

# AGGREGATE FACILITIES STUDY

SPP-2015-AG2-AFS1

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# **REVISION HISTORY**

DATE OR VERSION NUMBER	AUTHOR	CHANGE DESCRIPTION	COMMENTS
2/4/2016	SPP	Original	
2/24/2016	SPP	Change to Table 1	

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# **EXECUTIVE SUMMARY**

This study report provides preliminary results for Southwest Power Pool, Inc. (SPP) Aggregate Transmission Service Study (ATSS) <u>SPP-2015-AG2</u>. Pursuant to Attachment Z1 of the SPP Open Access Transmission Tariff (OATT), <u>2,334</u> 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)
- 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 February 4, 2016 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 February 11, 2016, 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 December 1, 2015 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,

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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 2015 Integrated Transmission Planning (ITP) models, used in the 2016 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:

- 2016 Summer Peak (16SP)
- 2016/17 Winter Peak (16WP)
- 2017 Summer Peak (17SP)
- 2017/18 Winter Peak (17WP)
- 2020 Summer Peak (20SP)
- 2020/21 Winter Peak (20WP)
- 2025 Summer Peak (25SP)
- 2025/26 Winter Peak (25WP)

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 2015 Series Cases. Scenario 5 includes transmission service not already included in the SPP 2015 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  $1^{st}$ -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

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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.

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#### 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

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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 February 4, 2016. This will open a 5 business day window for Customer response. To remain in the ATSS, SPP must receive from the Customer by February 11, 2016, 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:**

Fixed slope decoupled Newton-Raphson Solutions: •

solution (FDNS)

• Tap adjustment: Stepping

Tie lines and loads • Area Interchange Control:

• 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:

Exclude interfaces from report: NO YES Perform voltage limit check: Elements in available capacity table: 60000 99999.0 Cutoff threshold for available capacity

table:

Min. contng. Case Vltg chng for report: 0.02 None Sorted output:

**Newton Solution:** 

Tap adjustment: Stepping

Tie lines and loads (Disabled for generator Area interchange control:

outages)

YES

Apply immediately Var limits:

X Phase shift adjustment Solution options:

> \_ 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	<sup>5</sup> One or More Study Parameters Exceeded
AECC	AG2-2015-001	81871305	CSWS	CSWS	108	1/1/2017	1/1/2022	3/1/2021	3/1/2026	1/1/2017	1/1/2022	0	17SP	Yes
AECC	AG2-2015-002	81871334	OKGE	CSWS	64	1/1/2018	1/1/2023	1/1/2018	1/1/2023	1/1/2018	1/1/2023	0	20SP	Yes
AEPE	AG2-2015-003	81925179	NPPD	NPPD	40	1/1/2017	1/1/2022	1/1/2017	1/1/2022	1/1/2017	1/1/2022	0	17SP	No
AEPE	AG2-2015-004	81925238	NPPD	NPPD	32	1/1/2017	1/1/2022	1/1/2017	1/1/2022	1/1/2017	1/1/2022	0	17SP	No
AEPE	AG2-2015-005	81925271	WAUE	NPPD	5	1/1/2017	1/1/2022	1/1/2017	1/1/2022	1/1/2017	1/1/2022	0	17SP	No
AEPE	AG2-2015-006	81925328	LES	NPPD	4	1/1/2017	1/1/2022	1/1/2017	1/1/2022	1/1/2017	1/1/2022	0	17SP	No
BRPS	AG2-2015-007	81939641	SECI	NPPD	15	1/1/2018	6/1/2019	1/1/2018	6/1/2019	1/1/2018	6/1/2019	0	20SP	No
CHAN	AG2-2015-008	81921748	WR	WR	45	1/1/2017	1/1/2021	1/1/2017	1/1/2021	1/1/2017	1/1/2021	0	17SP	No
CHAN	AG2-2015-009	81921765	WR	WR	9	1/1/2017	1/1/2022	1/1/2017	1/1/2022	1/1/2017	1/1/2022	0	17SP	No
GSECGS	AG2-2015-010	81892833	OKGE	SPS	5	6/1/2016	7/1/2034	6/1/2016	7/1/2034	6/1/2016	7/1/2034	0	16SP	Yes
INDP	AG2-2015-011	81761267	WR	KCPL	20	6/1/2016	6/1/2036	6/1/2018	6/1/2036	6/1/2016	6/1/2036	0	16SP	No
KCPS	AG2-2015-012	81620079	WPEK	KCPL	50	1/1/2017	1/1/2022	3/1/2021	3/1/2026	1/1/2017	1/1/2022	0	17SP	Yes
KCPS	AG2-2015-013	81917580	AECI	KCPL	100	6/1/2016	1/1/2019	6/1/2018	1/1/2021	6/1/2016	1/1/2019	0	16SP	No
KCPS	AG2-2015-014	81921840	WPEK	KCPL	50	1/1/2017	1/1/2022	3/1/2021	3/1/2026	1/1/2017	1/1/2022	0	17SP	Yes
KMEA	AG2-2015-015	81939677	SECI	SECI	27	6/1/2016	6/1/2021	6/1/2016	6/1/2021	6/1/2016	6/1/2021	0	16SP	No
MIDW	AG2-2015-016	81939203	WR	WR	120	6/1/2016	6/1/2026	6/1/2019	6/1/2029	6/1/2016	6/1/2026	0	16SP	No
MIDW	AG2-2015-017	81939312	WR	WR	50	12/1/2016	12/1/2036	6/1/2019	6/1/2039	12/1/2016	12/1/2036	0	17SP	Yes
MIDW	AG2-2015-018	81939816	WR	WR	5	6/1/2016	6/1/2026	6/1/2016	6/1/2026	6/1/2016	6/1/2026	0	16SP	No
NPPM	AG2-2015-019	81761103	NPPD	NPPD	75	6/1/2016	6/1/2026	6/1/2016	6/1/2026	6/1/2016	6/1/2026	0	16SP	No
OMPA	AG2-2015-020	81909660	OKGE	OKGE	42	1/1/2020	1/1/2026	1/1/2020	1/1/2026	1/1/2020	1/1/2026	0	25SP	No
OPPM	AG2-2015-021	81918646	WAUE	OPPD	400	1/1/2018	7/1/2037	1/1/2018	7/1/2037	1/1/2018	7/1/2037	0	20SP	No
PEC	AG2-2015-022	81926148	CSWS	WFEC	75	6/1/2016	6/1/2026	3/1/2021	3/1/2031	6/1/2016	6/1/2026	0	16SP	No
PEC	AG2-2015-023	81926178	WFEC	WFEC	62	6/1/2016	6/1/2026	6/1/2016	6/1/2026	6/1/2016	6/1/2026	0	16SP	No
SPSM	AG2-2015-024	81882937	SPS	SPS	30	10/1/2016	10/1/2031	3/1/2021	3/1/2036	10/1/2016	10/1/2031	0	17SP	No
SPSM	AG2-2015-025	81883164	BLKW	SPS	15	6/1/2016	6/1/2021	12/15/2018	12/15/2023	6/1/2016	6/1/2021	0	16SP	No
SPSM	AG2-2015-026	81883317	OKGE	SPS	199	1/1/2017	12/9/2034	3/1/2021	2/1/2039	11/16/2018	10/16/2036	0	17SP	Yes
WRGS	AG2-2015-027	81914448	WR	WR	280	12/1/2016	10/1/2025	3/1/2021	10/1/2025	12/1/2016	10/1/2025	0	17SP	Yes
WRGS	AG2-2015-028	81916202	WR	WR	104	12/1/2016	10/1/2025	6/1/2019	10/1/2025	12/1/2016	10/1/2025	0	17SP	Yes
WRGS	AG2-2015-029	81916204	WR	WR	103	12/1/2016	10/1/2025	6/1/2019	10/1/2025	12/1/2016	10/1/2025	0	17SP	Yes
WRGS	AG2-2015-030	81925795	WR	WR	200	7/1/2016	10/1/2025	6/1/2019	10/1/2025	7/1/2016	10/1/2025	0	17SP	Yes

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: One or more study parameters have been exceeded. Specific details are provided directly to the Customer.

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

Customer	Study Number	Reservation	Engineering and Construction Cost of Upgrades Allocated to Customer for Revenue Requirements	<sup>1</sup> Letter of Credit Amount Required (Parameter)	<sup>2</sup> Potential Base Plan Engineering and Construction Funding Allowable	Notes	<sup>4</sup> Additional Engineering and Construction Cost for 3rd Party Upgrades (Parameter)	<sup>35</sup> Total Revenue Requirements for Assigned Upgrades Over Term of Reservation WITH Potential Base Plan Funding Allocation	Point-to-Point Base Rate Over Reservation Period	<sup>4</sup> Total Cost of Reservation Assignable to Customer Contingent Upon Base Plan Funding	Directly Assigned Upgrade Cost (DAUC) (E&C) (Parameter)
AECC	AG2-2015-001	81871305	\$11,823,093	\$11,823,090	\$0		\$0		\$0	,,.	\$11,823,090
AECC	AG2-2015-002	81871334	\$1,324,785	\$1,324,785	\$0		\$0	\$2,664,740	\$0	\$2,664,740	\$1,324,785
AEPE	AG2-2015-003	81925179	\$0	\$0	\$0		\$0		\$0	Schedule 9 & 11 Charges	\$0
AEPE	AG2-2015-004	81925238	\$0	\$0	\$0		\$0			Schedule 9 & 11 Charges	\$0
AEPE	AG2-2015-005	81925271	\$0	\$0	\$0		\$0			Schedule 9 & 11 Charges	\$0
AEPE	AG2-2015-006	81925328	\$0	\$0	\$0		\$0	\$0		Schedule 9 & 11 Charges	\$0
BRPS	AG2-2015-007	81939641	\$0	\$0	\$0		\$0			Schedule 9 & 11 Charges	\$0
CHAN	AG2-2015-008	81921748	\$0	\$0	\$0		\$0	\$0	\$0	Schedule 9 & 11 Charges	\$0
CHAN	AG2-2015-009	81921765	\$0	\$0	\$0		\$0		\$0	Schedule 9 & 11 Charges	\$0
GSECGS	AG2-2015-010	81892833	\$1,073,637	\$1,073,637	\$0		\$0	\$2,212,686	\$0	\$2,212,686	\$1,073,637
INDP	AG2-2015-011	81761267	\$0	\$0	\$0		\$0		\$0	Schedule 9 & 11 Charges	\$0
KCPS	AG2-2015-012	81620079	\$169,974	\$169,974	\$0		\$0		\$0	\$291,899	\$169,974
KCPS	AG2-2015-013	81917580	\$0	\$0	\$0		\$0	\$0	\$9,370,717	\$9,370,717	\$0
KCPS	AG2-2015-014	81921840	\$169,974	\$169,974	\$0		\$0		\$0	\$291,899	\$169,974
KMEA	AG2-2015-015	81939677	\$0	\$0	\$0		\$0	\$0	\$0	Schedule 9 & 11 Charges	\$0
MIDW	AG2-2015-016	81939203	\$6,834,463	\$0	\$6,834,463		\$0	\$0	\$0	Schedule 9 & 11 Charges	\$0
MIDW	AG2-2015-017	81939312	\$2,974,609	\$2,974,609	\$0		\$0	\$7,485,016	\$0	\$7,485,016	\$2,974,609
MIDW	AG2-2015-018	81939816	\$0	\$0	\$0		\$0	\$0	\$0	Schedule 9 & 11 Charges	\$0
NPPM	AG2-2015-019	81761103	\$0	\$0	\$0		\$0	\$0	\$0	Schedule 9 & 11 Charges	\$0
OMPA	AG2-2015-020	81909660	\$456,974	\$150,801	\$306,173		\$0	\$338,156	\$0	\$338,156	\$150,801
OPPM	AG2-2015-021	81918646	\$0	\$0	\$0		\$0	\$0	\$0	Schedule 9 & 11 Charges	\$0
PEC	AG2-2015-022	81926148	\$0	\$0	\$0		\$0	\$0	\$0	Schedule 9 & 11 Charges	\$0
PEC	AG2-2015-023	81926178	\$0	\$0	\$0		\$0		\$0	Schedule 9 & 11 Charges	\$0
SPSM	AG2-2015-024	81882937	\$0	\$0	\$0		\$0	\$0	\$0	Schedule 9 & 11 Charges	\$0
SPSM	AG2-2015-025	81883164	\$0	\$0	\$0		\$0	\$0	\$0	Schedule 9 & 11 Charges	\$0
SPSM	AG2-2015-026	81883317	\$0	\$0	\$0		\$0	\$0	\$0	Schedule 9 & 11 Charges	\$0
WRGS	AG2-2015-027	81914448	\$7,260,553	\$7,260,553	\$0		\$0	\$15,342,100	\$0	\$15,342,100	\$7,260,553
WRGS	AG2-2015-028	81916202	\$2,920,039	\$2,920,039	\$0		\$0	\$6,192,498	\$0	\$6,192,498	\$2,920,039
WRGS	AG2-2015-029	81916204	\$2,891,959	\$2,891,959	\$0		\$0	\$6,132,950	\$0	\$6,132,950	\$2,891,959
WRGS	AG2-2015-030	81925795	\$5,615,459	\$5,615,459	\$0		\$0	\$11,718,640	\$0	\$11,718,640	\$5,615,459
Grand Total			\$43,515,519		\$7,140,636			\$72,555,604		ustomer is the transmission owner less	

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 pla 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.

