,108
									$ -	$ -	$ 10,131	$ 43,108

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84755770	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	Allocated E & C Cost	Total Revenue Requirements
84755770	CLIFTON - GREENLEAF 115KV CKT 1	6/1/2011	6/1/2013			$ 9,184	$ 39,077
	GREENLEAF - KNOB HILL 115KV CKT 1 (MKEC)	6/1/2013	6/1/2013			$ 947	$ 4,031
					Total	$ 10,131	$ 43,108

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
AEPM	AG1-2017-011

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**
AEPM	84903862	CSWS	CSWS	400	6/1/2022	6/1/2027	6/1/2022	6/1/2027	$ -	$ -	$ 1,777,779	$ 3,906,525
									$ -	$ -	$ 1,777,779	$ 3,906,525

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84903862	ARSENAL HILL - RAINES 138KV CKT 1	10/1/2022	10/1/2022			$ 1,464,936	$ 10,000,000	$ 2,825,438
	HUGO POWER PLANT - VALLIANT 138KV CKT 1	10/1/2022	10/1/2022			$ 19,607	$ 150,000	$ 29,085
					Total	$ 1,484,543	$ 10,150,000	$ 2,854,522

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
84903862	ONETA - ONETA ENERGY CENTER 345KV CKT 1	6/1/2022	6/1/2022		
	ONETA - ONETA ENERGY CENTER 345KV CKT 2	6/1/2022	6/1/2022		

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	Allocated E & C Cost	Total Revenue Requirements
84903862	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012			$ 161,454	$ 786,546
	Kingfisher Co Tap - Mathewson 345kV CKT 1	3/1/2018	3/1/2018			$ 100,116	$ 131,056
	Valliant 345 kV (AEP)	4/17/2012	4/17/2012			$ 31,666	$ 134,401
					Total	$ 293,236	$ 1,052,002

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
AEPM	AG1-2017-012

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**
AEPM	84904082	CSWS	CSWS	610	6/1/2022	6/1/2027	6/1/2022	6/1/2027	$ -	$ -	$ 7,675,532	$ 12,519,380
									$ -	$ -	$ 7,675,532	$ 12,519,380

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84904082	ARSENAL HILL - RAINES 138KV CKT 1	10/1/2022	10/1/2022			$ 2,359,506	$ 10,000,000	$ 4,550,804
					Total	$ 2,359,506	$ 10,000,000	$ 4,550,804

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	Allocated E & C Cost	Total Revenue Requirements
84904082	Beaver County 345kV Substation	9/29/2014	9/29/2014			$ 3,972,023	$ 5,536,222
	Beaver County 345kV Substation Addition	11/14/2014	11/14/2014			$ 120,480	$ 164,341
	Beaver County Substation - Add 345kV terminal for Ochiltree	9/27/2017	9/27/2017			$ 1,032,430	$ 1,356,730
	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012			$ 159,760	$ 778,293
	Valliant 345 kV (AEP)	4/17/2012	4/17/2012			$ 31,333	$ 132,991
					Total	$ 5,316,026	$ 7,968,576

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

**Note: CPOs for creditable upgrade(s) may be required based on completion of GI review.

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

Customer	**Study Number**
AEPM	AG1-2017-013

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**
AEPM	84904145	OKGE	CSWS	612	6/1/2022	6/1/2027	6/1/2022	6/1/2027	$ 11,874	$ -	$ 6,280,882	$ 22,002,332
									$ 11,874	$ -	$ 6,280,882	$ 22,002,332

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84904145	ARSENAL HILL - RAINES 138KV CKT 1	10/1/2022	10/1/2022			$ 2,249,999	$ 10,000,000	$ 4,339,597
	HUGO POWER PLANT - VALLIANT 138KV CKT 1	10/1/2022	10/1/2022			$ 36,023	$ 150,000	$ 53,436
					Total	$ 2,286,022	$ 10,150,000	$ 4,393,033

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
84904145	HOYT - JEFFREY ENERGY CENTER 345KV CKT 2	6/1/2018	6/1/2021		

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	Allocated E & C Cost	Total Revenue Requirements
84904145	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012			$ 321,882	$ 1,568,087
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ 2,407,784	$ 14,169,296
	Power System Stabilizers in SPS	11/30/2014	11/30/2014			$ 11,874	$ 16,461
	Valliant 345 kV (AEP)	4/17/2012	4/17/2012			$ 63,130	$ 267,947
	Woodward EHV 138kV Phase Shifting Transformer circuit #1	8/2/2017	8/2/2017			$ 1,110,069	$ 1,469,007
	Harrington West - Nichols 230kV Ckt 1	12/1/2012	12/1/2012			$ 80,121	$ 118,501
					Total	$ 3,994,860	$ 17,609,299

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
AEPM	AG1-2017-014

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**
AEPM	84904230	OKGE	CSWS	450	6/1/2022	6/1/2027	6/1/2022	6/1/2027	$ -	$ -	$ 3,416,184	$ 11,029,515
									$ -	$ -	$ 3,416,184	$ 11,029,515

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84904230	ARSENAL HILL - RAINES 138KV CKT 1	10/1/2022	10/1/2022			$ 1,787,810	$ 10,000,000	$ 3,448,168
	HUGO POWER PLANT - VALLIANT 138KV CKT 1	10/1/2022	10/1/2022			$ 62,579	$ 150,000	$ 92,829
					Total	$ 1,850,389	$ 10,150,000	$ 3,540,997

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	Allocated E & C Cost	Total Revenue Requirements
84904230	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012			$ 1,044,409	$ 5,087,969
	HUGO 345/138KV TRANSFORMER CKT 1	7/1/2012	7/1/2012			$ 316,550	$ 1,531,142
	Valliant 345 kV (AEP)	4/17/2012	4/17/2012			$ 204,837	$ 869,406
					Total	$ 1,565,795	$ 7,488,518

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

**Note: CPOs for creditable upgrade(s) may be required based on completion of GI review.

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

Customer	**Study Number**
AEPM	AG1-2017-015

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	84904264	CSWS	CSWS	435	6/1/2022	6/1/2027	6/1/2022	6/1/2027	$ -	$ -	$ 5,677,661	$ 9,414,353
									$ -	$ -	$ 5,677,661	$ 9,414,353

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84904264	ARSENAL HILL - RAINES 138KV CKT 1	10/1/2022	10/1/2022			$ 1,588,721	$ 10,000,000	$ 3,064,183
	HUGO POWER PLANT - VALLIANT 138KV CKT 1	10/1/2022	10/1/2022			$ 21,683	$ 150,000	$ 32,164
					Total	$ 1,610,404	$ 10,150,000	$ 3,096,347

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	Allocated E & C Cost	Total Revenue Requirements
84904264	Beaver County 345kV Substation	9/29/2014	9/29/2014			$ 2,832,508	$ 3,947,962
	Beaver County 345kV Substation Addition	11/14/2014	11/14/2014			$ 85,916	$ 117,194
	Beaver County Substation - Add 345kV terminal for Ochiltree	9/27/2017	9/27/2017			$ 736,241	$ 967,504
	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012			$ 180,086	$ 877,312
	Kingfisher Co Tap - Mathewson 345kV CKT 1	3/1/2018	3/1/2018			$ 197,186	$ 258,124
	Valliant 345 kV (AEP)	4/17/2012	4/17/2012			$ 35,320	$ 149,911
					Total	$ 4,067,257	$ 6,318,005

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.
**Note: CPOs for creditable upgrade(s) may be required based on completion of GI review.

