



*Aggregate Facility Study  
SPP-2007-AG2-AFS-11  
For Transmission Service  
Requested by  
Aggregate Transmission Customers*

*SPP Engineering, SPP Tariff Studies*

SPP AGGREGATE FACILITY STUDY (SPP-2007-AG2-AFS-11)

July 27, 2009

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## **1. Executive Summary**

Pursuant to Attachment Z1 of the Southwest Power Pool Open Access Transmission Tariff (OATT), 585 MW of long-term transmission service requests have been restudied in this Aggregate Facility Study (AFS). The first phase of the AFS consisted of a revision of the impact study to reflect the withdrawal of requests for which an Aggregate Facility Study Agreement was not executed. The principal objective of the AFS is to identify system problems and potential modifications necessary to facilitate these transfers while maintaining or improving system reliability as well as summarizing the operating limits and determination of the financial characteristics associated with facility upgrades. Facility upgrade costs are allocated on a prorated basis to all requests positively impacting any individual overloaded facility. Further, Attachment Z2 provides for facility upgrade cost recovery by stating that “Transmission Customers paying Directly Assigned Upgrade Costs for Service Upgrades or that are in excess of the Safe Harbor Cost Limit for Network Upgrades associated with new or changed Designated Resources and Project Sponsors paying Directly Assigned Upgrade Costs for Sponsored Upgrades shall receive revenue credits in accordance with Attachment Z2. Generation Interconnection Customers paying for Network Upgrades shall receive credits for new transmission service using the facility as specified in Attachment Z1.”

The total assigned facility upgrade Engineering and Construction (E &C) cost determined by the AFS is \$0 Million. Additionally an indeterminate amount of assigned E & C cost for 3<sup>rd</sup> party facility upgrades are assignable to the customer. The total upgrade levelized revenue requirement for all transmission requests is \$0 Million. This is based on full allocation of levelized revenue requirements for upgrades to customers without consideration of base plan funding. AFS data table 3 reflects the allocation of upgrade costs to each request without potential base plan funding based on either the requested reservation period or the deferred

reservation period if applicable. Total upgrade levelized revenue requirements for all transmission requests after consideration of potential base plan funding is \$0 Million.

Third-party facilities must be upgraded when it is determined they are constrained in order to accommodate the requested Transmission Service. These include both first-tier neighboring facilities outside SPP and Transmission Owner facilities within SPP that are not under the SPP OATT. In this AFS, third-party facilities were identified. Total engineering and construction cost estimates for required third-party facility upgrades are \$6.5 Million.

The Transmission Provider will tender a Letter of Intent on July 27<sup>th</sup>, 2009. This will open a 15-day window for Customer response. To remain in the Aggregate Transmission Service Study (ATSS), the Transmission Provider must receive from the Transmission Customer (Customer) by August 11<sup>th</sup>, 2009, an executed Letter of Intent. The Letter of Intent will list options the Customer must choose to clarify their commitment to remain in the ATSS. The only action required on OASIS is to WITHDRAW the request or leave the request in STUDY mode.

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

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

## **2. Introduction**

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

Approximately 585 MW of long-term transmission service has been restudied in this Aggregate Facility Study (AFS) with \$0 Million in transmission upgrades being proposed. The results of the AFS are detailed in Tables 1 through 7. A highly tangible benefit of studying transmission requests aggregately under the SPP OATT Attachment Z1 is the sharing of costs among customers using the same facility. The detailed results show individual upgrade costs by study as well as potential base plan allowances as determined by Attachments J and Z1. The following URL can be used to access the SPP OATT: ([http://www.spp.org/Publications/SPP\\_Tariff.pdf](http://www.spp.org/Publications/SPP_Tariff.pdf)). In order to understand the extent to which base plan upgrades may be applied to both point-to-point and network transmission services, it is necessary to highlight the definition of Designated Resource. Per Section 1.9a of the SPP OATT, a Designated Resource is “[a]ny designated generation resource owned, purchased or leased by a Transmission Customer to serve load in the SPP Region. Designated Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Transmission Customer's load on a non-interruptible basis.” Therefore, not only network service, but also point-to-point service has potential for base plan funding if the conditions for classifying upgrades associated with designated resources as base plan upgrades as defined in Section III.B of Attachment J are met.

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

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

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

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

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

Facilities identified as limiting the requested Transmission Service have been reviewed to determine the required in-service date of each Network Upgrade. The year that each Network Upgrade is required to accommodate a request is determined by interpolating between the

applicable model years given the respective loading data. Both previously assigned facilities and the facilities assigned to this request for Transmission Service were evaluated.

In some instances due to lead times for engineering and construction, Network Upgrades may not be available when required to accommodate a request for Transmission Service. When this occurs, the ATC with available Network Upgrades will be less than the capacity requested during either a portion of or all of the requested reservation period. As a result, the lowest seasonal allocated ATC within the requested reservation period will be offered to the Transmission Customer on an applicable annual basis as listed in Table 1. The ATC may be limited by transmission owner planned projects, expansion plan projects, or customer assigned upgrades.

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

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

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

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

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

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

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

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

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

For third-party facilities listed in Table 3 and Table 5, the Transmission Customer is responsible for funding the necessary upgrades of these facilities per Section 21.1 of the Transmission Provider's OATT. In this AFS, third-party facilities were identified. Total engineering and construction cost estimates for required third-party facility upgrades \$6.5 Million. The Transmission Provider will undertake reasonable efforts to assist the Transmission Customer in making arrangements for necessary engineering, permitting, and construction of the third-party facilities. Third-party facility upgrade engineering and construction cost estimates are not utilized to determine the present worth value of levelized revenue requirements for SPP system network upgrades.

All modeled facilities within the Transmission Provider system were monitored during the development of this Study as well as certain facilities in first-tier neighboring systems. Third-party facilities must be upgraded when it is determined that they are overloaded while accommodating the requested Transmission Service. An agreement between the Customer and 3<sup>rd</sup> Party Owner detailing the mitigation of the 3<sup>rd</sup> party impact must be provided to the Transmission Provider prior to tendering of a Transmission Service Agreement. These facilities

also include those owned by members of the Transmission Provider who have not placed their facilities under the Transmission Provider's OATT. Upgrades on the Southwest Power Administration network requires prepayment of the upgrade cost prior to construction of the upgrade.

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

### **3. Study Methodology**

#### **A. Description**

The system impact analysis was conducted to determine the steady-state impact of the requested service on the SPP and first tier Non - SPP control area systems. The steady-state analysis was done to ensure current SPP Criteria and NERC Reliability Standards requirements are fulfilled. The Southwest Power Pool conforms to the NERC Reliability Standards, which provide the strictest requirements, related to voltage violations and thermal overloads during normal conditions and during a contingency. It requires that all facilities be within normal operating ratings for normal system conditions and within emergency ratings after a contingency. Normal operating ratings and emergency operating ratings monitored are Rate A and B in the SPP MDWG models, respectively. The upper bound and lower bound of the normal voltage range monitored is 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 69kV and above, first tier Non - SPP control area branches and ties 115 kV and above, any defined contingencies for these control areas, and generation unit outages for the control areas with SPP reserve share program redispatch. The monitor elements include all SPP control area branches, ties, and buses 69 kV and above, and all first tier Non – SPP control area branches and ties 115 kV and above. Voltage monitoring was performed for SPP control area buses 69 kV and above.

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

## **B. Model Development**

SPP used six seasonal models to study the aggregate transfers of 585 MW over a variety of requested service periods. The SPP STEP 2008 Q4 Series Cases 2009/10 Winter Peak (09WP), 2010 Summer Peak (10SP), 2010/11 Winter Peak (10WP), 2013 Summer Peak (13SP), 2013/14 Winter Peak (13WP), and 2018 Summer Peak (18SP) were used to study the impact of the requested service on the transmission system. The 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. Five groups of requests were developed from the aggregate of 585 MW in order to minimize counter flows among requested service. Each request was included in at least two of the four groups depending on the requested path. All requests were included in group five. From the six seasonal models, five system scenarios were developed. Scenario 1 includes SWPP OASIS transmission requests not already included in the SPP 2008 Series Cases flowing in a West to East direction with ERCOTN HVDC Tie South to North, ERCOTE HVDC Tie East to West, SPS exporting,

and SPS importing from the Lamar HVDC Tie. Scenario 2 includes transmission requests not already included in the SPP 2008 Series Cases flowing in an East to West direction with ERCOTN HVDC tie North to South, ERCOTE HVDC tie East to West, SPS importing, and SPS exporting to the Lamar HVDC Tie. Scenario 3 includes transmission requests not already included in the SPP 2008 Series Cases flowing in a South to North direction with ERCOTN HVDC tie South to North, ERCOTE HVDC tie East to West, SPS exporting, and SPS exporting to the Lamar HVDC Tie. Scenario 4 includes transmission requests not already included in the SPP 2008 Series Cases flowing in a North to South direction with ERCOTN HVDC tie North to South, ERCOTE HVDC tie East to West, SPS importing, and SPS importing from the Lamar HVDC tie. Scenario 5 include all transmission not already included in the SPP 2008 Series Cases with ERCOTN North to South, ERCOTE East to West, SPS importing and SPS exporting to the Lamar HVDC tie. The system scenarios were developed to minimize counter flows from previously confirmed, higher priority requests not included in the MDWG Base Case.