Customer Study Number AECC AG2-2015-001

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
AECC	81871305	CSWS	CSWS	108	1/1/2017	1/1/2022	3/1/2021	3/1/2026	\$ -	\$ -	\$ 11,823,093	\$ 19,885,021
									\$ -	\$ -	\$ 11.823.093	\$ 19.885.021

				Earliest Start	Redispatch	Base Plan Funding	Direct	ly Assigned	Allocated E & C			Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	for Wind	for Wi	nd	Cost	Total E	& C Cost	Requirements
81871305	BONANZA - HACKETT AECC 161KV CKT 1	6/1/2017	6/1/2019			\$ -	\$	2,201,052	\$ 2,201,052	\$	3,500,000	\$ 4,080,092
	COMANCHE - COMANCHE TAP 69KV CKT 1	10/1/2020	10/1/2020			\$ -	\$	2,600,000	\$ 2,600,000	\$	2,600,000	\$ 3,875,658
	HANCOCK - MUSKOGEE 161KV CKT 1 Accelerate	6/1/2017	6/1/2017			\$ -	\$	48,105	\$ 48,105	\$	73,942	\$ 90,546
	Marlow - Rush Springs Tap 138 kV Ckt 1 Rebuild	6/1/2018	6/1/2019		Yes	\$ -	\$	6,973,936	\$ 6,973,936	\$	7,430,909	\$ 11,838,724
					Total	\$ -	\$	11,823,093	\$ 11,823,093	\$	13,604,851	\$ 19,885,021

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

Γ											Earliest Start	Redispatch
F	Reservation	Upgrade Na	me						DUN	EOC	Date	Available
Г	81871305	Multi - Woo	dward District EH\	/ - Tato	nga - Ma	atthewson - Cimarron :	345 kV	-	6/1/2017	3/1/2021		Yes

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81871305	Solution(s) for 2016ITPNT-RON0422 and 2016ITPNT-RON0423.	1/1/2017	TBD		
	Solution(s) for 2016ITPNT-RON0474, 2016ITPNT-RON0475, 2016ITPNT-RON0476, 2016ITPNT-RON0477,				
	2016ITPNT-RON0478, 2016ITPNT-RON0479, and 2016ITPNT-RON0480.	1/1/2017	TBD		

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81871305	CHAMBER SPRINGS - FARMINGTON AECC 161KV CKT 1 AECC	6/1/2021	6/1/2021		

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81871305	Ashdown REC (AECC delivery point)	12/1/2011	12/1/2011		
	ASHDOWN REC (MILLWOOD) - OKAY 138KV CKT 1	12/1/2011	12/1/2011		
	ASHDOWN REC (MILLWOOD) - PATTERSON 138KV CKT 1	12/1/2011	12/1/2011		
	Gracemont 138kV line terminal addition	10/12/2012	10/12/2012		
	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012		
	MANDEVILTP4 - SE TEXARKANA 138KV CKT 1	7/1/2012			
	MANDEVILTP4 - TURK 138KV CKT 1	7/1/2012	7/1/2012		
	MATHEWSON - NORTHWEST 345KV CKT 1	1/1/2010	1/1/2010		
	MCNAB REC - Turk 115KV CKT 1 #2 (AEP)	12/1/2011	12/1/2011		
	OKAY - TURK 138KV CKT 1	12/1/2011	12/1/2011		
	Southwestern Station - Washita 138kV Ckt 1	10/1/2005	10/1/2005		
	Southwestern Station - Washita 138kV Ckt 1 (AEP)	10/1/2005	10/1/2005		
	SUGAR HILL - TURK 138KV CKT 1	12/16/2010	12/16/2010		
	TURK 138/115KV TRANSFORMER CKT 1	12/1/2011	12/1/2011		
	Valliant 345 kV (AEP)	7/1/2012	7/1/2012		
	WASHITA - GRACEMONT 138 KV CKT 2	10/12/2012	10/12/2012		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number AECC AG2-2015-002

							Deferred Start	Deferred Stop	Potential Base			i
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
AECC	81871334	OKGE	CSWS	64	1/1/2018	1/1/2023	1/1/2018	1/1/2023	\$ -	\$ -	\$ 1,324,785	\$ 2,664,740
									\$ -	\$ -	\$ 1,324,785	\$ 2,664,740

Reservation	Upgrade Name	DUN			Base Plan Funding for Wind	Directly As	ssigned		Total E & C Cost	 Revenue rements
81871334	BONANZA - HACKETT AECC 161KV CKT 1	6/1/2017	6/1/2019		\$ -	\$ 1	,298,948	\$ 1,298,948	\$ 3,500,000	\$ 2,611,446
	HANCOCK - MUSKOGEE 161KV CKT 1 Accelerate	6/1/2017	6/1/2017		\$ -	\$	25,837	\$ 25,837	\$ 73,942	\$ 53,294
				Total	ς -	\$ 1	.324.785	\$ 1 324 785	\$ 3 573 942	\$ 2 664 740

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81871334	CHAMBER SPRINGS - FARMINGTON AECC 161KV CKT 1 AECC	6/1/2021	6/1/2021		

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81871334	Ashdown REC (AECC delivery point)	12/1/2011	12/1/2011		
	ASHDOWN REC (MILLWOOD) - OKAY 138KV CKT 1	12/1/2011	12/1/2011		
	ASHDOWN REC (MILLWOOD) - PATTERSON 138KV CKT 1	12/1/2011	12/1/2011		
	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012		
	MANDEVILTP4 - SE TEXARKANA 138KV CKT 1	7/1/2012	7/1/2012		
	MANDEVILTP4 - TURK 138KV CKT 1	7/1/2012	7/1/2012		
	MATHEWSON - NORTHWEST 345KV CKT 1	1/1/2010	1/1/2010		
	MCNAB REC - Turk 115KV CKT 1 #2 (AEP)	12/1/2011	12/1/2011		
	OKAY - TURK 138KV CKT 1	12/1/2011	12/1/2011		
	SUGAR HILL - TURK 138KV CKT 1	12/16/2010	12/16/2010		
	TURK 138/115KV TRANSFORMER CKT 1	12/1/2011	12/1/2011		
	Valliant 345 kV (AEP)	7/1/2012	7/1/2012		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number AEPE AG2-2015-003

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
AEPE	81925179	NPPD	NPPD	40	1/1/2017	1/1/2022	1/1/2017	1/1/2022	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81925179	None					\$ -	\$ -	\$ -
					Total	Ś -	Ś -	Ś .

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number AEPE AG2-2015-004

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
AEPE	81925238	NPPD	NPPD	32	1/1/2017	1/1/2022	1/1/2017	1/1/2022	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81925238	None					\$ -	\$ -	\$ .
					Total	Ś -	Ś -	\$ .

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number AEPE AG2-2015-005

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
AEPE	81925271	WAUE	NPPD	5	1/1/2017	1/1/2022	1/1/2017	1/1/2022	\$ -	\$ -	\$ -	\$ -
									Ś -	\$ -	\$ -	Ś -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81925271	None					\$ -	\$ -	\$ .
					Total	\$ -	Ś -	\$ .

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number AEPE AG2-2015-006

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
AEPE	81925328	LES	NPPD	4	1/1/2017	1/1/2022	1/1/2017	1/1/2022	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81925328	None					\$ -	\$ -	\$ -
					Total	\$ -	\$ -	\$ -

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

							Earliest Start	Redispatch
Reservation	Upgrade Name				DUN	EOC	Date	Available
81925328	Cherry Co Gentleman 345 kV	Ckt 1			10/1/2016	6/1/2018		

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81925328	CLIFTON - GREENLEAF 115KV CKT 1	6/1/2011	6/1/2013		
	GREENLEAF - KNOB HILL 115KV CKT 1 (MKEC)	6/1/2013	6/1/2013		
	Hoskins - Dixon County 230kV Line Upgrade	10/24/2015	10/24/2015		
	Twin Church - Dixon County 230kV Line Upgrade	10/24/2015	10/24/2015		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number BRPS AG2-2015-007

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
BRPS	81939641	SECI	NPPD	15	1/1/2018	6/1/2019	1/1/2018	6/1/2019	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81939641	None					\$ -	\$ -	\$ -
					Total	\$ -	\$ -	\$ -

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number CHAN AG2-2015-008

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
CHAN	81921748	WR	WR	45	1/1/2017	1/1/2021	1/1/2017	1/1/2021	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81921748	None					\$ -	\$ -	\$ .
					Total	Ś -	Ś -	\$ .

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number CHAN AG2-2015-009

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
CHAN	81921765	WR	WR	9	1/1/2017	1/1/2022	1/1/2017	1/1/2022	\$ -	\$ -	\$ -	\$ -
									Ś -	\$ -	\$ -	Ś -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81921765	None					\$ -	\$ -	\$ -
					Total	Ś -	Ś -	Ś .

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number GSECGS AG2-2015-010

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
GSECGS	81892833	OKGE	SPS	5	6/1/2016	7/1/2034	6/1/2016	7/1/2034	\$ -	\$ -	\$ 1,073,637	\$ 2,212,686
									\$ -	\$ -	\$ 1,073,637	\$ 2,212,686

				Earliest Start	Redispatch	Base Plan Funding	Directly A	Assigned	Allocated E & C		Total Revenu	ue
Reservation	Upgrade Name	DUN	EOC	Date	Available	for Wind	for Wind	ŭ	Cost	Total E & C Cost	Requirements	ts
81892833	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	6/1/2021	6/1/2021			\$ -	\$	1,073,637	\$ 1,073,637	\$ 1,073,637	\$ 2,212,	2,686
					Total	\$ -	\$	1,073,637	\$ 1,073,637	\$ 1,073,637	\$ 2,212,	2,686

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81892833	AMARILLO SOUTH INTERCHANGE - SWISHER COUNTY INTERCHANGE 230KV CKT 1	10/1/2016	6/1/2020		
	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	10/1/2016	6/1/2017		
	CANYON WEST SUB - DAWN SUB 115KV CKT 1	6/1/2016	4/1/2018		
	Carlisle Interchange - Wolfforth Interchange 230 kV Ckt 1	6/1/2016	6/1/2017		
	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	6/1/2016	4/1/2018		
	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	6/1/2016	4/1/2018		

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81892833	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	6/1/2021	6/1/2021		
	CARNEGIE - HOBART JUNCTION 138KV CKT 1	6/1/2021	6/1/2021		
	Solution(s) for 2016ITPNT-RON0910, 2016ITPNT-RON0911, 2016ITPNT-RON0912, 2016ITPNT-RON0913,				
	2016ITPNT-RON0914, 2016ITPNT-RON0915, 2016ITPNT-RON0916, and 2016ITPNT-RON0917.	6/1/2017	TBD		
	Solution(s) for 2016ITPNT-RON0920, 2016ITPNT-RON0921, 2016ITPNT-RON0922, and 2016ITPNT-				
	RON0923.	6/1/2017	TBD		
	Solution(s) for 2016ITPNT-RON2130 and 2016ITPNT-RON2131.	6/1/2017	TBD		
	Tuco Interchange 345/230 kV Auto #2 Upgrade	6/1/2021	6/1/2021		