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

Customer	**Study Number**
AEPM	AG1-2017-016

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**
AEPM	84904431	OKGE	CSWS	500	6/1/2022	6/1/2027	6/1/2022	6/1/2027	$ 20,000	$ -	$ 11,640,871	$ 19,964,008
									$ 20,000	$ -	$ 11,640,871	$ 19,964,008

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
84904431	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	Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total Revenue Requirements
84904431	Sunnyside Relays for Grady Interconnection	11/23/2016	11/23/2016			$ 20,000	$ -	$ 20,000	$ 34,101
	Terry Road 345kV Station (NU)	11/16/2016	11/16/2016			$ -	$ 11,620,871	$ 11,620,871	$ 19,929,907
					Total	$ 20,000	$ 11,620,871	$ 11,640,871	$ 19,964,008

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

**Note: CPOs for creditable upgrade(s) may be required based on completion of GI review.

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

Customer	**Study Number**
AEPM	AG1-2017-017

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	84904909	CSWS	CSWS	147	12/1/2017	12/1/2022	6/1/2020	6/1/2025	$ 26,460,000	$ -	$ 44,521,888	$ 56,647,567
									$ 26,460,000	$ -	$ 44,521,888	$ 56,647,567

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
84904909	52ND & DELAWARE WEST TAP - RIVERSIDE STATION 138KV CKT 1	6/1/2019	6/1/2022			$ 7,528,254	$ 17,471,746	$ 25,000,000	$ 25,000,000	$ 31,103,903
	52ND & DELAWARE WEST TAP - TULSA POWER STATION 138KV CKT 1	6/1/2019	6/1/2022			$ 16,111,111		$ 16,111,111	$ 16,111,111	$ 20,027,671
	ARSENAL HILL - RAINES 138KV CKT 1	10/1/2022	10/1/2022			$ 549,028		$ 549,028	$ 10,000,000	$ 734,669
	HUGO POWER PLANT - VALLIANT 138KV CKT 1	10/1/2022	10/1/2022			$ 10,107		$ 10,107	$ 150,000	$ 12,349
	MUSTANG - SW 5TH 138KV CKT 1	6/1/2018	6/1/2020		Yes	$ 261,500	$ 128,799	$ 390,299	$ 500,000	$ 565,761
	THOMAS TAP - WEATHERFORD 69KV CKT 1	6/1/2018	6/1/2020		Yes	$ 2,000,000		$ 2,000,000	$ 2,000,000	$ 3,055,972
					Total	$ 26,460,000	$ 17,600,545	$ 44,060,545	$ 53,761,111	$ 55,500,325

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
84904909	HARRINGTON STATION EAST BUS - POTTER COUNTY INTERCHANGE 230KV CKT 1	6/1/2019	6/1/2019		

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	Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total Revenue Requirements
84904909	Gracemont 138kV line terminal addition	10/15/2011	10/15/2011			$ -	$ 25,788	$ 25,788	$ 34,240
	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012			$ -	$ 201,425	$ 201,425	$ 667,384
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ -	$ 29,590	$ 29,590	$ 118,616
	Valliant 345 kV (AEP)	4/17/2012	4/17/2012			$ -	$ 38,677	$ 38,677	$ 113,791
	WASHITA - GRACEMONT 138 KV CKT 2	10/12/2012	10/12/2012			$ -	$ 165,864	$ 165,864	$ 213,211
					Total	$ -	$ 461,343	$ 461,343	$ 1,147,242

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
BEPM	AG1-2017-018

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**
BEPM	84885588	WAUE	WAUE	140	12/1/2017	10/1/2023	10/1/2018	10/1/2023	$ 80,000	$ -	$ 617,236	$ 815,264
									$ 80,000	$ -	$ 617,236	$ 815,264

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84885588	DENISON - J6BOYER8 69.000 69KV CKT 1	12/1/2017	10/1/2018			$ 80,000	$ 80,000	$ 153,291
	EASTRUTH-CP7115.00 - MALLARD 115KV CKT 1	10/1/2022	10/1/2022			$ 379,206	$ 500,000	$ 461,554
					Total	$ 459,206	$ 580,000	$ 614,845

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	Allocated E & C Cost	Total Revenue Requirements
84885588	Fort Randall - Madison County 230kV Ckt 1	12/23/2013	12/23/2013			$ 158,030	$ 200,419
					Total	$ 158,030	$ 200,419

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
BEPM	AG1-2017-019

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**
BEPM	84885627	WAUE	WAUE	5	4/1/2018	1/1/3000	4/1/2018	1/1/3000	$ -	$ -	$ 24,365	$ 912,556
									$ -	$ -	$ 24,365	$ 912,556

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84885627	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
84885627	EVERLYN - K409HARTLYM869.000 69KV CKT 1	10/1/2022	10/1/2022		
	EVERLYN - SPENCER 69KV CKT 1	10/1/2022	10/1/2022		

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	Allocated E & C Cost	Total Revenue Requirements
84885627	Daglum - Dickinson 230kV CKT 1	3/1/2019	3/1/2019			$ 23,111	$ 866,610
	Kelly - Madison County 230kV Ckt 1	11/1/2014	11/1/2014			$ 1,254	$ 45,946
*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.					Total	$ 24,365	$ 912,556

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

Customer	**Study Number**
BEPM	AG1-2017-020

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**
BEPM	84885635	WAUE	WAUE	45	12/1/2017	10/1/2023	12/1/2017	10/1/2023	$ -	$ -	$ 136,080	$ 155,047
									$ -	$ -	$ 136,080	$ 155,047

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84885635	EASTRUTH-CP7115.00 - MALLARD 115KV CKT 1	10/1/2022	10/1/2022			$ 120,794	$ 500,000	$ 135,928
					Total	$ 120,794	$ 500,000	$ 135,928

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	Allocated E & C Cost	Total Revenue Requirements
84885635	Kelly - Madison County 230kV Ckt 1	11/1/2014	11/1/2014			$ 15,286	$ 19,118
					Total	$ 15,286	$ 19,118

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	Study Number
BRPS	AG1-2017-021

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
BRPS	84912692	NPPD	NPPD	19	1/1/2018	1/1/2028	1/1/2018	1/1/2028	$ 1,331,706	$ -	$ 1,331,706	$ 1,632,432
									$ 1,331,706	$ -	$ 1,331,706	$ 1,632,432

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
84912692	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	Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total Revenue Requirements
84912692	Antelope - County Line - 115kV Rebuild	5/1/2017	5/1/2017			$ 29,295	$ -	$ 29,295	$ 35,770
	Battle Creek - County Line 115kV Rebuild	5/1/2017	5/1/2017			$ 27,945	$ -	$ 27,945	$ 34,121
	Neligh - Petersburg North 115kV Ckt 1	11/9/2012	11/9/2012			$ 16,319	$ -	$ 16,319	$ 22,672
	Rosemont 115kV Substation	11/1/2017	11/1/2017			$ 1,258,147	$ -	$ 1,258,147	$ 1,539,870
					Total	$ 1,331,706	$ -	$ 1,331,706	$ 1,632,432

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
FREM	AG1-2017-022

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**
FREM	84911097	OPPD	OPPD	5	10/1/2018	10/1/2028	10/1/2018	10/1/2028	$ -	$ 1,631,074	$ -	$ -
									$ -	$ 1,631,074	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84911097	None					$ -	$ -	$ -
					Total	$ -	$ -	$ -

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
KCPS	AG1-2017-023

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	84873359	WPEK	KCPL	50	12/1/2017	12/1/2031	6/1/2021	12/1/2031	$ -	$ -	$ 1,917,459	$ 3,568,742
									$ -	$ -	$ 1,917,459	$ 3,568,742

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
84873359	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
84873359	WALKEMEYER TAP 345 KV SUBSTATION (SEPC)	12/1/2017	6/1/2018		