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

Network Integration Transmission Service requests are modeled as Generation to Load transfers in addition to Generation to Generation transfers. The Generation to Load modeling is accomplished by developing a pre-transfer case by redispatching the existing designated network resource(s) down by the new designated network resource request amount and scaling down the applicable network load by the same amount proportionally. The post-transfer case for comparison is developed by scaling the network load back to the forecasted amount and dispatching the new designated network resource being requested. Network Integration Transmission Service requests are modeled as Generation to Load transfers in addition to Generation to Generation because the requested Network Integration Transmission Service is a request to serve network load with the new designated network resource and the impacts on transmission system are determined accordingly. If the Network Integration Transmission Service request application clearly documents that the existing designated network resource(s) is

being replaced or undesignated by the new designated network resource then MW impact credits will be given to the request as is done for a redirect of existing transmission service. Point-To-Point Transmission Service requests are modeled as Generation to Generation transfers. Generation to Generation transfers are accomplished by developing a post-transfer case for comparison by dispatching the request source and redispatching the request sink.

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

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

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

During any period when SPP determines that a transmission constraint exists on the Transmission System, and such constraint may impair the reliability of the Transmission System, SPP will take whatever actions that are reasonably necessary to maintain the reliability of the Transmission System. To the extent SPP determines that the reliability of the Transmission System can be maintained by redispatching resources, SPP will evaluate interim curtailment of existing confirmed service or interim redispatch of units to provide service prior to completion of any assigned network upgrades. Any redispatch may not unduly discriminate between the Transmission Owners' use of the Transmission System on behalf of their Native Load Customers and any Transmission Customer's use of the Transmission System to serve its designated load. Redispatch was evaluated to provide only interim service during the time frame prior to completion of any assigned network upgrades. Curtailment of existing confirmed service is evaluated to provide only interim service. Curtailment of existing confirmed service is only evaluated at the request of the transmission customer.

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

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

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

Tables 1 through 6 contain the steady-state analysis results of the AFS. Table 1 identifies the participating long-term transmission service requests included in the AFS. This table lists deferred start and stop dates both with and without redispatch (based on customer selection of redispatch if available), the minimum annual allocated ATC without upgrades and season of first impact. Table 2 identifies total E & C cost allocated to each Transmission Customer, letter of credit requirements, third party E & C cost assignments, potential base plan E & C funding

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

The potential base plan funding allowable is contingent upon meeting each of the conditions for classifying upgrades associated with designated resources as base plan upgrades as defined in Section III.B of Attachment J. If the additional capacity of the new or changed designated resource exceeds the 125% resource to load forecast for the year of start of service, the requested resource is not eligible for base plan funding of required network upgrades and the full cost of the upgrades is assignable to the customer. Additionally, 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 5 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 Engineering and Construction Funding Allowable. Network upgrades required for wind generation requests located in a zone other than the customer POD shall be allocated as 67% Base Plan Region wide charge and 33% directly assigned to the customer.

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

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

Example A:

E & C allocated for upgrades is 74 million with revenue requirements of 140 million and PTP base rate of 101 million. Potential base plan funding is 47 million with the difference of 27 million E & C assignable to the customer. If the revenue requirements for the assignable portion is 54 million and the PTP base rate is 101 million, the customer will pay the higher “OR” pricing of 101 million base rate of which 54 million revenue requirements will be paid back to the

Transmission Owners for the upgrades and the remaining revenue requirements of (140-54) or 86 million will be paid by base plan funding.

Example B:

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

Example C:

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

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

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

## **B. Study Definitions**

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

## **5. Conclusion**

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

The Transmission Provider will tender a Letter of Intent on July 27<sup>th</sup>, 2009. This will open a 15-day window for Customer response. To remain in the Aggregate Transmission Service Study (ATSS), the Transmission Provider must receive from the Transmission Customer (Customer) by August 11<sup>th</sup>, 2009, an executed Letter of Intent. The Letter of Intent will list options the Customer must choose to clarify their commitment to remain in the ATSS. The only action required on OASIS is to WITHDRAW the request or leave the request in STUDY mode.

The Transmission Provider must receive an unconditional and irrevocable letter of credit in the amount of the total allocated Engineering and Construction costs assigned to the Customer. This letter of credit is not required for those facilities that are base plan funded. This amount is for all

assignable Network Upgrades less pre-payment requirements. The amount of the letter of credit will be adjusted down on an annual basis to reflect amortization of these costs. The Transmission Provider will issue notifications to construct facility upgrades to the constructing Transmission Owner. This date is determined by the engineering and construction lead time provided for each facility upgrade.

## 6. Appendix A

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

#### BASE CASES:

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

#### ACCC CASES:

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

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

Customer	Study Number	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date without interim redispach	Deferred Stop Date without interim redispach	Start Date with interim redispach	Stop Date with interim redispach	Minimum Allocated ATC (MW) withing reservation period	Season of Minimum Allocated ATC within reservation period
AEPM	AG2-2007-051	1283682	WFEC	CSWS	152	6/1/2008	6/1/2013	10/1/2010	10/1/2015	10/1/2009	10/1/2014	0	10SP
AEPM	AG2-2007-107	1286446	CSWS	CSWS	100	1/1/2009	1/1/2010	6/1/2011	6/1/2012	10/1/2009	10/1/2010	0	10SP
CWEP	AG2-2007-047	1283676	EES	SPA	12	6/1/2010	6/1/2040	6/1/2010	6/1/2040	6/1/2010	6/1/2040	0	10SP
KCPS	AG2-2007-109	1286498	KCPL	EES	82	1/1/2009	6/1/2010	10/1/2009	3/1/2011	10/1/2009	4/1/2011	0	10SP
KEPC	AG2-2007-028	1281648	WR	EDE	6	1/1/2008	1/1/2019	10/1/2009	10/1/2020			0	10SP
KPP	AG2-2007-072	1285893	WR	WR	8	11/1/2007	11/1/2017	6/1/2012	6/1/2022	10/1/2009	10/1/2019	0	10SP
MIDW	AG2-2007-012	1268955	WR	WR	5	6/1/2008	6/1/2013	10/1/2009	10/1/2014			0	10SP
MIDW	AG2-2007-013	1268959	WR	WR	1	6/1/2008	6/1/2013	10/1/2009	10/1/2014			0	10SP
MIDW	AG2-2007-014	1268965	WR	WR	1	6/1/2008	6/1/2013	10/1/2009	10/1/2014			0	10SP
MIDW	AG2-2007-034	1281706	WR	WR	25	3/1/2008	3/1/2027	6/1/2012	6/1/2031	10/1/2009	10/1/2028	0	10SP
MIDW	AG2-2007-078	1285947	WR	WR	2	6/1/2008	6/1/2013	10/1/2009	10/1/2014			0	10SP
SPRM	AG2-2007-110	1286502	WR	SPA	25	12/1/2008	12/1/2028	10/1/2009	10/1/2029	10/1/2009	10/1/2029	0	10SP
WRGS	AG2-2007-011D	1268638	KCPL	AMRN	20	6/1/2010	6/1/2015	6/1/2010	6/1/2015	6/1/2010	6/1/2015	0	10SP
WRGS	AG2-2007-017D	1278809	EES	SPA	20	3/1/2010	3/1/2040	3/1/2010	3/1/2040	3/1/2010	3/1/2040	0	10SP
WRGS	AG2-2007-018D	1278811	EES	SPA	20	3/1/2010	3/1/2040	3/1/2010	3/1/2040	3/1/2010	3/1/2040	0	10SP
WRGS	AG2-2007-019D	1278813	EES	SPA	7	3/1/2010	3/1/2040	3/1/2010	3/1/2040	3/1/2010	3/1/2040	0	10SP
WRGS	AG2-2007-092D	1286201	SECI	WR	99	3/1/2009	3/1/2019	6/1/2012	6/1/2022	10/1/2009	10/1/2019	0	10SP

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**Note 1:** Start and Stop Dates with interim redispach are determined based on customers choosing option to pursue redispach to start service at Requested Start and Stop Dates or earliest date possible.