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81892833	Harrington Mid - Nichols 230 kV Ckt 2	12/1/2012	12/1/2012		
	Harrington West - Nichols 230kV Ckt 1	12/1/2012	12/1/2012		
	MATHEWSON - NORTHWEST 345KV CKT 1	1/1/2010	1/1/2010		
	MATHEWSON - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	Southwestern Station - Washita 138kV Ckt 1	10/1/2005	10/1/2005		
	Southwestern Station - Washita 138kV Ckt 1 (AEP)	10/1/2005	10/1/2005		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		
	WOODWARD - WOODWARD EHV 138KV CKT 1	1/1/2010	1/1/2010		
	WOODWARD 345/138KV TRANSFORMER CKT 1	1/1/2010	1/1/2010		

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

Customer Study Number INDP AG2-2015-011

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
INDP	81761267	WR	KCPL	20	6/1/2016	6/1/2036	6/1/2018	6/1/2036	\$ -	\$ -	\$ -	\$ -
									Ś -	Ś -	Ś -	Ś -

Reservation	Upgrade Name	DUN				Directly Assigned for Wind			Total Revenue Requirements
81761267		5011	 Dute	rvanabic	\$ -	\$ -	\$ -	\$ -	\$ .
				Total	¢ .	ć .	¢ .	¢ .	¢

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81761267	Multi - Geary County 345/115 kV and Geary - Chapman 115 kV	6/1/2016	6/1/2018		Yes

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81761267	CLIFTON - GREENLEAF 115KV CKT 1	6/1/2011	6/1/2013		
	GREENLEAF - KNOB HILL 115KV CKT 1 (MKEC)	6/1/2013	6/1/2013		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number KCPS AG2-2015-012

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
KCPS	81620079	WPEK	KCPL	50	1/1/2017	1/1/2022	3/1/2021	3/1/2026	\$ -	\$ -	\$ 169,974	\$ 291,899
									Ś -	Ś -	\$ 169.974	\$ 291.899

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81620079	KNOLL - N HAYS3 115.00 115KV CKT 1	10/1/2016	10/1/2018			\$ 12,469	\$ 1,467,722	\$ 20,050
	N HAYS3 115.00 - VINE STREET 115KV CKT 1	10/1/2016	10/1/2018			\$ 23,254	\$ 2,737,301	\$ 37,393
	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	6/1/2017	6/1/2019			\$ 49,093	\$ 5,778,860	\$ 74,540
	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICH TX-12) 345/138/13.8kV							
	TRANSFORMER CKT 1	6/1/2016	6/1/2019			\$ 85,158	\$ 18,853,145	\$ 159,915
					Total	\$ 169,974	\$ 28,837,028	\$ 291,899

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81620079	Cherry Co Gentleman 345 kV Ckt 1	10/1/2016	6/1/2018		
	Multi - Viola 345/138kV Transformer and 138 kV Lines to Clearwater and Gill	6/1/2017	6/1/2019		Yes
	Multi - Woodward District EHV - Tatonga - Matthewson - Cimarron 345 kV	6/1/2017	3/1/2021		Yes

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81620079	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	MATHEWSON - NORTHWEST 345KV CKT 1	1/1/2010	1/1/2010		
	MATHEWSON - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number KCPS AG2-2015-013

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
KCPS	81917580	AECI	KCPL	100	6/1/2016	1/1/2019	6/1/2018	1/1/2021	\$ -	\$ 9,370,717	\$ -	\$ -
									Ś -	\$ 9,370,717	\$ -	\$ -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81917580	None					\$ -	\$ -	\$
					Total	Ś -	\$ -	Ś

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

				Earliest Start	Redispatch	
Reservation	Upgrade Name	DUN	EOC	Date	Available	
81917580	Multi - Geary County 345/115 kV and Geary - Chapman 115 kV	6/1/2016	6/1/2018		Yes	

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number KCPS AG2-2015-014

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
KCPS	81921840	WPEK	KCPL	50	1/1/2017	1/1/2022	3/1/2021	3/1/2026	\$ -	\$ -	\$ 169,974	\$ 291,899
									\$ -	\$ -	\$ 169,974	\$ 291,899

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81921840	KNOLL - N HAYS3 115.00 115KV CKT 1	10/1/2016	10/1/2018			\$ 12,469	\$ 1,467,722	\$ 20,050
	N HAYS3 115.00 - VINE STREET 115KV CKT 1	10/1/2016	10/1/2018			\$ 23,25	\$ 2,737,301	\$ 37,393
	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	6/1/2017	6/1/2019			\$ 49,09	\$ 5,778,860	\$ 74,540
	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICH TX-12) 345/138/13.8kV							
	TRANSFORMER CKT 1	6/1/2016	6/1/2019			\$ 85,15	\$ 18,853,145	\$ 159,915
					Total	\$ 169,97	\$ 28,837,028	\$ 291,899

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81921840	Cherry Co Gentleman 345 kV Ckt 1	10/1/2016	6/1/2018		
	Multi - Viola 345/138kV Transformer and 138 kV Lines to Clearwater and Gill	6/1/2017	6/1/2019		Yes
	Multi - Woodward District EHV - Tatonga - Matthewson - Cimarron 345 kV	6/1/2017	3/1/2021		Yes

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81921840	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	MATHEWSON - NORTHWEST 345KV CKT 1	1/1/2010	1/1/2010		
	MATHEWSON - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number KMEA AG2-2015-015

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
KMEA	81939677	SECI	SECI	27	6/1/2016	6/1/2021	6/1/2016	6/1/2021	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	Ś -	Ś -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81939677	None					\$ -	\$ -	\$ -
		Total	Ś -	Ś -	\$ -			

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81939677	Ft. Dodge - North Ft. Dodge 115 kV Ckt 2	5/1/2015	5/1/2015		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number MIDW AG2-2015-016

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
MIDW	81939203	WR	WR	120	6/1/2016	6/1/2026	6/1/2019	6/1/2029	\$ 6,834,463	\$ -	\$ 6,834,463	\$ 12,124,829
									\$ 6,834,463	\$ -	\$ 6,834,463	\$ 12,124,829

				Earliest Start	Redispatch	Alloca	ted E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost		Total E & C Cost	Requirements
81939203	KNOLL - N HAYS3 115.00 115KV CKT 1	10/1/2016	10/1/2018		Yes	\$	1,004,729	\$ 1,467,722	\$ 1,841,913
	N HAYS3 115.00 - VINE STREET 115KV CKT 1	10/1/2016	10/1/2018		Yes	\$	1,873,818	\$ 2,737,301	\$ 3,435,165
	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	6/1/2017	6/1/2019		Yes	\$	3,955,916	\$ 5,778,860	\$ 6,847,751
					Total	Ś	6.834.463	\$ 9.983.883	\$ 12,124,829

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81939203	HEIZER (HEIZER T4) 115/69/12.5KV TRANSFORMER CKT 4	6/1/2021	6/1/2021		
	Mingo 345/115 kV Ckt 2 Transformer	6/1/2017	6/1/2017		
	Solution(s) for 2016ITPNT-RON0745 and 2016ITPNT-RON0746.	6/1/2021	TBD		

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81939203	BARBER - SAWYER 115KV CKT 1	12/1/2009	6/1/2013		
	FLATRDG3 - HARPER 138KV CKT 1	12/1/2009	6/1/2013		
	FLATRDG3 - MEDICINE LODGE 138KV CKT 1	12/1/2009	6/1/2013		
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	MATHEWSON - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	MEDICINE LODGE 138/115KV TRANSFORMER CKT 1	12/1/2009	6/1/2013		
	Rice - Circle 230 kV Ckt 1 (MIDW portion)	11/7/2012	11/7/2012		
	Rice - Circle 230 kV Ckt 1 (WR portion)	11/29/2012	11/29/2012		
	Rice - Lyons 115 kV Ckt 1	4/1/2013	4/1/2013		
	Rice County 230/115 kV transformer Ckt 1	10/1/2012	10/1/2012		
	RIVER ROAD - SAWYER 115KV CKT 1	12/1/2009	6/1/2013		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		
	Wheatland 115 kV #2	12/31/2012	12/31/2012		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number MIDW AG2-2015-017

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
MIDW	81939312	WR	WR	50	12/1/2016	12/1/2036	6/1/2019	6/1/2039	\$ -	\$ -	\$ 2,974,609	\$ 7,485,016
									Ś -	Ś -	\$ 2,974,609	\$ 7.485.016

Reservation	Upgrade Name	DUN	EOC	 	Base Plan Funding for Wind	,	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
81939312	KNOLL - N HAYS3 115.00 115KV CKT 1	10/1/2016	10/1/2018	Yes	\$ -	\$ 415,094	\$ 415,094	\$ 1,467,722	\$ 1,069,069
	N HAYS3 115.00 - VINE STREET 115KV CKT 1	10/1/2016	10/1/2018	Yes	\$ -	\$ 774,150	\$ 774,150	\$ 2,737,301	\$ 1,993,812
	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	6/1/2017	6/1/2019	Yes	\$ -	\$ 1,634,348	\$ 1,634,348	\$ 5,778,860	\$ 3,974,602
	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICH TX-12) 345/138/13.8kV								
	TRANSFORMER CKT 1	6/1/2016	6/1/2019	Yes	\$ -	\$ 151,017	\$ 151,017	\$ 18,853,145	\$ 447,534
				Total	\$ -	\$ 2,974,609	\$ 2,974,609	\$ 28,837,028	\$ 7,485,016

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
8193931	HEIZER (HEIZER T4) 115/69/12.5KV TRANSFORMER CKT 4	6/1/2021	6/1/2021		
	Mingo 345/115 kV Ckt 2 Transformer	6/1/2017	6/1/2017		

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81939312	BARBER - SAWYER 115KV CKT 1	12/1/2009	6/1/2013		
	FLATRDG3 - MEDICINE LODGE 138KV CKT 1	12/1/2009	6/1/2013		
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	MEDICINE LODGE 138/115KV TRANSFORMER CKT 1	12/1/2009	6/1/2013		
	Rice - Circle 230 kV Ckt 1 (MIDW portion)	11/7/2012	11/7/2012		
	Rice - Circle 230 kV Ckt 1 (WR portion)	11/29/2012	11/29/2012		
	Rice County 230/115 kV transformer Ckt 1	10/1/2012	10/1/2012		
	RIVER ROAD - SAWYER 115KV CKT 1	12/1/2009	6/1/2013		
	Wheatland 115 kV #2	12/31/2012	12/31/2012		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number MIDW AG2-2015-018

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
MIDW	81939816	WR	WR	5	6/1/2016	6/1/2026	6/1/2016	6/1/2026	\$ -	\$ -	\$ -	\$ -
									Ś -	Ś -	Ś -	Ś -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81939816	None					\$ -	\$ -	\$ -
						Ś -	Ś -	Ś -

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

					Earliest Start	Redispatch
	Reservation	Upgrade Name	DUN	EOC	Date	Available
ſ	81939816	Mingo 345/115 kV Ckt 2 Transformer	6/1/2017	6/1/2017		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number NPPM AG2-2015-019

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
NPPM	81761103	NPPD	NPPD	75	6/1/2016	6/1/2026	6/1/2016	6/1/2026	\$ -	\$ -	\$ -	\$ -
									¢ .	¢ .	¢ .	Ġ.