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
84873359	HOYT - JEFFREY ENERGY CENTER 345KV CKT 2	6/1/2018	6/1/2021		
	LEXINGTON 161/69KV TRANSFORMER CKT 1	6/1/2019	6/1/2020	10/1/2019	

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	Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total Revenue Requirements
84873359	FLATRDG3 - HARPER 138KV CKT 1	12/1/2009	6/1/2013			$ -	$ 20,232	$ 20,232	$ 150,103
	Ft. Dodge - North Ft. Dodge 115 kV Ckt 2	5/1/2015	5/1/2015			$ -	$ 257,624	$ 257,624	$ 370,512
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006			$ -	$ 16,364	$ 16,364	$ 176,506
	MEDICINE LODGE - PRATT 115KV CKT 1	12/1/2009	6/1/2013			$ -	$ 1,288	$ 1,288	$ 8,681
	MEDICINE LODGE 138/115KV TRANSFORMER CKT 1	12/1/2009	6/1/2013			$ -	$ 10,046	$ 10,046	$ 77,853
	North Ft. Dodge - Spearville 115kV Ckt 2	5/1/2015	5/1/2015			$ -	$ 557,539	$ 557,539	$ 801,848
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ -	$ 89,654	$ 89,654	$ 597,040
	Spearville 345/115 kV Transformer CKT 1	5/1/2015	5/1/2015			$ -	$ 927,452	$ 927,452	$ 1,333,852
	Woodward EHV 138kV Phase Shifting Transformer circuit #1	8/2/2017	8/2/2017			$ -	$ 37,261	$ 37,261	$ 52,348
					Total	$ -	$ 1,917,459	$ 1,917,459	$ 3,568,742

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
KCPS	AG1-2017-024

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	84885455	WR	KCPL	1	12/1/2017	6/1/2030	12/1/2017	6/1/2030	$ 3,381	$ -	$ 3,381	$ 17,166
									$ 3,381	$ -	$ 3,381	$ 17,166

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84885455	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
84885455	HOYT - JEFFREY ENERGY CENTER 345KV CKT 2	6/1/2018	6/1/2021		
	LAWRENCE HILL (LAWH TX-3) 230/115/13.8KV TRANSFORMER CKT 1	6/1/2018	6/1/2020		
	LEXINGTON 161/69KV TRANSFORMER CKT 1	6/1/2019	6/1/2020	10/1/2019	
	MIDLADS3 115.00 - MIDLAND JUNCTION 115KV CKT Z1	6/1/2022	6/1/2022		

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	Allocated E & C Cost	Total Revenue Requirements
84885455	166TH STREET - JAGGARD JUNCTION 115KV CKT 1	9/18/2008	9/18/2008			$ 633	$ 3,248
	166TH STREET - JARBALO JUNCTION SWITCHING STATION 115KV CKT 1	2/3/2010	2/3/2010			$ 678	$ 3,876
	JAGGARD JUNCTION - PENTAGON 115KV CKT 1	6/1/2009	6/1/2009			$ 1,298	$ 6,521
	Kingfisher Co Tap - Mathewson 345kV CKT 1	3/1/2018	3/1/2018			$ 369	$ 465
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006			$ 288	$ 2,454
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ 114	$ 603
					Total	$ 3,381	$ 17,166

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
KMEA	AG1-2017-025

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**
KMEA	84875443	MPS	SECI	30	3/1/2018	3/1/2038	3/1/2018	3/1/2038	$ 98,340	$ -	$ 98,340	$ 630,470
									$ 98,340	$ -	$ 98,340	$ 630,470

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84875443	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	Allocated E & C Cost	Total Revenue Requirements
84875443	Kingfisher Co Tap - Mathewson 345kV CKT 1	3/1/2018	3/1/2018			$ 9,637	$ 13,997
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ 88,703	$ 616,474
					Total	$ 98,340	$ 630,470

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
KMEA	AG1-2017-026

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**
KMEA	84877536	MPS	SECI	5	1/1/2019	1/1/2029	1/1/2019	1/1/2029	$ 148,605	$ -	$ 148,605	$ 359,114
									$ 148,605	$ -	$ 148,605	$ 359,114

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84877536	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	Allocated E & C Cost	Total Revenue Requirements
84877536	FLATRDG3 - MEDICINE LODGE 138KV CKT 1	12/1/2009	6/1/2013			$ 6,244	$ 33,125
	Ft. Dodge - North Ft. Dodge 115 kV Ckt 2	5/1/2015	5/1/2015			$ 39,908	$ 52,673
	Kingfisher Co Tap - Mathewson 345kV CKT 1	3/1/2018	3/1/2018			$ 1,552	$ 1,950
	MEDICINE LODGE - PRATT 115KV CKT 1	12/1/2009	6/1/2013			$ 19,713	$ 100,986
	MEDICINE LODGE 138/115KV TRANSFORMER CKT 1	12/1/2009	6/1/2013			$ 1,960	$ 11,542
	North Ft. Dodge - Spearville 115kV Ckt 2	5/1/2015	5/1/2015			$ 20,075	$ 26,495
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ 13,192	$ 70,187
	Rice County 230/115 kV transformer Ckt 1	10/1/2012	10/1/2012			$ 12,568	$ 18,083
	Spearville 345/115 kV Transformer CKT 1	5/1/2015	5/1/2015			$ 33,393	$ 44,075
					Total	$ 148,605	$ 359,114

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
KMEA	AG1-2017-027

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**
KMEA	84884608	SPA	WR	1	12/1/2017	6/1/2028	12/1/2017	6/1/2028	$ 52,645	$ -	$ 52,645	$ 132,385
									$ 52,645	$ -	$ 52,645	$ 132,385

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84884608	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	6/1/2018	6/1/2020	10/1/2019		$ 50,297	$ 6,000,000	$ 120,485
					Total	$ 50,297	$ 6,000,000	$ 120,485

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
84884608	~~WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1~~	~~6/1/2018~~	~~6/1/2020~~	~~10/1/2019~~	
	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	6/1/2018	6/1/2020	10/1/2019	

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	Allocated E & C Cost	Total Revenue Requirements
84884608	COFFEYVILLE TAP - DEARING 138KV CKT 1 (WR) #2	6/9/2010	6/9/2010			$ 1	$ 1
	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012			$ 261	$ 1,065
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006			$ 238	$ 1,882
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ 1,682	$ 8,310
	SUB 110 - ORONOGO JCT. - SUB 452 - RIVERTON 161KV CKT 1	6/1/2011	6/1/2011			$ 117	$ 462
	Valliant 345 kV (AEP)	4/17/2012	4/17/2012			$ 50	$ 180
					Total	$ 2,348	$ 11,901

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
KMEA	AG1-2017-028

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**
KMEA	84885203	NPPD	WR	1	12/1/2017	10/1/2054	12/1/2017	10/1/2054	$ 21,169	$ -	$ 21,169	$ 101,471
									$ 21,169	$ -	$ 21,169	$ 101,471

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84885203	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	6/1/2018	6/1/2020	10/1/2019		$ 20,920	$ 6,000,000	$ 100,233
					Total	$ 20,920	$ 6,000,000	$ 100,233

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
84885203	STORLA (KV1A) 230/115/13.2KV TRANSFORMER CKT 1	10/1/2018	10/1/2019		
	~~WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1~~	~~6/1/2018~~	~~6/1/2020~~	~~10/1/2019~~	
	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	6/1/2018	6/1/2020	10/1/2019	

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	Allocated E & C Cost	Total Revenue Requirements
84885203	Kelly - Madison County 230kV Ckt 1	11/1/2014	11/1/2014			$ 200	$ 389
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006			$ 49	$ 849
					Total	$ 249	$ 1,238