**Note 2:** Start dates with and without redispach 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.

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

Customer	Study Number	Reservation	Engineering and Construction Cost of Upgrades Allocated to Customer for Revenue Requirements	<sup>1</sup> Letter of Credit Amount Required	<sup>2</sup> Potential Base Plan Engineering and Construction Funding Allowable	Notes	<sup>4</sup> Additional Engineering and Construction Cost for 3rd Party Upgrades	<sup>3</sup> Total Revenue Requirements for Assigned Upgrades Over Term of Reservation WITHOUT Potential Base Plan Funding Allocation	<sup>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
AEPM	AG2-2007-051	1283682	\$ -	\$ -	\$ -			\$ -	\$ -	\$ -	Schedule 9 Charges
AEPM	AG2-2007-107	1286446	\$ -	\$ -	\$ -			\$ -	\$ -	\$ -	Schedule 9 Charges
CWEP	AG2-2007-047	1283676	\$ -	\$ -	\$ -			\$ -	\$ -	\$ 4,104,000	\$ 4,104,000
KCPS	AG2-2007-109	1286498	\$ -	\$ -	\$ -			\$ -	\$ -	\$ 1,324,300	\$ 1,324,300
KEPC	AG2-2007-028	1281648	\$ -	\$ -	\$ -			\$ -	\$ -	\$ -	Schedule 9 Charges
KPP	AG2-2007-072	1285893	\$ -	\$ -	\$ -			\$ -	\$ -	\$ -	Schedule 9 Charges
MIDW	AG2-2007-012	1268955	\$ -	\$ -	\$ -			\$ -	\$ -	\$ 719,700	\$ 719,700
MIDW	AG2-2007-013	1268959	\$ -	\$ -	\$ -			\$ -	\$ -	\$ 143,940	\$ 143,940
MIDW	AG2-2007-014	1268965	\$ -	\$ -	\$ -			\$ -	\$ -	\$ 143,940	\$ 143,940
MIDW	AG2-2007-034	1281706	\$ -	\$ -	\$ -			\$ -	\$ -	\$ -	Schedule 9 Charges
MIDW	AG2-2007-078	1285947	\$ -	\$ -	\$ -			\$ -	\$ -	\$ 287,880	\$ 287,880
SPRM	AG2-2007-110	1286502	\$ -	\$ -	\$ -		6,500,000	\$ -	\$ -	\$ -	Schedule 9 Charges
WRGS	AG2-2007-011D	1268638	\$ -	\$ -	\$ -			\$ -	\$ -	\$ 1,140,000	\$ 1,140,000
WRGS	AG2-2007-017D	1278809	\$ -	\$ -	\$ -			\$ -	\$ -	\$ 6,840,000	\$ 6,840,000
WRGS	AG2-2007-018D	1278811	\$ -	\$ -	\$ -			\$ -	\$ -	\$ 6,840,000	\$ 6,840,000
WRGS	AG2-2007-019D	1278813	\$ -	\$ -	\$ -			\$ -	\$ -	\$ 2,394,000	\$ 2,394,000
WRGS	AG2-2007-092D	1286201	\$ -	\$ -	\$ -			\$ -	\$ -	\$ -	Schedule 9 Charges
<b>Grand Total</b>			\$ -	\$ -	\$ -		\$ 6,500,000	\$ -	\$ -	\$ -	

**Note 1:** Letter of Credit required for financial security for transmission owner for network upgrades is determined by allocated engineering and construction costs less engineering and construction costs for upgrades when network customer is the transmission owner less the E & C allocation of expedited projects. Letter of Credit is not required for upgrades fully funded by PTP base rate or base plan funding. 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 redispach. 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 redispach 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.

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

Customer	Study Number	Reservation	Engineering and Construction Cost of Upgrades Allocated to Customer for Revenue Requirements	<sup>1</sup> Letter of Credit Amount Required	<sup>2</sup> Potential Base Plan Engineering and Construction Funding Allowable	Notes	<sup>4</sup> Additional Engineering and Construction Cost for 3rd Party Upgrades	<sup>3</sup> Total Revenue Requirements for Assigned Upgrades Over Term of Reservation WITHOUT Potential Base Plan Funding Allocation	<sup>3 5</sup> Total Revenue Requirements for Assigned Upgrades Over Term of Reservation WITH Potential Base Plan Funding Allocation	Point-to-Point Base Rate Over Reservation Period	<sup>4</sup> Total Cost of Reservation Assignable to Customer Contingent Upon Base Plan Funding
<p><b>Note 5:</b> RR with base plan funding may increase or decrease even if no base plan funding is applicable to a particular request if another request that shares the upgrade is now full base plan funded resulting in a different amortization period for the upgrade and thus different RR.</p>											

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

**Customer Study Number**  
 AEPM AG2-2007-051

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
AEPM	1283682	WFEC	CSWS	152	6/1/2008	6/1/2013	10/1/2010	10/1/2015	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1283682	None					\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>						\$ -	\$ -	\$ -	\$ -	\$ -

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283682	DIANA - LONE STAR SOUTH 138KV CKT 1	12/1/2009	12/1/2010	4/1/2010	Yes

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283682	RIVERSIDE STATION - TULSA POWER STATION 138KV CKT 1	6/1/2010	6/1/2011	10/1/2010	Yes
	SILOAM CITY - SILOAM SPRINGS 161KV CKT 1	6/1/2010	6/1/2011		

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283682	BANN - RED SPRINGS REC 138KV CKT 1	7/1/2012	7/1/2012		
	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012		
	HUGO POWER PLANT - VALLIANT 345 KV WFEC	7/1/2012	7/1/2012		
	HUGO POWER PLANT 345/138KV TRANSFORMER CKT 1	7/1/2012	7/1/2012		

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

**Customer Study Number**  
 AEPM AG2-2007-107

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1286446	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286446	DIANA - LONE STAR SOUTH 138KV CKT 1	12/1/2009	12/1/2010	4/1/2010	Yes

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286446	RIVERSIDE STATION - TULSA POWER STATION 138KV CKT 1	6/1/2010	6/1/2011	10/1/2010	Yes
	SILLOAM CITY - SILOAM SPRINGS 161KV CKT 1	6/1/2010	6/1/2011		Yes

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

Customer Study Number  
 CWEP AG2-2007-047

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
CWEP	1283676	EES	SPA	12	6/1/2010	6/1/2040				\$ 4,104,000	\$ -	\$ -
										\$ 4,104,000	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1283676	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283676	BULL SHOALS - BULL SHOALS HES 161KV CKT 1	6/1/2010	6/1/2010		

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283676	3RDST - ARKOMA 161KV CKT 1	6/1/2017	6/1/2017		
	ASHDOWN WEST - CRAIG JUNCTION 138KV CKT 1	6/1/2013	6/1/2013		
	CARTHAGE (CRG X1) 161/69/13.8KV TRANSFORMER CKT 1	6/1/2013	6/1/2013		
	CARTHAGE (CRG X2) 161/69/13.8KV TRANSFORMER CKT 1	6/1/2013	6/1/2013		
	Multi - Stateline - Joplin - Reinmiller conversion	6/1/2016	6/1/2016		

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1283676	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012		
	HUGO POWER PLANT - VALLIANT 345 KV WFEC	7/1/2012	7/1/2012		
	HUGO POWER PLANT 345/138KV TRANSFORMER CKT 1	7/1/2012	7/1/2012		
	SUB 110 - ORONOGO JCT. - SUB 167 - RIVERTON 161KV CKT 1	6/1/2011	6/1/2011		

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available
1283676	CALICO ROCK - NORFORK 161KV CKT 1	12/1/2010	12/1/2010		
	DARDANELLE - RUSSELLVILLE SOUTH 161KV CKT 1 SWPA #1	6/1/2010	6/1/2010		
	DARDANELLE - RUSSELLVILLE SOUTH 161KV CKT 1 SWPA #2	6/1/2010	6/1/2010		

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

**Customer**      **Study Number**  
 KCPS            AG2-2007-109

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
KCPS	1286498	KCPL	EES	82	1/1/2009	6/1/2010	10/1/2009	3/1/2011		\$ 1,324,300	\$ -	\$ -
										\$ 1,324,300	\$ -	\$ -

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

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286498	ALUMAX TAP - BANN 138KV CKT 1			6/1/2008	6/1/2008
	LACYGNE - WEST GARDNER 345KV CKT 1			6/1/2006	6/1/2006
	NORTHWEST - WOODWARD 345KV CKT 1			1/1/2010	1/1/2010
	RENO 345/115KV CKT 1			6/1/2009	6/1/2009
	RENO 345/115KV CKT 2			6/1/2010	6/1/2010
	SUMMIT - RENO 345KV			6/1/2010	6/1/2010
	WICHITA - RENO 345KV			6/1/2009	6/1/2009
	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