				Earliest Start	Redispatch	Base Plan Funding	Directly Assigned	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	for Wind	for Wind	Cost	Total E & C Cost	Requirements
81761103	None					\$ -	\$ -	\$ -	\$ -	\$ -
					Total	\$ -	\$ -	\$ -	\$ -	\$ -

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

					Earliest Start	Redispatch
Reserv	ation	Upgrade Name	DUN	EOC	Date	Available
	81761103	Cherry Co Gentleman 345 kV Ckt 1	10/1/2016	6/1/2018		

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81761103	CLIFTON - GREENLEAF 115KV CKT 1	6/1/2011	6/1/2013		
	GREENLEAF - KNOB HILL 115KV CKT 1 (MKEC)	6/1/2013	6/1/2013		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number OMPA AG2-2015-020

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
OMPA	81909660	OKGE	OKGE	42	1/1/2020	1/1/2026	1/1/2020	1/1/2026	\$ 306,173	\$ -	\$ 456,974	\$ 1,024,715
									\$ 306,173	\$ -	\$ 456,974	\$ 1,024,715

Reservation	Upgrade Name	DUN		 Redispatch Available		Directly Assigned for Wind	Allocated E & C Cost		Total Revenue Requirements
81909660	Marlow - Rush Springs Tap 138 kV Ckt 1 Rebuild	6/1/2018	6/1/2019		\$ 306,173	\$ 150,801	\$ 456,974	\$ 7,430,909	\$ 1,024,715
				Total	\$ 306 173	\$ 150.801	\$ 456,974	\$ 7,430,909	\$ 1.024.715

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
	Solution(s) for 2016ITPNT-RON0611, 2016ITPNT-RON0612, 2016ITPNT-RON0613, 2016ITPNT-RON0614,				
	2016ITPNT-RON0615, 2016ITPNT-RON0616, 2016ITPNT-RON0617, 2016ITPNT-RON0618, 2016ITPNT-				
	RON0619, 2016ITPNT-RON0620, 2016ITPNT-RON0621, 2016ITPNT-RON0622, 2016ITPNT-RON0623,				
	2016ITPNT-RON0624, 2016ITPNT-RON0625, 2016ITPNT-RON0626, 2016ITPNT-RON0627, 2016ITPNT-				
81909660	RON0628, 2016ITPNT-RON0629, 2016ITPNT-RON0630, 2016ITPNT-RON0631, and 2016ITPNT-RON0632.	6/1/2020	TBD		

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81909660	CACHE - SNYDER 138KV CKT 1	5/21/2008	5/21/2008		
	Fairfax - Pawnee 138kV Ckt 1	6/30/2014	6/30/2014		
	MATHEWSON - NORTHWEST 345KV CKT 1	1/1/2010	1/1/2010		
	MATHEWSON - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	Osage - Shidler 138kV	1/15/2014	1/15/2014		
	Pawnee 138 kV	6/30/2014	6/30/2014		
	Shidler 138 kV	2/8/2014	2/8/2014		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number
OPPM AG2-2015-021

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
OPPM	81918646	WAUE	OPPD	400	1/1/2018	7/1/2037	1/1/2018	7/1/2037	\$ -	\$ -	\$ -	\$ -
									Ś -	Ś -	Ś -	Ś -

Reservation	Upgrade Name	DUN					Directly Assigned			Total Revenue Requirements
81918646		DON	LOC	Date	Available	\$ -	\$ -	\$ -	\$ -	\$ -
					Total	¢ .	ς .	¢ .	ć .	Ġ.

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number PEC AG2-2015-022

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
PEC	81926148	CSWS	WFEC	75	6/1/2016	6/1/2026	3/1/2021	3/1/2031	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81926148	None					\$ -	\$ -	\$ -
					Total	\$ -	\$ -	\$ -

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81926148	Multi - Woodward District EHV - Tatonga - Matthewson - Cimarron 345 kV	6/1/2017	3/1/2021		Yes

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

	cus - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to			Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
	Solution(s) for 2016ITPNT-RON0501, 2016ITPNT-RON0502, 2016ITPNT-RON0503, 2016ITPNT-RON0504,				
	2016ITPNT-RON0505, 2016ITPNT-RON0506, 2016ITPNT-RON0507, 2016ITPNT-RON0508, 2016ITPNT-				
	RON0509, 2016ITPNT-RON0510, 2016ITPNT-RON0511, 2016ITPNT-RON0512, 2016ITPNT-RON0513,				
	2016ITPNT-RON0514, 2016ITPNT-RON0515, 2016ITPNT-RON0516, 2016ITPNT-RON0517, 2016ITPNT-				
	RON0518, 2016ITPNT-RON0519, 2016ITPNT-RON0520, 2016ITPNT-RON0521, 2016ITPNT-RON0522,				
	2016ITPNT-RON0523, 2016ITPNT-RON0524, 2016ITPNT-RON0525, 2016ITPNT-RON0526, 2016ITPNT-				
	RON0527, 2016ITPNT-RON0528, 2016ITPNT-RON0529, 2016ITPNT-RON0530, 2016ITPNT-RON0531,				
	2016ITPNT-RON0532, 2016ITPNT-RON0533, 2016ITPNT-RON0534, 2016ITPNT-RON0535, 2016ITPNT-				
	RON0536, 2016ITPNT-RON0537, 2016ITPNT-RON0538, 2016ITPNT-RON0539, 2016ITPNT-RON0540,				
	2016ITPNT-RON0541, 2016ITPNT-RON0542, 2016ITPNT-RON0543, 2016ITPNT-RON0544, 2016ITPNT-RON0545, 2016ITPNT-RON0546, 2016ITPNT-RON0547, 48, 2016ITPNT-RON0549, 2016ITPNT-RON0550,				
	2016ITPNT-RON0551, 2016ITPNT-RON0552, 2016ITPNT-RON0553, 2016ITPNT-RON0554, 2016ITPNT-				
	RON0555, 2016ITPNT-RON0556, 2016ITPNT-RON0557, 2016ITPNT-RON0559,				
	2016ITPNT-RON0560, 2016ITPNT-RON0561, 2016ITPNT-RON0562, 2016ITPNT-RON0563, 2016ITPNT-				
	RON0564, 2016ITPNT-RON0565, 2016ITPNT-RON0566, 2016ITPNT-RON0567, 2016ITPNT-RON0568,				
	2016ITPNT-RON0569, 2016ITPNT-RON0570, 2016ITPNT-RON0571, 2016ITPNT-RON0572, 2016ITPNT-				
	RON0573, 2016ITPNT-RON0574, 2016ITPNT-RON0575, 2016ITPNT-RON0576, 2016ITPNT-RON0577,				
	2016ITPNT-RON0578, 2016ITPNT-RON0579, 2016ITPNT-RON0580, 2016ITPNT-RON0581, 2016ITPNT-				
	RON0582, 2016ITPNT-RON0583, 2016ITPNT-RON0584, 2016ITPNT-RON0585, 2016ITPNT-RON0586,				
819261	18 2016ITPNT-RON0587, and 2016ITPNT-RON0588.	6/1/2016	TBE	)	
	Solution(s) for 2016ITPNT-RON0611, 2016ITPNT-RON0612, 2016ITPNT-RON0613, 2016ITPNT-RON0614,				
	2016ITPNT-RON0615, 2016ITPNT-RON0616, 2016ITPNT-RON0617, 2016ITPNT-RON0618, 2016ITPNT-RON0619, 2016ITPNT-RON0620, 2016ITPNT-RON0621, 2016ITPNT-RON0622, 2016ITPNT-RON0623,				
	2016ITPNT-RON0624, 2016ITPNT-RON0625, 2016ITPNT-RON0626, 2016ITPNT-RON0627, 2016ITPNT-RON0627, 2016ITPNT-RON0626, 2016ITPNT-RON0627, 2016ITPNT-RON				
	RON0628, 2016ITPNT-RON0629, 2016ITPNT-RON0630, 2016ITPNT-RON0631, and 2016ITPNT-RON0632.	6/1/2020	ТВС	,	
	NONGOLO, 201011111 NONGOLO, 2010111111 NONGOLO, 201011111 NONGOLO, 201011111 NONGOLO, 201011111 NONGOLO, 20101111 NONGOLO, 201011111 NONGOLO, 20101111 NONGOLO, 2010111 NONGOLO, 201011 NOGOLO, 201011 NONGOLO, 201011 NONGOLO, 201011 NONGOLO, 201011 NON	0, 1, 2020	100	1	

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81926148	HUGO - VALLIANT 345KV CKT 1	7/1/2012	7/1/2012		
	HUGO 345/138KV TRANSFORMER CKT 1	7/1/2012	7/1/2012		
	MATHEWSON - NORTHWEST 345KV CKT 1	1/1/2010	1/1/2010		
	MATHEWSON - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		
	Valliant 345 kV (AEP)	7/1/2012	7/1/2012		
	WOODWARD - IODINE 138KV CKT 1	1/1/2010	1/1/2010		
	WOODWARD - WOODWARD EHV 138KV CKT 1	1/1/2010	1/1/2010		
	WOODWARD - WOODWARD EHV 138KV CKT 2	1/1/2010	1/1/2010		
	WOODWARD 345/138KV TRANSFORMER CKT 1	1/1/2010	1/1/2010		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number PEC AG2-2015-023

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
PEC	81926178	WFEC	WFEC	62	6/1/2016	6/1/2026	6/1/2016	6/1/2026	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81926178	None					\$ -	\$ -	\$ -
					Total	\$ -	\$ -	\$ -

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number SPSM AG2-2015-024

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
SPSM	81882937	SPS	SPS	30	10/1/2016	10/1/2031	3/1/2021	3/1/2036	\$ -	\$ -	\$ -	\$ -
									Ś -	Ś -	Ś -	Ś -

Reservation	Upgrade Name	DUN		Redispatch Available	Base Plan Funding for Wind	,	Allocated E & C Cost		Total Revenue Requirements
81882937	None				\$ -	\$ -	\$ -	\$ -	\$ -
				Total	ς -	ς -	ς -	\$ -	ς -

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81882937	Multi - Woodward District EHV - Tatonga - Matthewson - Cimarron 345 kV	6/1/2017	3/1/2021		Yes

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
	Solution(s) for 2016ITPNT-RON0449, 2016ITPNT-RON0450, 2016ITPNT-RON0451, 2016ITPNT-RON0452,				
81882937	2016ITPNT-RON0453, 2016ITPNT-RON0454, 2016ITPNT-RON0455, and 2016ITPNT-RON0456.	6/1/2016	TBD		
	Solution(s) for 2016ITPNT-RON0457, 2016ITPNT-RON0458, 2016ITPNT-RON0459, 2016ITPNT-RON0460,				
	2016ITPNT-RON0461, 2016ITPNT-RON0462, and 2016ITPNT-RON0463.	6/1/2020	TBD		
	Solution(s) for 2016ITPNT-RON0877 and 2016ITPNT-RON0878.	6/1/2017	TBD		
	Solution(s) for 2016ITPNT-RON0879, 2016ITPNT-RON0880, 2016ITPNT-RON0881, 2016ITPNT-RON0882,				
	2016ITPNT-RON0883, and 2016ITPNT-RON0884.	6/1/2016	TBD		
	Tuco Interchange 345/230 kV Auto #2 Upgrade	6/1/2021	6/1/2021		

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81882937	Harrington Mid - Nichols 230 kV Ckt 2	12/1/2012	12/1/2012		
	Harrington West - Nichols 230kV Ckt 1	12/1/2012	12/1/2012		
	WOODWARD - WOODWARD EHV 138KV CKT 1	1/1/2010	1/1/2010		
	WOODWARD - WOODWARD EHV 138KV CKT 2	1/1/2010	1/1/2010		
	WOODWARD 345/138KV TRANSFORMER CKT 1	1/1/2010	1/1/2010		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number SPSM AG2-2015-025

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
SPSM	81883164	BLKW	SPS	15	6/1/2016	6/1/2021	12/15/2018	12/15/2023	\$ -	\$ -	\$ -	\$ -
								1	\$ -	\$ -	\$ -	\$ -

				Earliest Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	Cost	Total E & C Cost	Requirements
81883164	None					\$ -	\$ -	\$ -
					Total	\$ -	\$ -	\$ -

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
8188	33164 Carlisle Interchange - Wolfforth Interchange 230 kV Ckt 1	6/1/2016	6/1/2017		
	INTREPDW_TP3115.00 - POTASH JUNCTION INTERCHANGE 115KV CKT 1	6/1/2017	11/16/2018		
	Mustang - Shell CO2 115 kV Ckt 1	6/1/2016	6/1/2017		

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
	Solution(s) for 2016ITPNT-RON0449, 2016ITPNT-RON0450, 2016ITPNT-RON0451, 2016ITPNT-RON0452,				
81883164	2016ITPNT-RON0453, 2016ITPNT-RON0454, 2016ITPNT-RON0455, and 2016ITPNT-RON0456.	6/1/2016	TBD		
	Solution(s) for 2016ITPNT-RON0877 and 2016ITPNT-RON0878.	6/1/2017	TBD		
	Solution(s) for 2016ITPNT-RON0879, 2016ITPNT-RON0880, 2016ITPNT-RON0881, 2016ITPNT-RON0882,				
	2016ITPNT-RON0883, and 2016ITPNT-RON0884.	6/1/2016	TBD		
	Solution(s) for 2016ITPNT-RON0910, 2016ITPNT-RON0911, 2016ITPNT-RON0912, 2016ITPNT-RON0913,				
	2016ITPNT-RON0914, 2016ITPNT-RON0915, 2016ITPNT-RON0916, and 2016ITPNT-RON0917.	6/1/2017	TBD		
	Solution(s) for 2016ITPNT-RON0920, 2016ITPNT-RON0921, 2016ITPNT-RON0922, and 2016ITPNT-				
	RON0923.	6/1/2017	TBD		