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
KMEA	AG1-2017-029

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**
KMEA	84885381	MPS	KCPL	5	3/1/2018	3/1/2028	3/1/2018	3/1/2028	$ 869	$ -	$ 869	$ 6,908
									$ 869	$ -	$ 869	$ 6,908

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84885381	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	Allocated E & C Cost	Total Revenue Requirements
84885381	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006			$ 869	$ 6,908
					Total	$ 869	$ 6,908

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
KMEA	AG1-2017-030

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**
KMEA	84885945	MPS	KCPL	20	1/1/2019	1/1/2029	1/1/2019	1/1/2029	$ 3,118	$ -	$ 3,118	$ 26,688
									$ 3,118	$ -	$ 3,118	$ 26,688

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84885945	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	Allocated E & C Cost	Total Revenue Requirements
84885945	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006			$ 3,118	$ 26,688
					Total	$ 3,118	$ 26,688

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
KMEA	AG1-2017-031

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**
KMEA	84906139	MPS	WR	1	1/1/2020	1/1/2040	1/1/2020	1/1/2040	$ 91	$ -	$ 91	$ 742
									$ 91	$ -	$ 91	$ 742

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84906139	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	Allocated E & C Cost	Total Revenue Requirements
84906139	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ 91	$ 742
					Total	$ 91	$ 742

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
KMEA	AG1-2017-032

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**
KMEA	84906152	MPS	WR	1	1/1/2020	1/1/2040	1/1/2020	1/1/2040	$ 91	$ -	$ 91	$ 742
									$ 91	$ -	$ 91	$ 742

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84906152	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	Allocated E & C Cost	Total Revenue Requirements
84906152	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ 91	$ 742
					Total	$ 91	$ 742

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
MEAN	AG1-2017-033

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**
MEAN	84903949	NPPD	MEC	10	1/1/2018	1/1/2019	1/1/2018	1/1/2019	$ -	$ 392,494	$ -	$ -
									$ -	$ 392,494	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84903949	None					$ -	$ -	$ -
					Total	$ -	$ -	$ -

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

Customer	**Study Number**
MIDW	AG1-2017-034

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	84911381	SPA	WR	1	1/1/2018	6/1/2034	1/1/2018	6/1/2034	$ 2,184	$ -	$ 2,184	$ 13,406
									$ 2,184	$ -	$ 2,184	$ 13,406

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84911381	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	Allocated E & C Cost	Total Revenue Requirements
84911381	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012			$ 176	$ 890
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006			$ 83	$ 818
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ 1,890	$ 11,548
	Valliant 345 kV (AEP)	4/17/2012	4/17/2012			$ 34	$ 150
					Total	$ 2,184	$ 13,406

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
MIDW	AG1-2017-035

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	84912544	WR	WR	1	1/1/2018	6/1/2034	1/1/2018	6/1/2034	$ 2,013	$ -	$ 2,013	$ 12,265
									$ 2,013	$ -	$ 2,013	$ 12,265

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84912544	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	Allocated E & C Cost	Total Revenue Requirements
84912544	FLATRDG3 - MEDICINE LODGE 138KV CKT 1	12/1/2009	6/1/2013			$ 422	$ 2,616
	MEDICINE LODGE - PRATT 115KV CKT 1	12/1/2009	6/1/2013			$ 1,459	$ 8,737
	MEDICINE LODGE 138/115KV TRANSFORMER CKT 1	12/1/2009	6/1/2013			$ 133	$ 912
					Total	$ 2,013	$ 12,265

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
MIDW	AG1-2017-036

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	84912549	SPA	WR	1	1/1/2018	6/1/2034	1/1/2018	6/1/2034	$ 1,412	$ -	$ 1,412	$ 8,642
									$ 1,412	$ -	$ 1,412	$ 8,642

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84912549	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	Allocated E & C Cost	Total Revenue Requirements
84912549	FLATRDG3 - MEDICINE LODGE 138KV CKT 1	12/1/2009	6/1/2013			$ 141	$ 875
	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012			$ 73	$ 366
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006			$ 32	$ 315
	MEDICINE LODGE - PRATT 115KV CKT 1	12/1/2009	6/1/2013			$ 396	$ 2,372
	MEDICINE LODGE 138/115KV TRANSFORMER CKT 1	12/1/2009	6/1/2013			$ 44	$ 305
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ 712	$ 4,348
	Valliant 345 kV (AEP)	4/17/2012	4/17/2012			$ 14	$ 61
					Total	$ 1,412	$ 8,642

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
NPPM	AG1-2017-037

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	84863769	NPPD	NPPD	32	1/1/2018	4/1/2025	6/1/2020	9/1/2027	$ -	$ -	$ -	$ -
									$ -	$ -	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84863769	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
84863769	FT RANDAL - SPENCER 115KV CKT 1	6/1/2018	6/1/2020		

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

Customer	**Study Number**
NPPM	AG1-2017-038

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	84863943	NPPD	NPPD	36	1/1/2018	4/1/2025	6/1/2020	9/1/2027	$ -	$ -	$ -	$ -
									$ -	$ -	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84863943	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
84863943	FT RANDAL - SPENCER 115KV CKT 1	6/1/2018	6/1/2020		

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

Customer	**Study Number**
OTPW	AG1-2017-039

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**
OTPW	84906479	OTP	WAUE	49	1/1/2018	1/1/3000	1/1/2018	1/1/3000	$ -	$ -	$ -	$ -
									$ -	$ -	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84906479	None					$ -	$ -	$ -
					Total	$ -	$ -	$ -

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

Customer	**Study Number**
OTPW	AG1-2017-040

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**
OTPW	84906636	OTP	WAUE	49	1/1/2018	1/1/2023	1/1/2018	1/1/2023	$ -	$ -	$ -	$ -
									$ -	$ -	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84906636	None					$ -	$ -	$ -
					Total	$ -	$ -	$ -

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

Customer	**Study Number**
OTPW	AG1-2017-041

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**
OTPW	84906754	OTP	WAUE	15	1/1/2018	1/1/3000	1/1/2018	1/1/3000	$ -	$ -	$ -	$ -
									$ -	$ -	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84906754	None					$ -	$ -	$ -
					Total	$ -	$ -	$ -

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

Customer	**Study Number**
OTPW	AG1-2017-042

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**
OTPW	84910586	OTP	WAUE	15	1/1/2018	1/1/2023	1/1/2018	1/1/2023	$ -	$ -	$ -	$ -
									$ -	$ -	$ -	$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84910586	None					$ -	$ -	$ -
					Total	$ -	$ -	$ -

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

Customer	**Study Number**
PEC	AG1-2017-043

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**
PEC	84885681	WFEC	WFEC	50	1/1/2018	1/1/2023	1/1/2018	1/1/2023	$ 179	$ -	$ 8,865,718	$ 9,699,401
									$ 179	$ -	$ 8,865,718	$ 9,699,401

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
84885681	MUSTANG - SW 5TH 138KV CKT 1	6/1/2018	6/1/2020			$ -	$ 109,701	$ 109,701	$ 500,000	$ 160,258
	GLASSES - RUSSETT 138KV CKT 1	6/1/2022	6/1/2022			$ -	$ 8,000,000	$ 8,000,000	$ 8,000,000	$ 8,207,179
					Total	$ -	$ 8,109,701	$ 8,109,701	$ 8,500,000	$ 8,367,437

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
84885681	HARRINGTON STATION EAST BUS - POTTER COUNTY INTERCHANGE 230KV CKT 1	6/1/2019	6/1/2019		