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

**Customer Study Number**  
 KEPC AG2-2007-028

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
KEPC	1281648	WR	EDE	6	1/1/2008	1/1/2019	10/1/2009	10/1/2020	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1281648	None					\$ -	\$ -	\$ -
<b>Total</b>						<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281648	BISMARCK JUNCTION SWITCHING STATION - FARMERS CONSUMER CO-OP 115KV CKT 1	6/1/2010	6/1/2011	10/1/2010	
	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2011	6/1/2011		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2010	6/1/2012	10/1/2011	
	PLATTE CITY - SMITHVILLE 161KV CKT 1	12/1/2010	12/1/2010		
	South Harper 161 kV cut-in to Stilwell-Archie JCT 161 kV line	6/1/2010	10/1/2010	10/1/2010	

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281648	Multi - Stateline - Joplin - Reinmiller conversion	6/1/2016	6/1/2016		
	SILOAM CITY - SILOAM SPRINGS 161KV CKT 1	6/1/2010	6/1/2011		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281648	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2011	10/1/2010	
	REDEL - STILWELL 161KV CKT 1	6/1/2010	6/1/2011	10/1/2010	

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

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

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

**Customer** Study Number  
KPP AG2-2007-072

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
KPP	1285893	WR	WR	8	11/1/2007	11/1/2017	6/1/2012	6/1/2022	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

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

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285893	AUBURN ROAD (AUBRN77X) 230/115/13.8KV TRANSFORMER CKT 2			6/1/2013	6/1/2013
	CHISHOLM - RIPLEY 69KV CKT 1			6/1/2010	6/1/2010
	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1			6/1/2010	6/1/2012
	EAST MANHATTAN - NW MANHATTAN 230/115KV			6/1/2010	12/1/2011
	East Manhattan to Mcdowell 230 kV			6/1/2010	6/1/2012
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1			6/1/2010	6/1/2012

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285893	AQUARIUS - HUDSON JUNCTION 69KV CKT 1			6/1/2018	6/1/2018
	AQUARIUS - LITCHFIELD 69KV CKT 1			6/1/2018	6/1/2018
	BPU - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON SWITCHING STATION 115KV CKT 1			6/1/2010	6/1/2012
	HUDSON JUNCTION - PITTSBURG 69KV CKT 1			6/1/2018	6/1/2018
	LITCHFIELD - AQUARIUS - HUDSON JUNCTION 69KV CKT 1			6/1/2013	6/1/2013
	SEVENTEENTH (J) 138/69/11 295KV TRANSFORMER CKT 2			6/1/2010	6/1/2013
	STRANGER CREEK - NW LEAVENWORTH 115KV			6/1/2010	6/1/2011

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285893	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1 Displacement			6/1/2010	6/1/2012
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement			6/1/2010	6/1/2011

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

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

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

**Customer** Study Number  
 MIDW AG2-2007-012

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1268955	WR	WR	5	6/1/2008	6/1/2013	10/1/2009	10/1/2014	\$ -	\$ 719,700	\$ -	\$ -
									\$ -	\$ 719,700	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1268955	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268955	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	1/1/2011	10/1/2010	
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	1/1/2012	10/1/2010	
	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2011	6/1/2011		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2010	6/1/2012	10/1/2011	
	South Harper 161 kV cut-in to Stilwell-Archie JCT 161 kV line	6/1/2010	6/1/2011	10/1/2010	

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268955	KINSLEY 115KV Capacitor	6/1/2011	6/1/2011		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268955	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2011	10/1/2010	
	REDEL - STILWELL 161KV CKT 1	6/1/2010	6/1/2011	10/1/2010	

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

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

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

**Customer** Study Number  
 MIDW AG2-2007-013

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1268959	WR	WR	1	6/1/2008	6/1/2013	10/1/2009	10/1/2014	\$ -	\$ 143.940	\$ -	\$ -
									\$ -	\$ 143.940	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1268959	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268959	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	1/1/2011	10/1/2010	
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	1/1/2012	10/1/2010	
	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2011	6/1/2011		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2010	6/1/2012	10/1/2011	

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268959	KINSLEY 115KV Capacitor	6/1/2011	6/1/2011		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268959	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2011	10/1/2010	

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

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

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

**Customer** Study Number  
 MIDW AG2-2007-014

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1268965	WR	WR	1	6/1/2008	6/1/2013	10/1/2009	10/1/2014	\$ -	\$ 143.940	\$ -	\$ -
									\$ -	\$ 143.940	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1268965	None					\$ -	\$ -	\$ -
Total						\$ -	\$ -	\$ -

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268965	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	1/1/2011	10/1/2010	
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	1/1/2012	10/1/2010	
	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2011	6/1/2011		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2010	6/1/2012	10/1/2011	

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268965	KINSLEY 115KV Capacitor	6/1/2011	6/1/2011		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268965	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2011	10/1/2010	

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

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

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

**Customer** Study Number  
 MIDW AG2-2007-034

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1281706	WR	WR	25	3/1/2008	3/1/2027	6/1/2012	6/1/2031	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1281706	None					\$ -	\$ -	\$ -	\$ -	\$ -
					Total	\$ -	\$ -	\$ -	\$ -	\$ -

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281706	AUBURN ROAD (AUBRN77X) 230/115/13.8KV TRANSFORMER CKT 2		6/1/2013	6/1/2013	
	CHISHOLM - RIPLEY 69KV CKT 1		6/1/2010	6/1/2010	
	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1		6/1/2010	6/1/2012	10/1/2011 Yes
	EAST MANHATTAN - NW MANHATTAN 230/115KV		6/1/2010	12/1/2011	10/1/2011 Yes
	East Manhattan to McDowell 230 kV		6/1/2010	6/1/2012	10/1/2011 Yes
	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1 MIDW		6/1/2018	6/1/2018	
	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1 WERE		6/1/2018	6/1/2018	
	HUNTSVILLE - ST_JOHN 115KV CKT 1		6/1/2018	6/1/2018	

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281706	AQUARIUS - HUDSON JUNCTION 69KV CKT 1		6/1/2018	6/1/2018	
	AQUARIUS - LITCHFIELD 69KV CKT 1		6/1/2018	6/1/2018	
	BPU - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON SWITCHING STATION 115KV CKT 1		6/1/2010	6/1/2012	10/1/2011 Yes
	HUDSON JUNCTION - PITTSBURG 69KV CKT 1		6/1/2018	6/1/2018	
	KINSLEY 115KV Capacitor		6/1/2011	6/1/2011	
	LITCHFIELD - AQUARIUS - HUDSON JUNCTION 69KV CKT 1		6/1/2013	6/1/2013	
	LYONS - WHEATLAND 115KV CKT 1 MIDW		6/1/2018	6/1/2018	
	LYONS - WHEATLAND 115KV CKT 1 WERE		6/1/2018	6/1/2018	
	SEVENTEENTH (J) 138/69/11.295KV TRANSFORMER CKT 2		6/1/2010	6/1/2013	10/1/2010 Yes
	STRANGER CREEK - NW LEAVENWORTH 115KV		6/1/2010	6/1/2011	10/1/2010 Yes

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1281706	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1 Displacement		6/1/2010	6/1/2012	Yes
	NEOSHO - NORTHEAST PARSONS 138KV CKT 1		6/1/2010	6/1/2011	10/1/2010 Yes
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement		6/1/2010	6/1/2011	Yes

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

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

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

**Customer** Study Number  
 MIDW AG2-2007-078

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
MIDW	1285947	WR	WR	2	6/1/2008	6/1/2013	10/1/2009	10/1/2014	\$ -	\$ 287,880	\$ -	\$ -
									\$ -	\$ 287,880	\$ -	\$ -

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

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285947	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	6/1/2010	1/1/2011	10/1/2010	
	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	6/1/2010	1/1/2012	10/1/2010	
	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	6/1/2011	6/1/2011		
	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	6/1/2010	6/1/2012	10/1/2011	

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285947	KINSLEY 115KV Capacitor	6/1/2011	6/1/2011		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2013	6/1/2013		

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1285947	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1 Displacement	6/1/2010	6/1/2012		
	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2010	6/1/2011	10/1/2010	
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	6/1/2010	6/1/2011		

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

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

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

**Customer Study Number**  
 SPRM AG2-2007-110

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
SPRM	1286502	WR	SPA	25	12/1/2008	12/1/2028	10/1/2009	10/1/2029	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1286502	None					\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>						\$ -	\$ -	\$ -	\$ -	\$ -

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286502	AUBURN ROAD (AUBRN77X) 230/115/13.8KV TRANSFORMER CKT 2	6/1/2013	6/1/2013		

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286502	BROOKLINE - JUNCTION 161KV CKT 1	6/1/2017	6/1/2017		
	SILOAM CITY - SILOAM SPRINGS 161KV CKT 1	6/1/2010	6/1/2011		

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

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

Third Party Limitations.