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81883164	EDDY CO 230kV Bus Tie	10/1/2016	12/15/2018		Yes

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81883164	Harrington Mid - Nichols 230 kV Ckt 2	12/1/2012	12/1/2012		
	Harrington West - Nichols 230kV Ckt 1	12/1/2012	12/1/2012		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number SPSM AG2-2015-026

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
SPSM	81883317	OKGE	SPS	199	1/1/2017	12/9/2034	3/1/2021	2/1/2039	\$ -	\$ -	\$ -	\$ -
									Ś -	Ś -	Ś -	\$ -

					Earliest Start	Redispatch	Base Plan Funding	Directly Assigned	Allocated E & C		Total Revenue
Re	servation	Upgrade Name	DUN	EOC	Date	Available	for Wind	for Wind	Cost	Total E & C Cost	Requirements
	81883317	None					\$ -	\$ -	\$ -	\$ -	\$ -
						Total	\$ -	\$ -	\$ -	\$ -	\$ -

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81883317	AMARILLO SOUTH INTERCHANGE - SWISHER COUNTY INTERCHANGE 230KV CKT 1	10/1/2016	6/1/2020		Yes
	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	10/1/2016	6/1/2017		Yes
	CANYON WEST SUB - DAWN SUB 115KV CKT 1	6/1/2016	4/1/2018		Yes
	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	6/1/2016	4/1/2018		Yes
	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	6/1/2016	4/1/2018		Yes
	INTREPDW_TP3115.00 - POTASH JUNCTION INTERCHANGE 115KV CKT 1	6/1/2017	11/16/2018		No
	Multi - Woodward District EHV - Tatonga - Matthewson - Cimarron 345 kV	6/1/2017	3/1/2021		Yes

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81883317	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	6/1/2021	6/1/2021		
	Solution(s) for 2016ITPNT-RON0449, 2016ITPNT-RON0450, 2016ITPNT-RON0451, 2016ITPNT-RON0452,				
	2016ITPNT-RON0453, 2016ITPNT-RON0454, 2016ITPNT-RON0455, and 2016ITPNT-RON0456.	6/1/2016	TBD		
	Solution(s) for 2016ITPNT-RON0877 and 2016ITPNT-RON0878.	6/1/2017	TBD		
	Solution(s) for 2016ITPNT-RON0879, 2016ITPNT-RON0880, 2016ITPNT-RON0881, 2016ITPNT-RON0882,				
	2016ITPNT-RON0883, and 2016ITPNT-RON0884.	6/1/2016	TBD		
	Solution(s) for 2016ITPNT-RON0910, 2016ITPNT-RON0911, 2016ITPNT-RON0912, 2016ITPNT-RON0913,				
	2016ITPNT-RON0914, 2016ITPNT-RON0915, 2016ITPNT-RON0916, and 2016ITPNT-RON0917.	6/1/2017	TBD		
	Solution(s) for 2016ITPNT-RON0920, 2016ITPNT-RON0921, 2016ITPNT-RON0922, and 2016ITPNT-				
	RON0923.	6/1/2017	TBD		
	Solution(s) for 2016ITPNT-RON2130 and 2016ITPNT-RON2131.	6/1/2017	TBD		
	Tuco Interchange 345/230 kV Auto #2 Upgrade	6/1/2021	6/1/2021		

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81883317	EDDY CO 230kV Bus Tie	10/1/2016	12/15/2018		Yes

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number WRGS AG2-2015-027

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
WRGS	81914448	WR	WR	280	12/1/2016	10/1/2025	3/1/2021	10/1/2025	\$ -	\$ -	\$ 7,260,553	\$ 15,342,096
									\$ -	Ś -	\$ 7,260,553	\$ 15.342.096

				Earliest Start	Redispatch	Base Plan Funding	Directly Assigned	Allocated E & C		Total Revenue
Reservation	Upgrade Name	DUN	EOC	Date	Available	for Wind	for Wind	Cost	Total E & C Cost	Requirements
81914448	KNOLL - N HAYS3 115.00 115KV CKT 1	10/1/2016	10/1/2018		Yes	\$ -	\$ 22,963	\$ 22,963	\$ 1,467,722	\$ 41,922
	N HAYS3 115.00 - VINE STREET 115KV CKT 1	10/1/2016	10/1/2018		Yes	\$ -	\$ 42,825	\$ 42,825	\$ 2,737,301	\$ 78,182
	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	6/1/2017	6/1/2019			\$ -	\$ 90,410	\$ 90,410	\$ 5,778,860	\$ 155,854
	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICH TX-12) 345/138/13.8kV									
	TRANSFORMER CKT 1	6/1/2016	6/1/2019		Yes	\$ -	\$ 7,104,355	\$ 7,104,355	\$ 18,853,145	\$ 15,066,137
					Total	\$ -	\$ 7,260,553	\$ 7,260,553	\$ 28,837,028	\$ 15,342,096

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81914448	BENTON 138kV Terminal Equipment	6/1/2017	6/1/2017		
	Cherry Co Gentleman 345 kV Ckt 1	10/1/2016	6/1/2018		
	Multi - Viola 345/138kV Transformer and 138 kV Lines to Clearwater and Gill	6/1/2017	6/1/2019		Yes
	Multi - Woodward District EHV - Tatonga - Matthewson - Cimarron 345 kV	6/1/2017	3/1/2021		Yes

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81914448	FLATRDG3 - HARPER 138KV CKT 1	12/1/2009	6/1/2013		
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	MATHEWSON - NORTHWEST 345KV CKT 1	1/1/2010	1/1/2010		
	MATHEWSON - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	Rice - Lyons 115 kV Ckt 1	4/1/2013	4/1/2013		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		
	Wheatland 115 kV #2	12/31/2012	12/31/2012		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number WRGS AG2-2015-028

							Deferred Start	Deferred Stop	Potential Base			i
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
WRGS	81916202	WR	WR	104	12/1/2016	10/1/2025	6/1/2019	10/1/2025	\$ -	\$ -	\$ 2,920,039	\$ 6,192,499
									\$ -	\$ -	\$ 2,920,039	\$ 6,192,499

Re	eservation	Upgrade Name	DUN				Directly Assigned for Wind		Total E & C Cost	Total Revenue Requirements
		WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICH TX-12) 345/138/13.8kV								
	81916202	TRANSFORMER CKT 1	6/1/2016	6/1/2019	Yes	\$ -	\$ 2,920,039	\$ 2,920,039	\$ 18,853,145	\$ 6,192,499
					Total	\$ -	\$ 2,920,039	\$ 2,920,039	\$ 18,853,145	\$ 6,192,499

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81916202	BENTON 138kV Terminal Equipment	6/1/2017	6/1/2017		

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81916202	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	MATHEWSON - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number WRGS AG2-2015-029

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
WRGS	81916204	WR	WR	103	12/1/2016	10/1/2025	6/1/2019	10/1/2025	\$ -	\$ -	\$ 2,891,959	\$ 6,132,950
									\$ -	\$ -	\$ 2,891,959	\$ 6,132,950

Reservation	Upgrade Name	DUN		 		Directly Assigned for Wind		Total E & C Cost	Total Revenue Requirements
	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICH TX-12) 345/138/13.8kV								
8191	204 TRANSFORMER CKT 1	6/1/2016	6/1/2019	Yes	\$ -	\$ 2,891,959	\$ 2,891,959	\$ 18,853,145	\$ 6,132,950
				Total	\$ -	\$ 2,891,959	\$ 2,891,959	\$ 18,853,145	\$ 6,132,950

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

				Earliest Start	Redispatch	ı
Reservation	Upgrade Name	DUN	EOC	Date	Available	ı
81916204	BENTON 138kV Terminal Equipment	6/1/2017	6/1/2017			ı

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81916204	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	MATHEWSON - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

Customer Study Number WRGS AG2-2015-030

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested Start	Requested Stop	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Date	Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
WRGS	81925795	WR	WR	200	6/1/2016	10/1/2025	6/1/2019	10/1/2025	\$ -	\$ -	\$ 5,615,459	\$ 11,718,635
									\$ -	\$ -	\$ 5,615,459	\$ 11,718,635

Reservation	Upgrade Name	DUN	EOC		Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICH TX-12) 345/138/13.8kV								
81925795	TRANSFORMER CKT 1	6/1/2016	6/1/2019	Yes	\$ -	\$ 5,615,459	\$ 5,615,459	\$ 18,853,145	\$ 11,718,635
				Total	\$ -	\$ 5,615,459	\$ 5,615,459	\$ 18,853,145	\$ 11,718,635

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

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81925795	BENTON 138kV Terminal Equipment	6/1/2017	6/1/2017		
	Multi - Geary County 345/115 kV and Geary - Chapman 115 kV	6/1/2016	6/1/2018		Yes

 ${\color{blue} \textbf{Construction Pending - The requested service is contingent upon completion of the following upgrades. Cost is not assignable to the transmission customer.} \\$ 

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81925795	SUMMIT (SUMM TX-2) 230/115/13.8KV TRANSFORMER CKT 1	6/1/2016	6/1/2017		Yes

				Earliest Start	Redispatch
Reservation	Upgrade Name	DUN	EOC	Date	Available
81925795	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
	MATHEWSON - TATONGA 345KV CKT 1	1/1/2010	1/1/2010		
	TATONGA - WOODWARD 345KV CKT 1	1/1/2010	1/1/2010		

<sup>\*</sup>Credits may be required for applicable generation interconnection network upgrades.

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	BONANZA - HACKETT AECC 161KV CKT 1	Rebuild 2.34 miles of line	6/1/2017	6/1/2019	\$3,500,000.00
AEPW	COMANCHE - COMANCHE TAP 69KV CKT 1	Rebuild 2.6 miles with 795 ACSR	10/1/2020	10/1/2020	\$2,600,000.00
MIDW MIDW	KNOLL - N HAYS3 115.00 115KV CKT 1	Rebuild 9.05-mile 138 kV line from Marlow to Rush Springs with 1533.3 ACSR/TW conductor. Rebuild 2 miles of line Rebuild 3.73 miles of line Upgrade xfmar to 250	6/1/2018 10/1/2016 10/1/2016 6/1/2017	6/1/2019 10/1/2018 10/1/2018 6/1/2019	\$7,430,909.11 \$1,467,722.00 \$2,737,301.00 \$5,778,860.00
OKGE	HANCOCK - MUSKOGEE 161KV CKT 1 Accelerate	Replace Muskogee Terminal Equipment	6/1/2017	6/1/2017	\$73,942.00
SPS	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	Upgrade relays, add new EEEs at Bushland Intg. and Potter Co. Intg.	6/1/2021	6/1/2021	\$1,073,637.00
	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICH TX-12) 345/138/13.8kV TRANSFORMER	Replace transformers with 560 MVA 345/138kV transformers with LTCs and replace the 138kV terminal equipment (switch, bus, jumpers, CTs, and relays to 3000 Amps minimum eqiupment. Upgrade switches, breakers, line jumpers, and relays at Gordon Evans substa		6/1/2019	\$18,853,145.00

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

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

Transmission Owner	Upgrade	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)
		Upgrade 1272 AAC bus at Farmington REC. Replace bus at Farmington REC and rebuild 400 feet		
AECC	CHAMBER SPRINGS - FARMINGTON AECC 161KV CKT 1 AECC	of the 161 kV line going to Chamber Springs.	6/1/2021	6/1/2021
SPS	EDDY CO 230kV Bus Tie	Build the 230kV main and transfer bus to a double breaker double bus.	10/1/2016	12/15/2018
		Upgrade 115kV terminal equipment at Summit (533381). New ratings will be Rate A= 280		
		MVA, Rate B=308 MVA on Summit 230-115kV TX-2 (533381-532873-532896) and Summit 230-		
WERE	SUMMIT (SUMM TX-2) 230/115/13.8KV TRANSFORMER CKT 1	115kV TX-3 (533381-532873-532896).	6/1/2016	6/1/2017