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	Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total Revenue Requirements
84885681	BROWN - EXPLORER TAP 138KV CKT 1	6/1/2008	6/1/2008			$ 179	$ -	$ 179	$ 1,000
	Gracemont 138kV line terminal addition	10/15/2011	10/15/2011			$ -	$ 10,035	$ 10,035	$ 13,360
	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012			$ -	$ 21,948	$ 21,948	$ 73,241
	HUGO 345/138KV TRANSFORMER CKT 1	7/1/2012	7/1/2012			$ -	$ 48,203	$ 48,203	$ 159,712
	Lake Creek - Lone Wolf 69kV Ckt 1 Current Transformers	8/8/2015	8/8/2015			$ -	$ 484,511	$ 484,511	$ 569,775
	NORTHWEST - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010			$ -	$ 96,674	$ 96,674	$ 390,295
	Valliant 345 kV (AEP)	4/17/2012	4/17/2012			$ -	$ 4,216	$ 4,216	$ 12,488
	WASHITA - GRACEMONT 138 KV CKT 2	10/12/2012	10/12/2012			$ -	$ 64,545	$ 64,545	$ 83,194
	Woodward EHV 138kV Phase Shifting Transformer circuit #1	8/2/2017	8/2/2017			$ -	$ 25,707	$ 25,707	$ 28,900
					Total	$ 179	$ 755,838	$ 756,017	$ 1,331,964

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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

Customer	**Study Number**
SPSM	AG1-2017-044

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	84730363	SPS	SPS	16	6/1/2019	7/1/2024	6/1/2019	7/1/2024	$ 16,122	$ -	$ 16,122	$ 20,337
									$ 16,122	$ -	$ 16,122	$ 20,337

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84730363	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
84730363	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1	6/1/2022	6/1/2022		
	DENVER CITY INTERCHANGE N. - XTO_RUSSEL 3115.00 115KV CKT 1	10/1/2022	10/1/2022		

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	Allocated E & C Cost	Total Revenue Requirements
84730363	Harrington Mid - Nichols 230 kV Ckt 2	12/1/2012	12/1/2012			$ 4,480	$ 6,021
	Harrington West - Nichols 230kV Ckt 1	12/1/2012	12/1/2012			$ 4,626	$ 6,217
	Plant X - Tolk 230kV rebuild circuit #1	12/31/2017	12/31/2017			$ 1,117	$ 1,289
	Plant X - Tolk 230kV rebuild circuit #2	12/31/2017	12/31/2017			$ 1,103	$ 1,272
	Power System Stabilizers in SPS	11/30/2014	11/30/2014			$ 66	$ 84
	TUCO Interchange 345/230kV CKT 1 Replacement	6/1/2018	6/1/2018			$ 4,728	$ 5,454
					Total	$ 16,122	$ 20,337

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.
**Note: CPOs for creditable upgrade(s) may be required based on completion of GI review.

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

Customer	**Study Number**
SPSM	AG1-2017-045

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	84734700	SPS	SPS	17	6/1/2019	7/1/2024	6/1/2019	7/1/2024	$ 9,750	$ -	$ 9,750	$ 13,096
									$ 9,750	$ -	$ 9,750	$ 13,096

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84734700	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
84734700	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1	6/1/2022	6/1/2022		
	DENVER CITY INTERCHANGE N. - XTO_RUSSEL 3115.00 115KV CKT 1	10/1/2022	10/1/2022		

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	Allocated E & C Cost	Total Revenue Requirements
84734700	Harrington Mid - Nichols 230 kV Ckt 2	12/1/2012	12/1/2012			$ 4,760	$ 6,397
	Harrington West - Nichols 230kV Ckt 1	12/1/2012	12/1/2012			$ 4,915	$ 6,605
	Power System Stabilizers in SPS	11/30/2014	11/30/2014			$ 75	$ 94
					Total	$ 9,750	$ 13,096

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

**Note: CPOs for creditable upgrade(s) may be required based on completion of GI review.

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

Customer SPSM
Study Number AG1-2017-046

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	84734856	SPS	SPS	21	6/1/2019	7/1/2024	6/1/2019	7/1/2024	$ 12,128	$ -	$ 12,128	$ 16,284
									$ 12,128	$ -	$ 12,128	$ 16,284

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84734856	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
84734856	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1	6/1/2022	6/1/2022		
	DENVER CITY INTERCHANGE N. - XTO_RUSSEL 3115.00 115KV CKT 1	10/1/2022	10/1/2022		

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	Allocated E & C Cost	Total Revenue Requirements
84734856	Harrington Mid - Nichols 230 kV Ckt 2	12/1/2012	12/1/2012			$ 5,881	$ 7,904
	Harrington West - Nichols 230kV Ckt 1	12/1/2012	12/1/2012			$ 6,072	$ 8,161
	Power System Stabilizers in SPS	11/30/2014	11/30/2014			$ 174	$ 219
					Total	$ 12,128	$ 16,284

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.
**Note: CPOs for creditable upgrade(s) may be required based on completion of GI review.

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

Customer	**Study Number**
SPSM	AG1-2017-047

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**
SPSM	84734992	SPS	SPS	58	6/1/2019	7/1/2024	6/1/2019	7/1/2024	$ 33,493	$ -	$ 33,493	$ 44,971
									$ 33,493	$ -	$ 33,493	$ 44,971

Reservation	Upgrade Name	DUN	EOC	Earliest Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
84734992	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
84734992	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1	6/1/2022	6/1/2022		
	DENVER CITY INTERCHANGE N. - XTO_RUSSEL 3115.00 115KV CKT 1	10/1/2022	10/1/2022		

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	Allocated E & C Cost	Total Revenue Requirements
84734992	Harrington Mid - Nichols 230 kV Ckt 2	12/1/2012	12/1/2012			$ 16,244	$ 21,831
	Harrington West - Nichols 230kV Ckt 1	12/1/2012	12/1/2012			$ 16,768	$ 22,535
	Power System Stabilizers in SPS	11/30/2014	11/30/2014			$ 481	$ 605
					Total	$ 33,493	$ 44,971

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

**Note: CPOs for creditable upgrade(s) may be required based on completion of GI review.

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

Customer	**Study Number**
WRGS	AG1-2017-048

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	84877548	WR	WR	50	12/1/2017	1/1/2024	10/1/2019	11/1/2025	$ 3,325	$ -	$ 9,483,992	$ 14,614,137
									$ 3,325	$ -	$ 9,483,992	$ 14,614,137

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
84877548	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	6/1/2018	6/1/2020	10/1/2019	Yes	$ -	$ 3,900,515	$ 3,900,515	$ 6,000,000	$ 8,072,496
					Total	$ -	$ 3,900,515	$ 3,900,515	$ 6,000,000	$ 8,072,496

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
84877548	~~WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1~~	~~6/1/2018~~	~~6/1/2020~~	~~10/1/2019~~	~~Yes~~
	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	6/1/2018	6/1/2020	10/1/2019	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	Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total Revenue Requirements
84877548	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006			$ -	$ 14,295	$ 14,295	$ 95,512
	Tap Wichita - Thistle 345 kV Ckt 1 & 2 - Pratt Addition (NU)	12/31/2016	12/31/2016			$ 3,325	$ -	$ 3,325	$ 3,848
	Tap Wichita - Thistle 345 kV Ckt 1 & 2 - Pratt Co Addition (NU)	10/16/2016	10/16/2016			$ -	$ 5,565,858	$ 5,565,858	$ 6,442,281
*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.					Total	$ 3,325	$ 5,580,152	$ 5,583,477	$ 6,541,641