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available	Allocated E & C Cost	Total E & C Cost
1286502	HUBEN 345/161KV TRANSFORMER CKT 1	6/1/2017	6/1/2017			\$ 6,500,000	\$ 6,500,000
<b>Total</b>						\$ 6,500,000	\$ 6,500,000

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

**Customer**      **Study Number**  
 WRGS            AG2-2007-011D

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
WRGS	1268638	KCPL	AMRN	20	6/1/2010	6/1/2015			\$ -	\$ 1,140,000	\$ -	\$ -
									\$ -	\$ 1,140,000	\$ -	\$ -

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

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1268638	HUGO POWER PLANT - VALLIANT 345 KV AEPW	7/1/2012	7/1/2012		
	HUGO POWER PLANT - VALLIANT 345 KV WFEC	7/1/2012	7/1/2012		
	HUGO POWER PLANT 345/138KV TRANSFORMER CKT 1	7/1/2012	7/1/2012		
	SUMMIT - RENO 345KV	6/1/2010	6/1/2010		
	WICHITA - RENO 345KV	6/1/2009	6/1/2009		

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

**Customer**      **Study Number**  
 WRGS            AG2-2007-017D

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
WRGS	1278809	EES	SPA	20	3/1/2010	3/1/2040			\$ -	\$ 6,840,000	\$ -	\$ -
									\$ -	\$ 6,840,000	\$ -	\$ -

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

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available
1278809	ASHERVILLE - IDALIA 161KV CKT 1 SWPA		6/1/2011	6/1/2011	
	ASHERVILLE - POPLAR BLUFF 161KV CKT 1 SWPA		6/1/2012	6/1/2012	

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available
1278809	CALICO ROCK - NORFORK 161KV CKT 1		12/1/2010	12/1/2010	

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

**Customer**      **Study Number**  
 WRGS            AG2-2007-018D

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
WRGS	1278811	EES	SPA	20	3/1/2010	3/1/2040			\$ -	\$ 6,840,000	\$ -	\$ -
									\$ -	\$ 6,840,000	\$ -	\$ -

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

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available
1278811	HERGETT - JONESBORO 161KV CKT 1 SWPA	6/1/2013	6/1/2013		
				Total	

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

**Customer Study Number**  
 WRGS AG2-2007-019D

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
WRGS	1278813	EES	SPA	7	3/1/2010	3/1/2040			\$ -	\$ 2,394,000	\$ -	\$ -
									\$ -	\$ 2,394,000	\$ -	\$ -

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

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Start Date	Redispatch Available
1278813	HERGETT - JONESBORO 161KV CKT 1 SWPA	6/1/2013	6/1/2013		
Total					

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

**Customer** Study Number  
 WRGS AG2-2007-092D

Customer	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date Without Redispatch	Deferred Stop Date Without Redispatch	Potential Base Plan Funding Allowable	Point-to-Point Base Rate	Allocated E & C Cost	Total Revenue Requirements
WRGS	1286201	SECI	WR	99	3/1/2009	3/1/2019	6/1/2012	6/1/2022	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available	Base Plan Funding for Wind	Directly Assigned for Wind	Allocated E & C Cost	Total E & C Cost	Total Revenue Requirements
1286201	None					\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>						\$ -	\$ -	\$ -	\$ -	\$ -

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286201	AUBURN ROAD (AUBRN77X) 230/115/13.8KV TRANSFORMER CKT 2		6/1/2013	6/1/2013	
	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1		6/1/2010	6/1/2012	10/1/2011 Yes
	EAST MANHATTAN - NW MANHATTAN 230/115KV		6/1/2010	12/1/2011	10/1/2011 Yes
	East Manhattan to Mcdowell 230 kV		6/1/2010	6/1/2012	10/1/2011 Yes

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286201	AQUARIUS - HUDSON JUNCTION 69KV CKT 1		6/1/2018	6/1/2018	
	AQUARIUS - LITCHFIELD 69KV CKT 1		6/1/2018	6/1/2018	
	BPU - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON SWITCHING STATION 115KV CKT 1		6/1/2010	6/1/2012	10/1/2011 Yes
	GILL ENERGY CENTER WEST - WACO 138KV CKT 1		6/1/2010	6/1/2012	10/1/2011 Yes
	HUDSON JUNCTION - PITTSBURG 69KV CKT 1		6/1/2018	6/1/2018	
	KINSLEY 115KV Capacitor		6/1/2011	6/1/2011	
	LITCHFIELD - AQUARIUS - HUDSON JUNCTION 69KV CKT 1		6/1/2013	6/1/2013	
	SEVENTEENTH (J) 138/69/11.295KV TRANSFORMER CKT 2		6/1/2010	6/1/2013	10/1/2010 Yes
	STRANGER CREEK - NW LEAVENWORTH 115KV		6/1/2010	6/1/2011	10/1/2010 Yes

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

Reservation	Upgrade Name	DUN	EOC	Earliest Service Date	Redispatch Available
1286201	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1 Displacement		6/1/2010	6/1/2012	Yes
	NEOSHO - NORTHEAST PARSONS 138KV CKT 1		6/1/2010	6/1/2011	10/1/2010 Yes
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement		6/1/2010	6/1/2011	Yes

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

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

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

Transmission Owner	Upgrade	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)	Estimated Engineering & Construction Cost
	None				\$ -

**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)
KACP	REDEL - STILWELL 161KV CKT 1	Reconductor line with 1192 ACSS and upgrade terminal equipment for 2000 amps	6/1/2010	6/1/2011
SWPA	CALICO ROCK - NORFORK 161KV CKT 1	Replace buswork within bay and change metering CT ratio, replace wavetraps. Entergy must also reconductor their line to increase the rating.	12/1/2010	12/1/2010
SWPA	DARDANELLE - RUSSELLVILLE SOUTH 161KV CKT 1 SWPA #1	Replace wave trap, disconnect switches, current transformers, and breaker. Bus will limit rating to 1340 amps.	6/1/2010	6/1/2010
SWPA	DARDANELLE - RUSSELLVILLE SOUTH 161KV CKT 1 SWPA #2	Replace the bus within the bay for the Russellville line.	6/1/2010	6/1/2010
WERE	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1 Displacement	Replace Disconnect Switches, Wavetrap, Breaker, Jumpers	6/1/2010	6/1/2012
WERE	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	Replace bus and Jumpers at NE Parsons 138 kV substation	6/1/2010	6/1/2011
WERE	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	Add third 345-138 kV transformer at Rose Hill	6/1/2010	6/1/2011

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

Transmission Owner	Upgrade	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)
AEPW	DIANA - LONE STAR SOUTH 138KV CKT 1	Replace switches and reset CT	12/1/2009	12/1/2010
MIDW	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1 MIDW	Tear down and rebuild 73.4% Ownership 28.79 mile HEC-Huntsville 115 kV line and replace CT, wavetrap and relays.	6/1/2018	6/1/2018
MIDW	HUNTSVILLE - ST. JOHN 115KV CKT 1	Rebuild 26.5 miles Huntsville - St. John 115 kV line and replace CT, wavetrap, breakers, and relays.	6/1/2018	6/1/2018
MIPU	PLATTE CITY - SMITHVILLE 161KV CKT 1	Replace wavetrap between Platte City and Smithville.	12/1/2010	12/1/2010
MIPU	South Harper 161 kV cut-in to Stilwell-Archie JCT 161 kV line	To tap Stilwell-Archie JCT 161 kV line into South Harper 161 kV sub and make it two new 161 kV sections: Stilwell-South Harper and Archie JCT- South Harper	6/1/2010	6/1/2011
OKGE	Multi-Dover-Twin Lake_Crescent 138 kV	Convert 69 kV to 138 kV and install terminal equipment at Dover SW; Instal 7 miles of new 138 kV fro WFEC Twin Lakes to OGE Crescent substation	6/1/2014	6/1/2014
SWPA	BULL SHOALS - BULL SHOALS HES 161KV CKT 1	Replace buswork in Bull Shoals switchyard	6/1/2010	6/1/2010
WERE	27TH & CROCO - TECUMSEH HILL 115KV CKT 1	Tear down and rebuild 2.72 mile Tecumseh Hill-27th & Croco 115 kV line as a single circuit.	6/1/2010	1/1/2011
WERE	27TH & CROCO JUNCTION - 41ST & CALIFORNIA 115KV CKT 1	Tear down and rebuild 3.43 mile 27th & Croco-41ST & CALIFORNIA 115 kV line as a single circuit.	6/1/2010	1/1/2012
WERE	AUBURN ROAD (AUBRN77X) 230/115/13.8KV TRANSFORMER CKT 2	Add second Auburn 230-115 kV transformer.	6/1/2013	6/1/2013
WERE	BISMARCK JUNCTION SWITCHING STATION - FARMERS CONSUMER CO-OP 115KV CKT 1	Rebuild 2.9 mi 115 kV line Bismark to COOP	6/1/2010	6/1/2011
WERE	CHISHOLM - RIPLEY 69KV CKT 1	Tear down and rebuild 2.40 miles using single 1192.5 ACSR operated at 69 kV.	6/1/2010	6/1/2010
WERE	CIRCLE - HUTCHINSON GAS TURBINE STATION 115KV CKT 1	Rebuild Circle - HEC GT 115 kV line.	6/1/2011	6/1/2011
WERE	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1	Uprate JEC- E.Manhattan 230 kV line to 100 deg C operation by raising structures	6/1/2010	6/1/2012
WERE	EAST MANHATTAN - NW MANHATTAN 230/115KV	Tap the Concordia - East Manhattan 230kV line and add a new substation "NW Manhattan"; Add a 230kV/115kV transformer and tap the KSU - Wildcat 115kV line into NW Manhattan	6/1/2010	12/1/2011
WERE	East Manhattan to McDowell 230 kV	The East Manhattan-McDowell 115 kV is built as a 230 kV line, but is operated at 115 kV. Substation work will have to be performed in order to convert this line.	6/1/2010	6/1/2012
WERE	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1 WERE	Tear down and rebuild 26.6% Ownership 28.79 mile HEC-Huntsville 115 kV line and replace CT, wavetrap and relays.	6/1/2018	6/1/2018
WERE	LAWRENCE HILL - MOCKINGBIRD HILL SWITCHING STATION 115KV CKT 1	Rebuild 5.49 miles	6/1/2010	6/1/2012
WFEC	Norman Area Voltage Conversion	Convert Canadian - OU - Cole - Criner to 138 KV and Canadian-Goldsby-OU-W Norman-Acme-Franklin	6/1/2010	6/1/2010