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
		Build new 110-mile 345 kV line from Gerald Gentleman Station substation to new Cherry		
		County substation. This upgrade is contingent upon approval from Western Area Power		
NPPD	Cherry Co Gentleman 345 kV Ckt 1	Administration ("WAPA") to tap the Grand Island - Fort Thompson 345 kV line.	10/1/2016	6/1/2018
		Build new 126 mile Woodward - Tatonga 345 kV circuit 2 and Tatonga - Matthewson -		
OKGE	Multi - Woodward District EHV - Tatonga - Matthewson - Cimarron 345 kV	Cimarron 345 kV line.	6/1/2017	3/1/2021
SPS	AMARILLO SOUTH INTERCHANGE - SWISHER COUNTY INTERCHANGE 230KV CKT 1	Upgrade wave trap at Amarillo South interchange - Swisher County Interchange	10/1/2016	6/1/2020
		Rebuild 3 miles of 397 ACSR from Canyon East Sub to Randall County Interchange with 795		
SPS	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	ACSR conductor.	10/1/2016	6/1/2017
SPS	CANYON WEST SUB - DAWN SUB 115KV CKT 1	Rebuild 13.7-mile 115 kV line from Canyon West to Dawn	6/1/2016	4/1/2018
		Build 15 miles of new 230 kV line from Carlisle to Wolfforth South and install necessary		
SPS	Carlisle Interchange - Wolfforth Interchange 230 kV Ckt 1	terminal equipment.	6/1/2016	6/1/2017
SPS	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	Rebuild 8.4-mile 115 kV line from Dawn to Panda.	6/1/2016	4/1/2018
SPS	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	Rebuild 3.5-mile 115 kV line from Deaf Smith to Panda.	6/1/2016	4/1/2018
SPS	INTREPDW_TP3115.00 - POTASH JUNCTION INTERCHANGE 115KV CKT 1	Rebuild 1.5-mile 115 kV line from Intrepid West Tap to Potash Junction.	6/1/2017	11/16/2018
SPS	Mustang - Shell CO2 115 kV Ckt 1	Construct new 7.7-mile 115 kV line from Mustang to Shell CO2.	6/1/2016	6/1/2017
WERE	BENTON 138kV Terminal Equipment	Replace Terminal Equipment	6/1/2017	6/1/2017
		Build new Geary County 345/115 kV substation south of Junction City where JEC-Summit and		
		McDowell Creek-Junction City #2 ckt separate. Construct new Geary County - Chapman 115 kV		
WERE	Multi - Geary County 345/115 kV and Geary - Chapman 115 kV	line.	6/1/2016	6/1/2018
		Install 345/138 kV transformer at future Viola 345 kV substation. Build 138kV line from Viola to		
WERE	Multi - Viola 345/138kV Transformer and 138 kV Lines to Clearwater and Gill	Clearwater substation. Build 138 kV line from Viola to Gill substation	6/1/2017	6/1/2019

# 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	CARNEGIE - HOBART JUNCTION 138KV CKT 1	Rebuild Carnegie - Hobart Junction 26.15 miles with 954 ACSR Hawk VR2	6/1/2021	6/1/2021
MIDW	HEIZER (HEIZER T4) 115/69/12.5KV TRANSFORMER CKT 4	Upgrade Transformer	6/1/2021	6/1/2021
MIDW	Mingo 345/115 kV Ckt 2 Transformer	Install a second 345/115 kV transformer at Mingo. Install any necessary 115 kV terminal equipment.	6/1/2017	6/1/2017
SPS	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	Upgrade relays, add new EEEs at Carlisle and Wolfforth substations	6/1/2021	6/1/2021
			. / . /	0/1/0001
SPS	Tuco Interchange 345/230 kV Auto #2 Upgrade	Upgrade 345/230kV Autotransformer #2 and reinforce low-side bus systems at Tuco Intg	6/1/2021	6/1/2021
TBD	Solution(s) for 2016ITPNT-RON0422 and 2016ITPNT-RON0423.	Solution(s) for 2016ITPNT-RON0422 and 2016ITPNT-RON0423.	1/1/2017	TBD
TBD	Solution(s) for 2016ITPNT-RON0474, 2016ITPNT-RON0475, 2016ITPNT-RON0476, 2016ITPNT-RON0477, 2016ITPNT-RON0478, 2016ITPNT-RON0479, and 2016ITPNT-RON0480.	Solution(s) for 2016ITPNT-RON0474, 2016ITPNT-RON0475, 2016ITPNT-RON0476, 2016ITPNT-RON0477, 2016ITPNT-RON0478, 2016ITPNT-RON0479, and 2016ITPNT-RON0480.	1/1/2017	TBD
TBD	Solution(s) for 2016ITPNT-RON0611, 2016ITPNT-RON0612, 2016ITPNT-RON0613, 2016ITPNT-RON0614, 2016ITPNT-RON0615, 2016ITPNT-RON0615, 2016ITPNT-RON0616, 2016ITPNT-RON0617, 2016ITPNT-RON0620, 2016ITPNT-RON0621, 2016ITPNT-RON0622, 2016ITPNT-RON0623, 2016ITPNT-RON0624, 2016ITPNT-RON0625, 2016ITPNT-RON0627, 2016ITPNT-RON0628, 2016ITPNT-RON0629, 2016ITPNT-RON0629, 2016ITPNT-RON0630, 2016ITPNT-RON0631, and 2016ITPNT-RON0632.	Solution(s) for 2016ITPNT-RON0611, 2016ITPNT-RON0612, 2016ITPNT-RON0613, 2016ITPNT-RON0614, 2016ITPNT-RON0614, 2016ITPNT-RON0614, 2016ITPNT-RON0614, 2016ITPNT-RON0618, 2016ITPNT-RON0619, 2016ITPNT-RON0621, 2016ITPNT-RON0622, 2016ITPNT-RON0623, 2016ITPNT-RON0623, 2016ITPNT-RON0623, 2016ITPNT-RON0623, 2016ITPNT-RON0626, 2016ITPNT-RON0626, 2016ITPNT-RON0627, 2016ITPNT-RON0628, 2016ITPNT-RON0629, 2016ITPNT-RON0630, 2016ITPNT-RON0631, and 2016ITPNT-RON0632.	6/1/2020	TBD
TBD	Solution(s) for 2016ITPNT-RON0449, 2016ITPNT-RON0450, 2016ITPNT-RON0451, 2016ITPNT-RON0452, 2016ITPNT-RON0453, 2016ITPNT-RON0454, 2016ITPNT-RON0455, and 2016ITPNT-RON0456.	Solution(s) for 2016ITPNT-RON0449, 2016ITPNT-RON0450, 2016ITPNT-RON0451, 2016ITPNT-RON0452, 2016ITPNT-RON0453, 2016ITPNT-RON0454, 2016ITPNT-RON0456.	6/1/2016	TBD
	Solution(s) for 2016ITPNT-RON0457, 2016ITPNT-RON0458, 2016ITPNT-RON0459, 2016ITPNT-RON0460, 2016ITPNT-	Solution(s) for 2016ITPNT-RON0457, 2016ITPNT-RON0458, 2016ITPNT-RON0459, 2016ITPNT-		
TBD	RON0461, 2016ITPNT-RON0462, and 2016ITPNT-RON0463.	RON0460, 2016ITPNT-RON0461, 2016ITPNT-RON0462, and 2016ITPNT-RON0463.	6/1/2020	TBD
TBD	Solution(s) for 2016ITPNT-RON0877 and 2016ITPNT-RON0878.	Solution(s) for 2016ITPNT-RON0877 and 2016ITPNT-RON0878.	6/1/2017	TBD
TBD	Solution(s) for 2016ITPNT-RON0879, 2016ITPNT-RON0880, 2016ITPNT-RON0881, 2016ITPNT-RON0882, 2016ITPNT-RON0883, and 2016ITPNT-RON0884.	Solution(s) for 2016ITPNT-RON0879, 2016ITPNT-RON0880, 2016ITPNT-RON0881, 2016ITPNT-RON0882, 2016ITPNT-RON0883, and 2016ITPNT-RON0884.	6/1/2016	TBD
TBD	Solution(s) for 2016ITPNT-RON0910, 2016ITPNT-RON0911, 2016ITPNT-RON0912, 2016ITPNT-RON0913, 2016ITPNT-RON0914, 2016ITPNT-RON0915, 2016ITPNT-RON0916, and 2016ITPNT-RON0917.	Solution(s) for 2016ITPNT-RON0910, 2016ITPNT-RON0911, 2016ITPNT-RON0912, 2016ITPNT RON0913, 2016ITPNT-RON0914, 2016ITPNT-RON0915, 2016ITPNT-RON0916, and 2016ITPNT-RON0917.	6/1/2017	TBD
TBD	Solution(s) for 2016ITPNT-RON0920, 2016ITPNT-RON0921, 2016ITPNT-RON0922, and 2016ITPNT-RON0923.	Solution(s) for 2016ITPNT-RON0920, 2016ITPNT-RON0921, 2016ITPNT-RON0922, and 2016ITPNT-RON0923.	6/1/2017	TBD
TBD	Solution(s) for 2016/TPNT-RON2130 and 2016/TPNT-RON2131.	Solution(s) for 2016ITPNT-RON2130 and 2016ITPNT-RON2131.	6/1/2017	TBD