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

Customer	**Study Number**
WRGS	AG1-2017-049

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**
WRGS	84877556	WR	WR	26	12/1/2017	12/1/2023	10/1/2019	10/1/2025	$ 3,439	$ -	$ 3,478,625	$ 5,906,199
									$ 3,439	$ -	$ 3,478,625	$ 5,906,199

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
84877556	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	6/1/2018	6/1/2020	10/1/2019	Yes	$ -	$ 2,028,268	$ 2,028,268	$ 6,000,000	$ 4,188,904
					Total	$ -	$ 2,028,268	$ 2,028,268	$ 6,000,000	$ 4,188,904

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
84877556	~~WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1~~	~~6/1/2018~~	~~6/1/2020~~	~~10/1/2019~~	~~Yes~~
	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	6/1/2018	6/1/2020	10/1/2019	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	Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total Revenue Requirements
84877556	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006			$ -	$ 7,433	$ 7,433	$ 49,501
	Tap Wichita - Thistle 345 kV Ckt 1 & 2 - Pratt Addition (NU)	12/31/2016	12/31/2016			$ 3,439	$ -	$ 3,439	$ 3,975
	Tap Wichita - Thistle 345 kV Ckt 1 & 2 - Pratt Co Addition (NU)	10/16/2016	10/16/2016			$ -	$ 1,439,484	$ 1,439,484	$ 1,663,818
					Total	$ 3,439	$ 1,446,918	$ 1,450,357	$ 1,717,295

*Note: CPOs may be calculated based on estimated upgrade cost and are subject to change.

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	52ND & DELAWARE WEST TAP - RIVERSIDE STATION 138KV CKT 1	Rebuild to 1272 ACSR and replace station equipment on both ends.	6/1/2019	6/1/2022	$25,000,000.00
AEPW	52ND & DELAWARE WEST TAP - TULSA POWER STATION 138KV CKT 1	Rebuild to 1272 ACSR and replace station equipment on both ends.	6/1/2019	6/1/2022	$16,111,111.00
AEPW	ARSENAL HILL - RAINES 138KV CKT 1	Rebuild to 1272 ACSR and replace station equipment on both ends.	10/1/2022	10/1/2022	$10,000,000.00
AEPW	THOMAS TAP - WEATHERFORD 69KV CKT 1	Rebuild to 477 ACSR and replace station equipment on both ends.	6/1/2018	6/1/2020	$2,000,000.00
BEPC	EASTRUTH-CP7115.00 - MALLARD 115KV CKT 1	Rebuild 9.5 miles of 115 kV transmission line from East Ruth to Mallard.	10/1/2022	10/1/2022	$500,000.00
OKGE	GLASSES - RUSSETT 138KV CKT 1	Rebuild & re-conductor transmission line to 795mcm conductor. Replace wavetrap and line relays.	6/1/2022	6/1/2022	$8,000,000.00
OKGE	MUSTANG - SW 5TH 138KV CKT 1	Replace switches, traps, and CTs within Mustang & SW 5th Substations.	6/1/2018	6/1/2020	$500,000.00
WAPA	DENISON - J6BOYER8 69.000 69KV CKT 1	Replace Denison bus jumpers (terminal for NIPCO J6 line).	12/1/2017	10/1/2018	$80,000.00
WERE	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	Replace Wichita (WICH TX-11) 345/138/13.8 kV transformer with 616 MVA transformer.	6/1/2018	6/1/2020	$6,000,000.00
WFEC	HUGO POWER PLANT - VALLIANT 138KV CKT 1	Upgrade Hugo switch relay, Breaker 472 Bushing CTs, and Breaker 3472 Bushing CTs from 1200 to 2000A.	10/1/2022	10/1/2022	$150,000.00

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)
SUNC	WALKEMEYER TAP 345 KV SUBSTATION (SEPC)	Tap the existing 345 kV line from Finney to Hitchland to construct the new Walkemeyer Tap substation. Install any necessary 345 kV terminal equipment. Install new 345/115 kV transformer at the new Walkemeyer Tap substation. Install any necessary 115 kV terminal equipment. Construct new 1-mile 115 kV line from Walkemeyer to the new Walkemeyer Tap substation. Install any 115 kV terminal equipment at the existing Walkemeyer substation necessary to accommodate terminations of new 115 kV lines from the new Walkemeyer Tap substation and North Liberal. Construct new 21-mile 115 kV line from North Liberal to Walkemeyer. Install any 115 kV terminal equipment at the existing North Liberal substation necessary to accommodate termination of new 115 kV line from Walkemeyer.	12/1/2017	6/1/2018

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	ONETA - ONETA ENERGY CENTER 345KV CKT 1	Rebuild to 2-1590 ACSR and replace station equipment.	6/1/2022	6/1/2022
AEPW	ONETA - ONETA ENERGY CENTER 345KV CKT 2	Rebuild to 2-1590 ACSR and replace station equipment.	6/1/2022	6/1/2022
BEPC	EVERLYN - K409HARTLYM869.000 69KV CKT 1	Reconductor 7.5 miles of 69 kV line from Everlyn to Hartley.	10/1/2022	10/1/2022
BEPC	STORLA (KV1A) 230/115/13.2KV TRANSFORMER CKT 1	Replace 230/115/13.2 kV transformer with 200/250 MVA.	10/1/2018	10/1/2019
KCPL	LEXINGTON 161/69KV TRANSFORMER CKT 1	Replace Lexington 161/69 kV transformer with 100/110 MVA transformer.	6/1/2019	6/1/2020
SPS	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1	Upgrade terminal limitations on circuit V40, Carlisle-Murphy.	6/1/2022	6/1/2022
SPS	CARLSBAD INTERCHANGE - PECOS INTERCHANGE 115KV CKT 1	Replace terminal equipment.	10/1/2022	10/1/2022
SPS	DENVER CITY INTERCHANGE N. - XTO_RUSSEL 3115.00 115KV CKT 1	Upgrade terminal limitations on circuit T89, Denver City to XTO-Russell.	10/1/2022	10/1/2022
SPS	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	Upgrade terminal limitations on circuit T68, Tuco-Floyd County.	6/1/2022	6/1/2022
SPS	HARRINGTON STATION EAST BUS - POTTER COUNTY INTERCHANGE 230KV CKT 1	Upgrade terminal equipment at both Potter Co. and Harrington 230 kV substations.	6/1/2019	6/1/2019
SPS	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1	Rebuild Tolk 230 kV bus to double-bus, double-breaker.	6/1/2022	12/31/2022
WAPA	EVERLYN - SPENCER 69KV CKT 1	Change relay setting. Replace breaker and CTs at WAPA Spencer 69 kV.	10/1/2022	10/1/2022
WAPA	FT RANDAL - SPENCER 115KV CKT 1	Add 2nd Ft. Randall-Spencer 115 kV line.	6/1/2018	6/1/2020
WERE	HOYT - JEFFREY ENERGY CENTER 345KV CKT 2	Add 2nd Hoyt - Jeffrey Energy Center 345 kV transmission line.	6/1/2018	6/1/2021
WERE	LAWRENCE HILL (LAWH TX-3) 230/115/13.8KV TRANSFORMER CKT 1	Replace existing TX with a 440 MVA emergency rated dual high side LAWH 345/230-115 kV TX.	6/1/2018	6/1/2020
WERE	MIDLADS3 115.00 - MIDLAND JUNCTION 115KV CKT Z1	Replace limiting 750 CU Bus (201/240 MVA) with 1590 AAC Bus (255/308 MVA).	6/1/2022	6/1/2022
~~WERE~~	~~WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1~~	~~Replace Wichita (WICH TX-11) 345/138/13.8 kV transformer with 616 MVA transformer.~~	~~6/1/2018~~	~~6/1/2020~~
WERE	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	Replace Wichita (WICH TX-12) 345/138/13.8 kV transformer with 616 MVA transformer.	6/1/2018	6/1/2020