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

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

Transmission Owner	Upgrade	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)
AEPW	ASHDOWN WEST - CRAIG JUNCTION 138KV CKT 1	Rebuild 2.45 miles of 795 ACSR with 1272 ACSR	6/1/2013	6/1/2013
AEPW	RIVERSIDE STATION - TULSA POWER STATION 138KV CKT 1	Install 2% Reactor at Tulsa Power Station	6/1/2010	6/1/2011
AEPW	SILOAM CITY - SILOAM SPRINGS 161KV CKT 1	Replace switches & jumpers @ AEP Siloam Springs.	6/1/2010	6/1/2011
EMDE	Multi - Stateline - Joplin - Reinmiller conversion	Tear down the Riverton to Joplin 59 69 kV line, rebuilding the line to 161 kV from Stateline to outside Joplin 59 sub. Tear down and rebuild Joplin 59 to Gateway to Pilsbury to Reinmiller, converting those 69 kV lines to 161 kV. Tap the 161 kV line betwe	6/1/2016	6/1/2016
MIDW	KINSLEY 115KV Capacitor	Install 10MVAR capacitors at Kinsley 115 kV	6/1/2011	6/1/2011
MIDW	LYONS - WHEATLAND 115KV CKT 1 MIDW	Rebuild 98.5% ownership of 19.4 miles	6/1/2018	6/1/2018
OKGE	3RDST - ARKOMA 161KV CKT 1	Replace 8-1200A switches & 2-wave traps.	6/1/2017	6/1/2017
SPRM	BROOKLINE - JUNCTION 161KV CKT 1	Reconductor 1192 AAC with 1158.4 ACSS/TW 3.4 miles	6/1/2017	6/1/2017
SWPA	ASHERVILLE - IDALIA 161KV CKT 1 SWPA	Reconductor line	6/1/2011	6/1/2011
SWPA	ASHERVILLE - POPLAR BLUFF 161KV CKT 1 SWPA	Replace disconnect switches, replace some structures and resag line	6/1/2012	6/1/2012
SWPA	CARTHAGE (CRG X1) 161/69/13.8KV TRANSFORMER CKT 1	Replace transformer 1 with larger unit -125 MVA	6/1/2013	6/1/2013
SWPA	CARTHAGE (CRG X2) 161/69/13.8KV TRANSFORMER CKT 1	Replace transformer 2 with larger unit -125 MVA	6/1/2013	6/1/2013
SWPA	HERGETT - JONESBORO 161KV CKT 1 SWPA	Increase the CT ratio to 1200/5. This would involve changing taps on the CT, adjusting the scaling on a panel meter, and changing relay settings.	6/1/2013	6/1/2013
WERE	AQUARIUS - HUDSON JUNCTION 69KV CKT 1	Rebuild 0.72 miles	6/1/2018	6/1/2018
WERE	AQUARIUS - LITCHFIELD 69KV CKT 1	Rebuild 5.54 miles	6/1/2018	6/1/2018
WERE	BPU - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON SWITCHING STATION 115KV CKT 1	Rebuild Line	6/1/2010	6/1/2012
WERE	GILL ENERGY CENTER WEST - WACO 138KV CKT 1	Tear down and rebuild Gill - Waco with bundled 1192.5 ACSR conductor	6/1/2010	6/1/2012
WERE	HUDSON JUNCTION - PITTSBURG 69KV CKT 1	Rebuild 1.41 miles	6/1/2018	6/1/2018
WERE	LITCHFIELD - AQUARIUS - HUDSON JUNCTION 69KV CKT 1	Replace 69 kV disconnect switches at Aquarius.	6/1/2013	6/1/2013
WERE	LYONS - WHEATLAND 115KV CKT 1 WERE	Rebuild 1.5% ownership of 19.4 miles	6/1/2018	6/1/2018
WERE	SEVENTEENTH (I) 138/69/11.295KV TRANSFORMER CKT 2	Install second 17th St. 138-69 kV transformer	6/1/2010	6/1/2013
WERE	STRANGER CREEK - NW LEAVENWORTH 115KV	Rebuild 11.62-mile Jarbalo-NW Leavenworth 115 kV line and tap in & out of Stranger 115 kV	6/1/2010	6/1/2011
WERE	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	Upgrade 0.24 mile TEC-Tecumseh Hill 115 kV line to 100 degree operation.	6/1/2013	6/1/2013

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

Transmission Owner	Upgrade	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)
AEPW	ALUMAX TAP - BANN 138KV CKT 1	Replace six (6) 138 kV switches, five at Bann & one at Alumax Tap. Rebuild 0.67 miles of 1024 ACAR with 2156 ACSR. Replace wavetrap & jumpers @ Bann. Replace breaker 3300 @ Bann.	6/1/2008	6/1/2008
AEPW	BANN - RED SPRINGS REC 138KV CKT 1	Replace 138 kV breakers 3300 & 3310	7/1/2012	7/1/2012
AEPW	HUGO POWER PLANT - VALLIANT 345 KV AEPW	Valliant 345 KV line terminal	7/1/2012	7/1/2012
EMDE	SUB 110 - OROGONO JCT. - SUB 167 - RIVERTON 161KV CKT 1	Reconductor Oronogo 59467 to Riverton 59469 with Bundled 556 ACSR	6/1/2011	6/1/2011
KACP	LACYGNE - WEST GARDNER 345KV CKT 1	KCPL Sponsored Project to Reconductor Line to be In-Service by 6/1/2006	6/1/2006	6/1/2006
OKGE	NORTHWEST - WOODWARD 345KV CKT 1	Build 120 miles of 345 kV	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
WERE	RENO 345/115KV CKT 1	New step-down transformer at a new substation in Reno County east northeast of Hutchinson	6/1/2009	6/1/2009
WERE	RENO 345/115KV CKT 2	Install 2nd step-down transformer at Reno County substation east northeast of Hutchinson	6/1/2010	6/1/2010
WERE	SUMMIT - RENO 345KV	Install new 50.55-mile 345 kV line from Reno county to Summit; 31 miles of 115 kV line between Circle and S Philips would be rebuilt as double circuit with the 345 kV line to minimize ROW impacts; Substation work required at Summit for new 345 kV terminal	6/1/2010	6/1/2010
WERE	WICHITA - RENO 345KV	40 mile 345 kV transmission line from existing Wichita 345 kV substation to a new 345-115 kV substation in Reno County east northeast of Hutchinson (Wichita to Reno)	6/1/2009	6/1/2009
WFEC	HUGO POWER PLANT - VALLIANT 345 KV WFEC	New 19 miles 345 KV	7/1/2012	7/1/2012
WFEC	HUGO POWER PLANT 345/138KV TRANSFORMER CKT 1	New 345/138 kv Auto	7/1/2012	7/1/2012

**Table 5 - Third Party Facility Constraints**

Transmission Owner	UpgradeName	Solution	Earliest Date Upgrade Required (DUN)	Estimated Date of Upgrade Completion (EOC)	Estimated Engineering & Construction Cost
AECI	HUBEN 345/161KV TRANSFORMER CKT 1	Install a second Huben 345/161kV transformer	6/1/2017	6/1/2017	\$ 6,500,000