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

TBD	Solution(s) for 2016ITPNT-RON0745 and 2016ITPNT-RON0746.	Solution(s) for 2016ITPNT-RON0745 and 2016ITPNT-RON0746.	6/1/2021	TBD
		Solution(s) for 2016ITPNT-RON0501, 2016ITPNT-RON0502, 2016ITPNT-RON0503, 2016ITPNT-		
		RON0504, 2016ITPNT-RON0505, 2016ITPNT-RON0506, 2016ITPNT-RON0507, 2016ITPNT-		
		RON0508, 2016ITPNT-RON0509, 2016ITPNT-RON0510, 2016ITPNT-RON0511, 2016ITPNT-		
		RON0512, 2016ITPNT-RON0513, 2016ITPNT-RON0514, 2016ITPNT-RON0515, 2016ITPNT-		
	Solution(s) for 2016ITPNT-RON0501, 2016ITPNT-RON0502, 2016ITPNT-RON0503, 2016ITPNT-RON0504, 2016ITPNT-	RON0516, 2016ITPNT-RON0517, 2016ITPNT-RON0518, 2016ITPNT-RON0519, 2016ITPNT-		
	2016ITPNT-RON0511, 2016ITPNT-RON0512, 2016ITPNT-RON0513, 2016ITPNT-RON0514, 2016ITPNT-RON0515,	RON0524, 2016ITPNT-RON0525, 2016ITPNT-RON0526, 2016ITPNT-RON0527, 2016ITPNT-		
	2016ITPNT-RON0516, 2016ITPNT-RON0517, 2016ITPNT-RON0518, 2016ITPNT-RON0519, 2016ITPNT-RON0520,	RON0528, 2016ITPNT-RON0529, 2016ITPNT-RON0530, 2016ITPNT-RON0531, 2016ITPNT-		
	2016ITPNT-RON0521, 2016ITPNT-RON0522, 2016ITPNT-RON0523, 2016ITPNT-RON0524, 2016ITPNT-RON0525,	RON0532, 2016ITPNT-RON0533, 2016ITPNT-RON0534, 2016ITPNT-RON0535, 2016ITPNT-		
	2016ITPNT-RON0526, 2016ITPNT-RON0527, 2016ITPNT-RON0528, 2016ITPNT-RON0529, 2016ITPNT-RON0530,	RON0536, 2016ITPNT-RON0537, 2016ITPNT-RON0538, 2016ITPNT-RON0539, 2016ITPNT-		
	2016ITPNT-RON0531, 2016ITPNT-RON0532, 2016ITPNT-RON0533, 2016ITPNT-RON0534, 2016ITPNT-RON0535,	RON0540, 2016ITPNT-RON0541, 2016ITPNT-RON0542, 2016ITPNT-RON0543, 2016ITPNT-		
	2016ITPNT-RON0536, 2016ITPNT-RON0537, 2016ITPNT-RON0538, 2016ITPNT-RON0539, 2016ITPNT-RON0540,	RON0544, 2016ITPNT-RON0545, 2016ITPNT-RON0546, 2016ITPNT-RON0547, 48, 2016ITPNT-		
	2016ITPNT-RON0541, 2016ITPNT-RON0542, 2016ITPNT-RON0543, 2016ITPNT-RON0544, 2016ITPNT-RON0545,	RON0549, 2016ITPNT-RON0550, 2016ITPNT-RON0551, 2016ITPNT-RON0552, 2016ITPNT-		
	2016ITPNT-RON0546, 2016ITPNT-RON0547, 48, 2016ITPNT-RON0549, 2016ITPNT-RON0550, 2016ITPNT-RON0551,	RON0553, 2016ITPNT-RON0554, 2016ITPNT-RON0555, 2016ITPNT-RON0556, 2016ITPNT-		
	2016ITPNT-RON0552, 2016ITPNT-RON0553, 2016ITPNT-RON0554, 2016ITPNT-RON0555, 2016ITPNT-RON0556,	RON0557, 2016ITPNT-RON0558, 2016ITPNT-RON0559, 2016ITPNT-RON0560, 2016ITPNT-		
	2016ITPNT-RON0557, 2016ITPNT-RON0558, 2016ITPNT-RON0559, 2016ITPNT-RON0560, 2016ITPNT-RON0561,	RON0561, 2016ITPNT-RON0562, 2016ITPNT-RON0563, 2016ITPNT-RON0564, 2016ITPNT-		
	2016ITPNT-RON0562, 2016ITPNT-RON0563, 2016ITPNT-RON0564, 2016ITPNT-RON0565, 2016ITPNT-RON0566,	RON0565, 2016ITPNT-RON0566, 2016ITPNT-RON0567, 2016ITPNT-RON0568, 2016ITPNT-		
	2016ITPNT-RON0567, 2016ITPNT-RON0568, 2016ITPNT-RON0569, 2016ITPNT-RON0570, 2016ITPNT-RON0571,	RON0569, 2016ITPNT-RON0570, 2016ITPNT-RON0571, 2016ITPNT-RON0572, 2016ITPNT-		
	2016ITPNT-RON0572, 2016ITPNT-RON0573, 2016ITPNT-RON0574, 2016ITPNT-RON0575, 2016ITPNT-RON0576,	RON0573, 2016ITPNT-RON0574, 2016ITPNT-RON0575, 2016ITPNT-RON0576, 2016ITPNT-		
	2016ITPNT-RON0577, 2016ITPNT-RON0578, 2016ITPNT-RON0579, 2016ITPNT-RON0580, 2016ITPNT-RON0581,	RON0577, 2016ITPNT-RON0578, 2016ITPNT-RON0579, 2016ITPNT-RON0580, 2016ITPNT-		
	2016ITPNT-RON0582, 2016ITPNT-RON0583, 2016ITPNT-RON0584, 2016ITPNT-RON0585, 2016ITPNT-RON0586,	RON0581, 2016ITPNT-RON0582, 2016ITPNT-RON0583, 2016ITPNT-RON0584, 2016ITPNT-		
TBD	2016ITPNT-RON0587, and 2016ITPNT-RON0588.	RON0585, 2016ITPNT-RON0586, 2016ITPNT-RON0587, and 2016ITPNT-RON0588.	6/1/2016	TBD

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.

Network Upgrades re	equiring credits per Attachment Z2 of the SPP OATT.		1	1
Transmission Owner	Upgrade	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC
AEPW	Ashdown REC (AECC delivery point)	Replace switches 6276 and 6277 with 3000 A, 138 kV switches and replace the conductor between them with 1590 ACSR.	12/1/2011	12/1/2011
AEPW	ASHDOWN REC (MILLWOOD) - OKAY 138KV CKT 1	Rebuild fourteen (14.3) miles of 115 kV line to 138 kV and reconductor with 1590 ACSR.	12/1/2011	12/1/2011
		Reconductor line and convert line to 138 kV. Convert Patterson station to breaker-and-a half		, , ,
AEPW	ASHDOWN REC (MILLWOOD) - PATTERSON 138KV CKT 1	configuration.	12/1/2011	12/1/2011
AEPW	CACHE - SNYDER 138KV CKT 1	Replace Snyder wavetrap	5/21/2008	5/21/2008
AEPW	MANDEVILTP4 - SE TEXARKANA 138KV CKT 1	Build new Turk-SE Texarkana 138 kV line and add SE Texarkana 138 kV terminal.	7/1/2012	7/1/2012
AEPW	MANDEVILTP4 - TURK 138KV CKT 1	Build new Turk-SE Texarkana 138 kV line and add SE Texarkana 138 kV terminal.	7/1/2012	7/1/2012
AEPW	MCNAB REC - Turk 115KV CKT 1 #2 (AEP)	Build a new two mile, 138kV, 1590 ACSR line section (operated at 115kV) from Turk Substation to the existing Okay-Hope 115kV line to form a Turk - Hope 115kV line.	12/1/2011	12/1/2011
AEPW	OKAY - TURK 138KV CKT 1	Build a new two mile, 138kV, 1590 ACSR line section from Turk Substation to the existing Okay- Hope 115kV line and rebuild twelve miles of 115kV line to Okay Substation to 138kV, 1590 ACSR, to form a Turk - Okay 138kV line.	12/1/2011	12/1/2011
		Osage Substation:Replace Shidler 138kV line terminal primary and redundant relaying with SEL		
		uProcessor based relays, install 3-138kV PTs, Install 1-138kV CB, Install metering, Install 2000A		
AEPW	Osage - Shidler 138kV	line Trap	1/15/2014	1/15/2014
AEPW	Shidler 138 kV	138kV four (4) Breaker ring-bus including 138kV transmission line terminal to KAMO's Remington 138kV Substation, replace grounding switch with circuit switcher, move OGE's Osage 138kV line terminal, replace relay panels on OGE's Osage and Mound Road 138kV line terminals, metering, and associated equipment.	2/8/2014	2/8/2014
		Expand Southwestern Station for termination of WFEC 2.75 mile 138kV Transmission Line from	_,,,,	_, _, _,
AEPW	Southwestern Station - Washita 138kV Ckt 1 (AEP)	Washita Switch Station	10/1/2005	10/1/2005
AEPW	SUGAR HILL - TURK 138KV CKT 1	Build new 24 mile Turk - Sugar Hill 138 kV line and add Sugar Hill 138 kV terminal.	12/16/2010	12/16/2010
		Build Turk 138-115 kV station and relocate autotransformer (and spare) from Patterson to this		
AEPW	TURK 138/115KV TRANSFORMER CKT 1	new Turk station	12/1/2011	12/1/2011
AEPW	Valliant 345 kV (AEP)	Vallient 345 KV line terminal	7/1/2012	7/1/2012
GRDA	Fairfax - Pawnee 138kV Ckt 1	Construct Approx. 15 miles of 138kV transmission line from Fairfax to a new substation on the Cleveland-Stillwater 138kV line near Pawnee. & Fairfax Substation: Install 138kV line terminal and any additional modifications that are necessary to connect to	6/30/2014	6/30/2014
GRDA	Pawnee 138 kV	New three breaker ring bus on the Cleveland-Stillwater 138kV line near Pawnee. Station will have terminals to Cleveland, Stillwater, and Fairfax.	6/30/2014	6/30/2014
ITCGP	HUGO - VALLIANT 345KV CKT 1	New 19 miles 345 KV	7/1/2012	7/1/2012
ITCGP	HUGO 345/138KV TRANSFORMER CKT 1	New 345/138 kv Auto	7/1/2012	7/1/2012
KACP	LACYGNE - WEST GARDNER 345KV CKT 1	KCPL Sponsored Project to Reconductor Line to be In-Service by 6/1/2006	6/1/2006	6/1/2006
MIDW	Rice - Circle 230 kV Ckt 1 (MIDW portion)	ALL WORK REQUIRED TO CONVERT RICE - CIRCLE 115KV TO 230KV OPERATION. INCLUDES NEW 230KV 3 BREAKER RING BUS, AN EXTENSION OF THE 230KV FROM CURRENT RICE STATION TO NEW RICE SUBSTATION, AND ANY ADDITIONAL WORK REQUIRED FOR THE CONVERSION.	11/7/2012	11/7/2012
	and the second s	Install necessary equipment and perform line work at Circle substation to accommodate new	,-,	, -,12
MIDW	Rice - Circle 230 kV Ckt 1 (WR portion)	bus position.  Rebuild and extend 115 kV transmission line from existing Rice Co. substation to new Rice Co.	11/29/2012	11/29/2012
		substation, including engineering, surveying, and modification of existing easements as		
MIDW	Rice - Lyons 115 kV Ckt 1	required.	4/1/2013	4/1/2013
MIDW	Rice County 230/115 kV transformer Ckt 1  BARBER - SAWYER 115KV CKT 1	Install 230/115 kV transformer at Rice County.  Rebuild line	10/1/2012 12/1/2009	10/1/2012 6/1/2013
MKEC	CLIFTON - GREENLEAF 115KV CKT 1	Rebuild 14.4 miles	6/1/2011	6/1/2013
MKEC	FLATRDG3 - HARPER 138KV CKT 1	Rebuild 24.15 mile line	12/1/2009	6/1/2013
MKEC	FLATROGS - MEDICINE LODGE 138KV CKT 1	Rebuild 8.05 mile line	12/1/2009	6/1/2013
MKEC	Ft. Dodge - North Ft. Dodge 115 kV Ckt 2	Build appoximately 0.5 mile 115 kV line	5/1/2015	5/1/2015
MKEC	GREENLEAF - KNOB HILL 115KV CKT 1 (MKEC)	Rebuild 43.5% Ownership of 20.9 miles	6/1/2013	6/1/2013
MKEC	MEDICINE LODGE 138/115KV TRANSFORMER CKT 1	Upgrade transformer	12/1/2009	6/1/2013
MKEC	RIVER ROAD - SAWYER 115KV CKT 1	Rebuild line	12/1/2009	6/1/2013
NPPD	Hoskins - Dixon County 230kV Line Upgrade	Increase clearances to accommodate 320MVA facility rating to address loading issues	10/24/2015	10/24/2015
NPPD	Twin Church - Dixon County 230kV Line Upgrade	Increase clearances to accommodate 320MVA facility rating	10/24/2015	10/24/2015

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

		138kV line terminal at Gracemont substation, including breaker, line relaying, disconnect		
OKGE	Gracemont 138kV line terminal addition	switches and associated equipment, dead end structures, revenue metering with CT's and PT's.	10/12/2012	10/12/2012
OKGE	MATHEWSON - NORTHWEST 345KV CKT 1	Build 345 kV line	1/1/2010	1/1/2010
OKGE	MATHEWSON - TATONGA 345KV CKT 1	Build 345 kV line	1/1/2010	1/1/2010
OKGE	TATONGA - WOODWARD 345KV CKT 1	Build 345 kV line	1/1/2010	1/1/2010
OKGE	WOODWARD - IODINE 138KV CKT 1	Tap Iodine to Woodward 138 kV line	1/1/2010	1/1/2010
OKGE	WOODWARD - WOODWARD EHV 138KV CKT 1	Build .5 miles of 138 kV and install terminal equipment	1/1/2010	1/1/2010
OKGE	WOODWARD - WOODWARD EHV 138KV CKT 2	Build .5 miles of 138 kV and install terminal equipment	1/1/2010	1/1/2010
OKGE	WOODWARD 345/138KV TRANSFORMER CKT 1	Install 345/138 kV XF	1/1/2010	1/1/2010
		Reconductor Harrington Mid - Nichols 230kV. Replace switches and breakers to get circuit to		
SPS	Harrington Mid - Nichols 230 kV Ckt 2	727/727 MVA rating. New limit should be bus rating.	12/1/2012	12/1/2012
		Reconductor Harrington West - Nichols 230kV. Replace switches and breakers to get circuit to		
SPS	Harrington West - Nichols 230kV Ckt 1	727/727 MVA rating. New limit should be bus rating.	12/1/2012	12/1/2012
WERE	Wheatland 115 kV #2	Install metering equipment at the Wheatland 115 kV substation for GEN-2010-057	12/31/2012	12/31/2012
		Expand Washita Switch Station from a 4-breaker to a 5-breaker 138kV ring bus & Construct		
WFEC	Southwestern Station - Washita 138kV Ckt 1	2.75 mile 138kV Transmission Line to the AEP/PSO Southwestern Station	10/1/2005	10/1/2005
		BUILD WASHITA - GRACEMONT 138KV CKT 2 (APPROXIMATELY 7 MILES). ADD LINE TERMINAL		
		AT WASHITA AND PROCURE RIGHT OF WAY. REQUIRED AS SHARED NETWORK UPGRADE FOR		
WFEC	WASHITA - GRACEMONT 138 KV CKT 2	INTERCONNECTION OF GEN-2008-037.	10/12/2012	10/12/2012