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

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)	Total Gross CPO Allocation
AEPM	Terry Road 345kV Station (NU)	Construct the 345 kV Terry Road switching station including a three breaker ring bus configured for future expansion to breaker-and-a-half. The Terry Road switching station will be located on property acceptable to Transmission Owner in the vicinity of t	11/16/2016	11/16/2016	$19,929,907
AEPM	Valliant 345 kV (AEP)	Install 345 kV terminal equipment at Valliant substation.	4/17/2012	4/17/2012	$1,690,074
BEPM	Daglum - Dickinson 230kV CKT 1	Build new 230kV line from Daglum - Dickinson	3/1/2019	3/1/2019	$866,610
EDE	SUB 110 - ORONOGO JCT. - SUB 452 - RIVERTON 161KV CKT 1	Reconductor 11.9 miles of Oronogo Jct. to Riverton 161kV Ckt. 1 from 556 ACSR to 795 ACSR, change CT settings @ Oronogo, and replace wavetrap.	6/1/2011	6/1/2011	$462
ITCM	HUGO - VALLIANT 345KV CKT 1	Install new line from Valliant 345 kV to Hugo Power Plant with 19 miles of bundled 1590 ACSR conductior.	7/1/2012	7/1/2012	$9,892,480
ITCM	HUGO 345/138KV TRANSFORMER CKT 1	Install new line from Valliant 345 kV to Hugo Power Plant with 19 miles of bundled 1590 ACSR conductior. Note that ITC is building the line from Valiant to Hugo.	7/1/2012	7/1/2012	$1,690,854
KCPL	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	$361,434
MIDW	Rice County 230/115 kV transformer Ckt 1	Install 230/115 kV transformer at Rice County.	10/1/2012	10/1/2012	$18,083
MKEC	CLIFTON - GREENLEAF 115KV CKT 1	Rebuild 14.4 miles	6/1/2011	6/1/2013	$88,687
MKEC	FLATRDG3 - HARPER 138KV CKT 1	Rebuild 24.15 mile line	12/1/2009	6/1/2013	$150,103
MKEC	FLATRDG3 - MEDICINE LODGE 138KV CKT 1	Rebuild 8.05 mile line	12/1/2009	6/1/2013	$36,616
MKEC	Ft. Dodge - North Ft. Dodge 115 kV Ckt 2	Build appoximately 0.5 mile 115 kV line	5/1/2015	5/1/2015	$423,185
MKEC	GREENLEAF - KNOB HILL 115KV CKT 1 (MKEC)	Rebuild 43.5% Ownership of 20.9 miles	6/1/2013	6/1/2013	$9,148
MKEC	MEDICINE LODGE - PRATT 115KV CKT 1	Rebuild 26 mile line	12/1/2009	6/1/2013	$120,776
MKEC	MEDICINE LODGE 138/115KV TRANSFORMER CKT 1	Upgrade transformer	12/1/2009	6/1/2013	$90,612
MKEC	North Ft. Dodge - Spearville 115kV Ckt 2	Build appoximately 20 mile 115 kV line	5/1/2015	5/1/2015	$828,342
MKEC	Spearville 345/115 kV Transformer CKT 1	Spearville Substation - Add 345/115kV autotransformer and 345kV and 115kV terminal positions for autotransformer.	5/1/2015	5/1/2015	$1,377,927
NPPD	Albion - Petersburg 115kV Ckt 1 Hansford Upgrade	Replace Breaker Switch 1106-D & jumpers; Replace Petersburg 115kV Substation main bus; Upgrade and replace transmission structures on 115kV lines TL1168 A & B to facilitate 100 degrees Centigrade line operation	12/31/2012	12/31/2012	$951
NPPD	Antelope - County Line - 115kV Rebuild	Rebuild/Upgrade the Antelope – County Line 115kV to rerate line segments to greater than 125 MVA.	5/1/2017	5/1/2017	$35,770
NPPD	Battle Creek - County Line 115kV Rebuild	Rebuild/Upgrade the Battle Creek – County Line 115kV to rerate line segments to greater than 125 MVA.	5/1/2017	5/1/2017	$34,121
NPPD	Fort Randall - Madison County 230kV Ckt 1	Raise structures and line clearances as necessary to re-rate the transmission line to 320 MVA	12/23/2013	12/23/2013	$200,419
NPPD	Kelly - Madison County 230kV Ckt 1	Raise structures and line clearances as necessary to re-rate the transmission line to 320MVA	11/1/2014	11/1/2014	$68,327
NPPD	Neligh - Petersburg North 115kV Ckt 1	Replace Breaker 1106, jumpers, & 115kV Switch 1106-D2; Replace Petersburg 115kV Substation main bus; Upgrade and replace transmission structures on 115kV lines TL1168 A & B to facilitate 100 degrees Centigrade line operation	11/9/2012	11/9/2012	$36,485
NPPD	Rosemont 115kV Substation	115kV Substation addition to accommodate new 115kV interconnection & 115kV breakers at Guide Rock due to addition of Rosemont 115kV Substation	11/1/2017	11/1/2017	$1,539,870
OKGE	Beaver County 345kV Substation	345kV ring bus substation including: five (5) 345kV circuit breakers, line relaying, disconnect switches, and associated equipment.	9/29/2014	9/29/2014	$9,484,183
OKGE	Beaver County 345kV Substation Addition	345kV line terminal including one (1) 345kV circuit breaker, line relaying, disconnect switches, and associated equipment	11/14/2014	11/14/2014	$281,535
OKGE	Beaver County Substation - Add 345kV terminal for Ochiltree	Convert from ring bus to breaker-and-a-half configuration by installing additional rung to the existing bus layout and install five (5) 345 kV, 3000 Amp breakers, line relaying, disconnect switches, and associated equipment.	9/27/2017	9/27/2017	$2,324,233
OKGE	BROWN - EXPLORER TAP 138KV CKT 1	UPGRADE CT AT BROWN NEXT LIMIT CONDUCTOR 133/156	6/1/2008	6/1/2008	$1,000
OKGE	Gracemont 138kV line terminal addition	138kV line terminal at Gracemont substation, including breaker, line relaying, disconnect switches and associated equipment, dead end structures, revenue metering with CT's and PT's.	10/15/2011	10/15/2011	$47,600
OKGE	Kingfisher Co Tap - Mathewson 345kV CKT 1	Replace terminal equipment to achieve conductor limit	3/1/2018	3/1/2018	$446,390
OKGE	NORTHWEST - WOODWARD 345KV CKT 1	Build 345 kV line	1/1/2010	1/1/2010	$16,385,301
OKGE	Sunnyside Relays for Grady Interconnection	Sunnyside (OG&E) 345kV Substation: Verify relay settings are compatible with relays at Transmission Owner 345 kV Interconnection Substation.	11/23/2016	11/23/2016	$34,101
OKGE	Woodward EHV 138kV Phase Shifting Transformer circuit #1	Install one (1) 138 kV phase shifting transformer along with upgrading relay, protective, and metering equipment, and all associated and miscellaneous materials.	8/2/2017	8/2/2017	$1,550,255