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

Upgrade: BPU - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON  
 Limiting Facility: BPU - CITY OF MCPHERSON JOHNS-MANVILLE - EAST MCPHERSON  
 Direction: TO->FROM  
 Line Outage: EAST MCPHERSON SWITCHING STATION - REFINRY3 115.00 115KV  
 Flowgate: 2007AG2AFS1T303020SP  
 Date Redispatch Needed: Starting 2010 6/1 - 10/1 Unit EOC of Upgrade  
 Season Flowgate Identified: 2010 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount							
1281706	5.8	23.3							
1285893	1.6	23.3							
1286201	16	23.3							
Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083MKEC	A. M. MULLERGEN GENERATOR 115KV		63	0.02252	-0.56335	41
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083MIDW	KNOLL 115KV		75.60001	0.02128	-0.56212	41
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083MIDW	SMOKEY HILLS 34KV		25	0.02132	-0.56215	41
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083MKEC	CIMARRON RIVER 115KV		44	0.01244	-0.55327	42
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	CNTRPL2 34 500 115KV		99	0.01168	-0.55248	42
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083MKEC	GRAY COUNTY WIND FARM 115KV		36	0.01347	-0.55493	42
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083MKEC	RUDSON LARGE 115KV		95.93536	0.01344	-0.55427	42
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	AES 161KV		320	-0.00053	-0.5403	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083MIPU	ARIES 161KV		18.33311	-0.00004	-0.54079	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	ARSENAL HILL 138KV		455	-0.00032	-0.54051	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	ARSENAL HILL 69KV		90	-0.00032	-0.54051	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083EMDE	ASBURY 161KV		192	-0.00085	-0.53998	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	BPS GT1G 13.800 115KV		80	0.00204	-0.54287	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	BPS GT2G 13.800 115KV		45.19951	0.00204	-0.54287	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	BPS ST3G 13.800 115KV		49.99482	0.00204	-0.54287	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083KACP	BULL CREEK 161KV		61.6	-0.00007	-0.54076	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OPPD	CASS 1G 15.000 345KV		42.51929	0.00162	-0.54245	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OPPD	CASS 2G 15.000 345KV		52.99999	0.00162	-0.54245	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	CENTERVAL WIND 34KV		120	-0.0008	-0.54003	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	CHANUTE 69KV		54.8	-0.00131	-0.53952	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	CITY OF AUGUSTA 69KV		20	-0.00333	-0.5375	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	CITY OF BURLINGTON 69KV		55.4	-0.00228	-0.53855	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083KACP	CITY OF HIGGINSVILLE 69KV		36	0.00007	-0.5409	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	CITY OF WINFIELD 69KV		31.2	-0.00283	-0.538	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083MKEC	CLIFTON 115KV		65	0.0041	-0.54483	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	COFFEY COUNTY NO. 2 SHARPE 69KV		19.98	-0.00228	-0.53855	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	COGENTRIX 345KV		222.0668	-0.00083	-0.54	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	COL COG7 115.00 115KV		75	0.00218	-0.54302	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	COMANCHE 138KV		145	-0.00005	-0.54078	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	COMANCHE 69KV		60	-0.00007	-0.54076	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	COOPER1G 22.000 345KV		551.2802	0.00138	-0.54222	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	CRETE G 34.500 115KV		15.7	0.0021	-0.54293	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	D HENRYG 34.500 115KV		18	0.00281	-0.54364	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	DENVER G 34.500 115KV		34.32393	0.00281	-0.54364	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	EASTMAN 138KV		356.7947	-0.00034	-0.54049	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	EGY CTRG 13.800 115KV		54	0.00278	-0.54362	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083EMDE	ELK RIVER 345KV		44.986	-0.00264	-0.53799	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	EMPORIA ENERGY CENTER 345KV		610	-0.00036	-0.54047	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	EVANS ENERGY CENTER 138KV		560	-0.00424	-0.53658	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	FAIRBRYG 34.500 115KV		15.3	0.0023	-0.54313	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	FITZHUGH 161KV		125.4	-0.00048	-0.54034	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	FLINT CREEK 161KV		428	-0.00076	-0.54007	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	FPLWIND2 34KV		59	-0.00077	-0.54012	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OPPD	FREM 9G 13.800 69KV		90	0.0018	-0.54267	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OPPD	FT CAL1G 22.000 4KV		378	0.00164	-0.54247	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	GENTLM1G 23.000 230KV		463	0.00478	-0.54561	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	GENTLM2G 24.000 345KV		443.3608	0.0048	-0.54572	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	GILL ENERGY CENTER 138KV		155	-0.00345	-0.53738	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	GILL ENERGY CENTER 69KV		52	-0.00353	-0.5373	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	GT 1G 115KV		40	0.00283	-0.54376	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083KACP	HAWTHORN 161KV		517.7988	0.00017	-0.541	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	HORSESHOE LAKE 138KV		796	-0.00087	-0.53996	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	HORSESHOE LAKE 69KV		16	-0.00088	-0.53997	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083KACP	IATAN 345KV		371	0.00057	-0.5414	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083KACP	IATAN 345KV		1806	0.00057	-0.5414	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	JEFFREY ENERGY CENTER 230KV		440	0.00108	-0.5419	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	JEFFREY ENERGY CENTER 345KV		874	0.00147	-0.5423	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	KNOXLEE 138KV		225	-0.00034	-0.54049	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083MIPU	LAKE ROAD 161KV		35	0.00064	-0.54147	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083MIPU	LAKE ROAD 34KV		92	0.00064	-0.54147	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083EMDE	LARUSSEL 161KV		100	-0.0007	-0.54013	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083WERE	LAWRENCE ENERGY CENTER 230KV		223.9294	-0.00027	-0.5411	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	LEBROCK 345KV		517.1123	-0.0003	-0.54048	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	LEBERMAN 138KV		174	-0.00033	-0.5405	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	MCCLAIN 138KV		470	-0.00084	-0.53999	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083KACP	MONTR0SE 161KV		359.7142	-0.00004	-0.54079	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083EMDE	MRWYG11 34.500 230KV		100	0.00313	-0.54396	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	MUSKOGEE 161KV		166	-0.00076	-0.54007	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	MUSKOGEE 345KV		154	-0.00071	-0.54007	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	MUSTANG 138KV		351	-0.00088	-0.53995	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	MUSTANG 69KV		51.72168	-0.00088	-0.53995	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OPPD	N OMA 1G 13.800 2KV		48.5	0.00162	-0.54245	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OPPD	N OMA 2G 13.800 2KV		80.59999	0.00161	-0.54244	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OPPD	N OMA 3G 13.800 2KV		80.59999	0.00161	-0.54244	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OPPD	N OMA 4G 15.000 2KV		107.4	0.00161	-0.54244	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OPPD	N OMA 5G 20.000 4KV		173.9	0.00161	-0.54244	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	N PLATTG 13.800 115KV		15.40679	0.00467	-0.5455	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083KACY	NEARMAN 161KV		77	0.00014	-0.54097	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083KACY	NEARMAN 20KV		235	0.00014	-0.54097	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OPPD	NEBCTY1G 18.000 4KV		466	0.00158	-0.54241	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OPPD	NEBCTY2G 23.000 345KV		503	0.00158	-0.54241	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	NORTHEASTERN STATION 138KV		480	-0.00091	-0.53992	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	NORTHEASTERN STATION 345KV		625	-0.00094	-0.53989	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	OEC 345KV		390.4801	-0.00084	-0.53999	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083EMDE	OZARK BEACH 161KV		16	-0.00053	-0.5403	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083AEPW	PIRKEY GENERATION 138KV		288	-0.00034	-0.54049	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	PLATTE1G 13.800 115KV		71.51868	-0.00297	-0.5438	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083KACY	QUINDARO 161KV		129.4176	0.00014	-0.54097	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083KACY	QUINDARO 69KV		136.3562	0.00014	-0.54097	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	REDBUD 345KV		43.60958	-0.00092	-0.53991	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083EMDE	RIVERTON 161KV		100.0327	-0.00083	-0.54	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083EMDE	RIVERTON 69KV		44.07887	-0.0008	-0.54003	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	SEMINOLE 138KV		334.858	-0.00076	-0.54007	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083OKGE	SEMINOLE 34 345KV		1015	-0.00073	-0.54004	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	SHELDN1G 13.800 115KV		68.40001	0.002	-0.54283	43
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.54083NPPD	SHELDN2G 13.800 115KV		81	0.002		