# Table 5 - Third Party Facility Constraints

None	Transmission Owner	UpgradeName	Solution	Upgrade Required	Estimated Date of Upgrade Completion (EOC)	Estimated Engineering & Construction Cost
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		1			
	_			Allocation	Allocated E & C
Upgrade Name	Customer	Study Number	Reservation	Percentage	Cost
BONANZA - HACKETT AECC 161KV CKT 1	AECC	AG2-2015-001	81871305	62.89%	\$2,201,052
BONANZA - HACKETT AECC 161KV CKT 1	AECC	AG2-2015-002	81871334	37.11% <b>Total</b> :	\$1,298,948
			L	iotai.	\$3,500,000
				Allocation	Allocated E & C
Upgrade Name	Customer	Study Number	Reservation	Percentage	Cost
BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	GSECGS	AG2-2015-010	81892833	100.00%	\$1,073,637
			L	Total:	\$1,073,637
				Allocation	Allocated E & C
Upgrade Name	Customer	Study Number	Reservation	Percentage	Cost
COMANCHE - COMANCHE TAP 69KV CKT 1	AECC	AG2-2015-001	81871305	100.00%	\$2,600,000
	•			Total:	\$2,600,000
		1		Allocation	Allocated E & C
Upgrade Name	Customer	Study Number	Reservation	Percentage	Cost
HANCOCK - MUSKOGEE 161KV CKT 1 Accelerate	AECC	AG2-2015-001	81871305	65.06%	\$48,105
HANCOCK - MUSKOGEE 161KV CKT 1 Accelerate	AECC	AG2-2015-001 AG2-2015-002	81871334	34.94%	\$25,837
HANCOCK MOSKOGEL ISINV CKT I ACCCURACE	ALCC	AG2 2013 002	01071334	Total:	\$73,942
	<b>.</b>				
Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
KNOLL - N HAYS3 115.00 115KV CKT 1	KCPS	AG2-2015-012	81620079	0.85%	\$12,469
KNOLL - N HAYS3 115.00 115KV CKT 1	KCPS	AG2-2015-012 AG2-2015-014	81921840	0.85%	\$12,469
KNOLL - N HAYS3 115.00 115KV CKT 1	MIDW	AG2-2015-014 AG2-2015-016	81939203	68.45%	\$1,004,729
KNOLL - N HAYS3 115.00 115KV CKT 1	MIDW	AG2-2015-017	81939312	28.28%	\$415,094
KNOLL - N HAYS3 115.00 115KV CKT 1	WRGS	AG2-2015-027	81914448	1.56%	\$22,963
12500 12500 1		7.02 2013 027	01311110	Total:	\$1,467,722
	1	T T			
Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
Marlow - Rush Springs Tap 138 kV Ckt 1 Rebuild	AECC	AG2-2015-001	81871305	93.85%	\$6,973,936
Marlow - Rush Springs Tap 138 kV Ckt 1 Rebuild	OMPA	AG2-2015-020	81909660	6.15%	\$456,974
				Total:	\$7,430,909
	1	T T			
Upgrade Name	Customer	Study Number	Reservation	Allocation Percentage	Allocated E & C Cost
N HAYS3 115.00 - VINE STREET 115KV CKT 1	KCPS	AG2-2015-012	81620079	0.85%	\$23,254
N HAYS3 115.00 - VINE STREET 115KV CKT 1	KCPS	AG2-2015-014	81921840	0.85%	\$23,254
N HAYS3 115.00 - VINE STREET 115KV CKT 1	MIDW	AG2-2015-016	81939203	68.45%	\$1,873,818
N HAYS3 115.00 - VINE STREET 115KV CKT 1	MIDW	AG2-2015-017	81939312	28.28%	\$774,150
N HAYS3 115.00 - VINE STREET 115KV CKT 1	WRGS	AG2-2015-027	81914448	1.56%	\$42,825
			0131110		742,023
		7.02 2013 027	01314410	Total:	\$2,737,301
			01314440	Total:	\$2,737,301
Upgrade Name	Customer	Study Number	Reservation		\$2,737,301
Upgrade Name SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1				Total:	\$2,737,301 Allocated E & C Cost
	Customer	Study Number	Reservation	Total: Allocation Percentage	\$2,737,301  Allocated E & C  Cost  \$49,093
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	Customer KCPS	Study Number AG2-2015-012	Reservation 81620079	Total:  Allocation Percentage 0.85%	\$2,737,301  Allocated E & C  Cost  \$49,093 \$49,093
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	Customer KCPS KCPS	Study Number AG2-2015-012 AG2-2015-014	Reservation 81620079 81921840	Total:  Allocation Percentage  0.85%  0.85%	\$2,737,301  Allocated E & C  Cost  \$49,093 \$49,093 \$3,955,916
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	Customer KCPS KCPS MIDW	Study Number AG2-2015-012 AG2-2015-014 AG2-2015-016	Reservation 81620079 81921840 81939203	Allocation Percentage 0.85% 0.85% 68.45%	\$2,737,301 Allocated E & C
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	Customer KCPS KCPS MIDW MIDW	Study Number AG2-2015-012 AG2-2015-014 AG2-2015-016 AG2-2015-017	Reservation 81620079 81921840 81939203 81939312	Total:  Allocation Percentage  0.85%  0.85%  68.45%  28.28%	\$2,737,301  Allocated E & C  Cost  \$49,093  \$49,093  \$3,955,916  \$1,634,348  \$90,410
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	Customer KCPS KCPS MIDW MIDW	Study Number AG2-2015-012 AG2-2015-014 AG2-2015-016 AG2-2015-017	Reservation 81620079 81921840 81939203 81939312	Total:  Allocation Percentage  0.85% 0.85% 68.45% 28.28% 1.56% Total:	\$2,737,301  Allocated E & C Cost \$49,093 \$49,093 \$3,955,916 \$1,634,348 \$90,410 \$5,778,860
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	Customer KCPS KCPS MIDW MIDW	Study Number AG2-2015-012 AG2-2015-014 AG2-2015-016 AG2-2015-017 AG2-2015-027	Reservation 81620079 81921840 81939203 81939312 81914448	Total:  Allocation Percentage  0.85% 0.85% 68.45% 28.28% 1.56% Total:  Allocation	\$2,737,301  Allocated E & C  Cost  \$49,093 \$49,093 \$3,955,916 \$1,634,348 \$90,410 \$5,778,860  Allocated E & C
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1  Upgrade Name	Customer KCPS KCPS MIDW MIDW WRGS	Study Number AG2-2015-012 AG2-2015-014 AG2-2015-016 AG2-2015-017 AG2-2015-027  Study Number	Reservation  81620079  81921840  81939203  81939312  81914448  Reservation	Allocation Percentage  0.85% 0.85% 68.45% 28.28% 1.56% Total:  Allocation Percentage	\$2,737,301  Allocated E & C Cost  \$49,093 \$49,093 \$3,955,916 \$1,634,348 \$90,410 \$5,778,866  Allocated E & C Cost
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1  WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICHITA (WIC	Customer KCPS KCPS MIDW MIDW WRGS  Customer	Study Number AG2-2015-012 AG2-2015-014 AG2-2015-016 AG2-2015-027 AG2-2015-027  Study Number AG2-2015-012	Reservation  81620079  81921840  81939203  81939312  81914448  Reservation  81620079	Total:  Allocation Percentage  0.85% 0.85% 68.45% 28.28% 1.56% Total:  Allocation Percentage 0.45%	\$2,737,30:  Allocated E & C Cost  \$49,09: \$49,09: \$3,955,91: \$1,634,34: \$90,41: \$5,778,866  Allocated E & C Cost \$85,15:
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1  Upgrade Name WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICHITA (WICHI	Customer KCPS KCPS MIDW MIDW WRGS  Customer H KCPS H KCPS	Study Number AG2-2015-012 AG2-2015-014 AG2-2015-016 AG2-2015-027  Study Number AG2-2015-012 AG2-2015-014	Reservation  81620079  81921840  81939203  81939312  81914448  Reservation  81620079  81921840	Allocation Percentage  0.85% 0.85% 68.45% 28.28% 1.56% Total:  Allocation Percentage	\$2,737,302  Allocated E & C Cost  \$49,093 \$49,093 \$3,955,916 \$1,634,346 \$90,416 \$5,778,866  Allocated E & C Cost  \$85,156 \$85,156
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1  Upgrade Name WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICHITA (WICHI	Customer KCPS KCPS MIDW MIDW WRGS  Customer H KCPS H KCPS H MIDW	Study Number AG2-2015-012 AG2-2015-014 AG2-2015-017 AG2-2015-027  Study Number AG2-2015-012 AG2-2015-014 AG2-2015-014 AG2-2015-017	Reservation  81620079  81921840  81939203  81939312  81914448  Reservation  81620079  81921840  81939312	Total:  Allocation Percentage  0.85% 0.85% 68.45% 28.28% 1.56% Total:  Allocation Percentage  0.45% 0.45% 0.80%	\$2,737,302  Allocated E & C Cost  \$49,093 \$49,093 \$3,955,916 \$1,634,346 \$90,410 \$5,778,866  Allocated E & C Cost  \$85,156 \$85,156 \$151,012
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1  Upgrade Name WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICHITA (WICHI	Customer KCPS KCPS MIDW MIDW WRGS  Customer H KCPS H KCPS H MIDW H WRGS	Study Number AG2-2015-012 AG2-2015-014 AG2-2015-017 AG2-2015-027  Study Number AG2-2015-012 AG2-2015-014 AG2-2015-017 AG2-2015-017 AG2-2015-017 AG2-2015-027	Reservation  81620079  81921840  81939203  81939312  81914448  Reservation  81620079  81921840  81939312  81914448	Total:  Allocation Percentage  0.85% 0.85% 68.45% 28.28% 1.56% Total:  Allocation Percentage 0.45% 0.45% 0.80% 37.68%	\$2,737,301  Allocated E & C Cost  \$49,093 \$49,093 \$3,955,916 \$1,634,348 \$90,410 \$5,778,866  Allocated E & C Cost  \$85,158 \$85,158 \$151,017 \$7,104,355
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1  Upgrade Name WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICHITA (WICHI	Customer KCPS KCPS MIDW MIDW WRGS  Customer H KCPS H KCPS H MIDW H WRGS H WRGS	Study Number AG2-2015-012 AG2-2015-014 AG2-2015-017 AG2-2015-027  Study Number AG2-2015-012 AG2-2015-014 AG2-2015-014 AG2-2015-017	Reservation  81620079  81921840  81939203  81939312  81914448  Reservation  81620079  81921840  81939312	Total:  Allocation Percentage  0.85% 0.85% 68.45% 28.28% 1.56% Total:  Allocation Percentage  0.45% 0.45% 0.80%	\$2,737,301  Allocated E & C Cost  \$49,093 \$49,093 \$3,955,916 \$1,634,348 \$90,410 \$5,778,866  Allocated E & C Cost  \$85,158 \$151,017 \$7,104,355 \$2,920,035
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1 SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1  Upgrade Name WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1 & WICHITA (WICHITA (WICHI	Customer KCPS KCPS MIDW MIDW WRGS  Customer H KCPS H KCPS H MIDW H WRGS H WRGS H WRGS H WRGS	Study Number AG2-2015-012 AG2-2015-014 AG2-2015-017 AG2-2015-027  Study Number AG2-2015-012 AG2-2015-014 AG2-2015-017 AG2-2015-017 AG2-2015-027 AG2-2015-027	Reservation  81620079  81921840  81939203  81939312  81914448  Reservation  81620079  81921840  81939312  81914448  81916202	Total:  Allocation Percentage  0.85% 0.85% 68.45% 28.28% 1.56% Total:  Allocation Percentage 0.45% 0.45% 0.80% 37.68% 15.49%	\$2,737,301  Allocated E & C  Cost  \$49,093 \$49,093 \$3,955,916 \$1,634,348 \$90,410 \$5,778,860  Allocated E & C