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

SPS	Harrington Mid - Nichols 230 kV Ckt 2	Reconductor Harrington Mid - Nichols 230kV. Replace switches and breakers to get circuit to 727/727 MVA rating. New limit should be bus rating.	12/1/2012	12/1/2012	$51,213
SPS	Harrington West - Nichols 230kV Ckt 1	Reconductor Harrington West - Nichols 230kV. Replace switches and breakers to get circuit to 727/727 MVA rating. New limit should be bus rating.	12/1/2012	12/1/2012	$171,563
SPS	Plant X - Tolk 230kV rebuild circuit #1	Rebuild Plant X – Tolk 230kV transmission circuit #1 which is approximately 10 miles in length. The existing 795 MCM ACSR conductor will be replaced with 995 MCM ACCS conductor along with upgrading associated disconnect switches, structural steel, foundat	12/31/2017	12/31/2017	$1,289
SPS	Plant X - Tolk 230kV rebuild circuit #2	Rebuild Plant X – Tolk 230kV transmission circuit #2 which is approximately 10 miles in length. The existing 795 MCM ACSR conductor will be replaced with 995 MCM ACCS conductor along with upgrading associated disconnect switches, structural steel, foundat	12/31/2017	12/31/2017	$1,272
SPS	Power System Stabilizers in SPS	Install Power System Stabilizers (PSS) at Tolk (Units: 1,2) and Jones (Units: 1,2,3).	11/30/2014	11/30/2014	$17,463
SPS	TUCO Interchange 345/230kV CKT 1 Replacement	The existing 345/230kV 560/560MVA autotransformer at Tuco Substation will be replaced with a new transformer unit to match the other transformer at this site. The new transformer can be installed at Tuco Substation by removing the existing transformer fro	6/1/2018	6/1/2018	$325,258
WERE	166TH STREET - JAGGARD JUNCTION 115KV CKT 1	Rebuild 166th Street - Jaggard Junction 115 kV line.	9/18/2008	9/18/2008	$3,248
WERE	166TH STREET - JARBALO JUNCTION SWITCHING STATION 115KV CKT 1	Rebuild Jarbalo - 166th Street 115 kV line.	2/3/2010	2/3/2010	$3,876
WERE	COFFEYVILLE TAP - DEARING 138KV CKT 1 (WR) #2	Replace Disconnect Switches, Wavetrap, Breaker, Jumpers with a minimum 2000 amp emergency rating equipment	6/9/2010	6/9/2010	$1
WERE	JAGGARD JUNCTION - PENTAGON 115KV CKT 1	Rebuild Jaggard Junction - Pentagon 115 kV line.	6/1/2009	6/1/2009	$6,521
WERE	Tap Wichita - Thistle 345 kV Ckt 1 & 2 - Pratt Addition (NU)	Pratt relaying settings changes at the new 345kV switching station identified for Pratt Co.	12/31/2016	12/31/2016	$7,823
WERE	Tap Wichita - Thistle 345 kV Ckt 1 & 2 - Pratt Co Addition (NU)	345 kV Breaker and Half Substation (No metering or customer equipment); Eight (8) 345 kV Breakers; Twenty (20) 345 kV switches; Two (2) 345 kV reactor switches; Fourteen (14) VTs; Two (2) 345 kV 50 Mvar line reactors; New redundant primary relaying, relay	10/16/2016	10/16/2016	$8,106,099
WFEC	Lake Creek - Lone Wolf 69kV Ckt 1 Current Transformers	Replace current transformers at Lake Creek and Lone Wolf substation	8/8/2015	8/8/2015	$569,775
WFEC	WASHITA - GRACEMONT 138 KV CKT 2	BUILD WASHITA - GRACEMONT 138KV CKT 2 (APPROXIMATELY 7 MILES). ADD LINE TERMINAL AT WASHITA AND PROCURE RIGHT OF WAY.	10/12/2012	10/12/2012	$296,404

*Note: CPOs may be calculated based on upgrade(s) currently in study and/or estimated upgrade cost(s), which may be subject to change.

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
	None				

Table 7- Service Upgrade Cost Allocation per Request

Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
52ND & DELAWARE WEST TAP - RIVERSIDE STATION 138KV CKT 1	AEPM	AG1-2017-017	84904909	100.00%	$25,000,000
				Total:	$25,000,000

Table 7- Service Upgrade Cost Allocation per Request

Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
52ND & DELAWARE WEST TAP - TULSA POWER STATION 138KV CKT 1	AEPM	AG1-2017-017	84904909	100.00%	$16,111,111
				Total:	$16,111,111

Table 7- Service Upgrade Cost Allocation per Request

Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
ARSENAL HILL - RAINES 138KV CKT 1	AEPM	AG1-2017-011	84903862	14.65%	$1,464,936
ARSENAL HILL - RAINES 138KV CKT 1	AEPM	AG1-2017-012	84904082	23.60%	$2,359,506
ARSENAL HILL - RAINES 138KV CKT 1	AEPM	AG1-2017-013	84904145	22.50%	$2,249,999
ARSENAL HILL - RAINES 138KV CKT 1	AEPM	AG1-2017-014	84904230	17.88%	$1,787,810
ARSENAL HILL - RAINES 138KV CKT 1	AEPM	AG1-2017-015	84904264	15.89%	$1,588,721
ARSENAL HILL - RAINES 138KV CKT 1	AEPM	AG1-2017-017	84904909	5.49%	$549,028
				Total:	$10,000,000

Table 7- Service Upgrade Cost Allocation per Request

Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
DENISON - J6BOYER8 69.000 69KV CKT 1	BEPM	AG1-2017-018	84885588	100.00%	$80,000
				Total:	$80,000

Table 7- Service Upgrade Cost Allocation per Request

Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
EASTRUTH-CP7115.00 - MALLARD 115KV CKT 1	BEPM	AG1-2017-018	84885588	75.84%	$379,206
EASTRUTH-CP7115.00 - MALLARD 115KV CKT 1	BEPM	AG1-2017-020	84885635	24.16%	$120,794
				Total:	$500,000

Table 7- Service Upgrade Cost Allocation per Request

Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
GLASSES - RUSSETT 138KV CKT 1	PEC	AG1-2017-043	84885681	100.00%	$8,000,000
				Total:	$8,000,000

Table 7- Service Upgrade Cost Allocation per Request

Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
HUGO POWER PLANT - VALLIANT 138KV CKT 1	AEPM	AG1-2017-011	84903862	13.07%	$19,607
HUGO POWER PLANT - VALLIANT 138KV CKT 1	AEPM	AG1-2017-013	84904145	24.02%	$36,023
HUGO POWER PLANT - VALLIANT 138KV CKT 1	AEPM	AG1-2017-014	84904230	41.72%	$62,579
HUGO POWER PLANT - VALLIANT 138KV CKT 1	AEPM	AG1-2017-015	84904264	14.46%	$21,683
HUGO POWER PLANT - VALLIANT 138KV CKT 1	AEPM	AG1-2017-017	84904909	6.74%	$10,107
				Total:	$150,000

Table 7- Service Upgrade Cost Allocation per Request

Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
MUSTANG - SW 5TH 138KV CKT 1	AEPM	AG1-2017-017	84904909	78.06%	$390,299
MUSTANG - SW 5TH 138KV CKT 1	PEC	AG1-2017-043	84885681	21.94%	$109,701
				Total:	$500,000

Table 7- Service Upgrade Cost Allocation per Request

Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
THOMAS TAP - WEATHERFORD 69KV CKT 1	AEPM	AG1-2017-017	84904909	100.00%	$2,000,000
				Total:	$2,000,000

Table 7- Service Upgrade Cost Allocation per Request

Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	KMEA	AG1-2017-028	84885203	0.35%	$20,920
WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	WRGS	AG1-2017-048	84877548	65.01%	$3,900,515
WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	WRGS	AG1-2017-049	84877556	33.80%	$2,028,268
WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	KMEA	AG1-2017-027	84884608	0.84%	$50,297
				Total:	$6,000,000