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

Reservation	Relief Amount	Aggregate Relief Amount							
1283682	2.5	5.4							
1286446	2.9	5.4							
Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	EASTMAN 138KV	358	0.0254	-0.48119	11
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	LEBROCK 345KV	518	0.02503	-0.48082	11
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	PIRKEY GENERATION 138KV	288	0.01208	-0.46787	11
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	WELSH 345KV	1044	0.02447	-0.48026	11
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	CELE	ACADIA 138KV	174	0.03032	-0.45881	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	AES 161KV	320	-0.00181	-0.45398	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WFEC	ANADARKO 138KV	284.9048	-0.00322	-0.45257	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	EMDE	ASBURY 161KV	192	-0.00182	-0.45397	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	LEPA	BAYOU RAMOS 138KV	20.03136	0.00251	-0.4583	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	BLACKHAWK 115KV	220	-0.00254	-0.45325	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WFEC	BLUE CANYON WIND FARM 138KV	152	-0.00318	-0.45261	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	GRDA	BOOMER 69KV	24	-0.00264	-0.45315	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	CAPROCK 0KV	24	-0.00262	-0.45317	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SWPA	CARTHAGE 69KV	12	-0.00178	-0.45403	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	CENTENIAL WIND 34KV	120	-0.00283	-0.45296	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	CHANUTE 69KV	45.393	-0.0019	-0.45389	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	CITY OF AUGUSTA 69KV	12	-0.00194	-0.45385	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	CITY OF BURLINGTON 69KV	23.022	-0.0019	-0.45399	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	LEPA	CITY OF HOUMA SUB 115KV	57	0.00207	-0.45786	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	CITY OF MULVANE 69KV	4.393	-0.00193	-0.45384	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	CLAY CENTER JUNCTION 115KV	6.7	-0.00174	-0.45405	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.61	-0.0018	-0.45399	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	COGENTRIX 345KV	200	-0.00241	-0.45338	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	COMANCHE 138KV	145	-0.00307	-0.45272	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	COMANCHE 69KV	60	-0.00314	-0.45265	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	CUNNINGHAM 230KV	56	-0.00264	-0.45315	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	CZ 69KV	37.283	-0.00258	-0.45321	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	CELE	DOLET HILLS 345KV	371.2379	0.00952	-0.46531	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	EMDE	ELK RIVER 345KV	67.754	-0.0019	-0.45389	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	ELLIS 69KV	6	-0.00177	-0.45402	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	CELE	EVANGELINE 230KV	194.5714	0.00341	-0.45926	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	EVANS ENERGY CENTER 138KV	277.9482	-0.00193	-0.45384	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	FITZHUGH 161KV	124.7	-0.00155	-0.45424	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	FLINT CREEK 161KV	428	-0.00204	-0.45375	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	FPLWIND2 34KV	59	-0.00282	-0.45297	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WFEC	G06-24 0.8000 34KV	19	-0.00281	-0.45298	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	CELE	G1COLUMB 13.800 138KV	12	0.00263	-0.45848	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	CELE	G1WKRAFT 13.800 230KV	55	0.00548	-0.46128	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	CELE	G7EVAN 22.000 138KV	155.3809	0.00343	-0.45922	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	GRDA	GRDA1 161KV	139.1873	-0.00218	-0.4536	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	GRDA	GRDA1 345KV	170	-0.00217	-0.45362	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	HARRINGTON 230KV	1040	-0.00254	-0.45325	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	HOBBS PLT 118.000 115KV	300	-0.00264	-0.45315	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	HOBBS PLT3 118.000 230KV	210	-0.00264	-0.45315	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	HOLTON 115KV	6	-0.0016	-0.45419	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	HORSESHOE LAKE 138KV	125	-0.00295	-0.45284	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	HUBRCO2 69KV	6.796	-0.00254	-0.45325	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WFEC	HUGO 138KV	440	-0.01033	-0.44548	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	HUTCHINSON ENERGY CENTER 115KV	60	-0.00186	-0.45383	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	LEPA	IRION SUB 69KV	6	0.00218	-0.45798	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	JEFFREY ENERGY CENTER 230KV	450	-0.00168	-0.45411	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	JEFFREY ENERGY CENTER 345KV	900	-0.00168	-0.45411	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	JONES 230KV	104	-0.00267	-0.45312	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SWPA	JONESBORO 161KV	82	-0.00058	-0.45524	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	GRDA	KERR 161KV	13	-0.00217	-0.45362	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	LAKUSSEL 161KV	100	-0.0017	-0.45406	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	LAWRENCE ENERGY CENTER 230KV	224.2432	-0.00164	-0.45415	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	LP-MACK2 69KV	60	-0.00267	-0.45312	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	MAJESTC WND3115.00 115KV	8	-0.00255	-0.45324	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	MCLAIN 138KV	470	-0.00297	-0.45282	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WFEC	MORLAND 138KV	263.2137	-0.00282	-0.45297	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	EMDE	MURPHY 34.500 230KV	100	-0.0016	-0.45411	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	MUSKOGEE 161KV	60	-0.00234	-0.45345	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	MUSKOGEE 345KV	1548	-0.0023	-0.45349	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	MUSTANG 115KV	276.3795	-0.00264	-0.45315	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	MUSTANG 138KV	93	-0.00292	-0.45287	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	MUSTANG 230KV	79	-0.00264	-0.45315	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	NORTHEASTERN STATION 138KV	485	-0.00224	-0.45355	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	NORTHEASTERN STATION 345KV	625	-0.00224	-0.45355	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	OEC 345KV	263	-0.00234	-0.45345	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OMPA	OMPA-KAW 69KV	16.58831	-0.00254	-0.45325	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	EMDE	OZARK BEACH 161KV	16	-0.00148	-0.45431	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	GRDA	PENSACOLA 161KV	11	-0.00208	-0.4537	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	GRDA	PENSACOLA 69KV	11	-0.00208	-0.45371	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	EMDE	RIVERTON 161KV	38	-0.00186	-0.45393	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	EMDE	RIVERTON 69KV	44.58395	-0.00185	-0.45394	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	CELE	RODEMACHER 230KV	693.3329	0.00398	-0.45975	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	GRDA	SALINA 161KV	35.64967	-0.00218	-0.45361	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	SAN JUAN 230KV	36	-0.00262	-0.45317	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	SEMINOLE 138KV	93.10008	-0.00317	-0.45262	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	SEMINOLE 345KV	308.0828	-0.003	-0.45279	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	SIDRCH 69KV	15.795	-0.00254	-0.45325	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SWPA	SIKESTON 161KV	235	-0.00054	-0.45525	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WFEC	SLEEPING BEAR 138KV	15	-0.00282	-0.45297	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	SMITH COGEN 138KV	106	-0.00293	-0.45286	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	SOONER 138KV	535	-0.00263	-0.45316	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	OKGE	SOONER 345KV	537	-0.00263	-0.45316	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	SOUTH SENECA 115KV	4	-0.00155	-0.45424	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	SOUTHWESTERN STATION 138KV	107.8255	-0.00318	-0.45261	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	SOUTHWESTERN STATION 138KV	559	-0.00318	-0.45261	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	EMDE	STATE LINE 161KV	453.3688	-0.00184	-0.45395	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	STEER WATER 115KV	24	-0.00257	-0.45322	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	CELE	TEGHE 138KV	228.6851	0.00273	-0.45858	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	WERE	TECUMSEH ENERGY CENTER 115KV	89	-0.00165	-0.45414	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	TOLK 230KV	1041.037	-0.00262	-0.45317	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	AEPW	WEATHERFORD 34KV	12	-0.00293	-0.45284	12
AEPW	LONESTAR POWER PLANT 69KV	50	-0.45579	SPS	WILWIND 230KV	48	-0.00254	-0.45325	12
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	EASTMAN 138KV	355	0.0254	-0.38199	15
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	ERBROCK 345KV	515	0.02503	-0.38162	15
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	PIRKEY GENERATION 138KV	288	0.01208	-0.38667	15
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	WELSH 345KV	1044	0.02447	-0.38106	15
AEPW	WILKES 138KV	491.3104	-0.33659						

**Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service**

AEPW	WILKES 138KV	491.3104	-0.33659	LEPA	BAYOU RAMOS 138KV	20.03136	0.00251	-0.3391	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	BLACKHAWK 115KV	220	-0.00254	-0.33405	16
AEPW	WILKES 138KV	491.3104	-0.33659	WFEC	BLUE CANYON WIND FARM 138KV	152	-0.00318	-0.33341	16
AEPW	WILKES 138KV	491.3104	-0.33659	GRDA	BOOMER 69KV	24	-0.00264	-0.33395	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	CAPROCK 0KV	24	-0.00262	-0.33397	16
AEPW	WILKES 138KV	491.3104	-0.33659	SWPA	CARTHAGE 69KV	12	-0.00176	-0.33483	16
AEPW	WILKES 138KV	491.3104	-0.33659	OKGE	CENTENIAL WIND 34KV	120	-0.00283	-0.33376	16
AEPW	WILKES 138KV	491.3104	-0.33659	WERE	CHANUTE 69KV	45.393	-0.0019	-0.33469	16
AEPW	WILKES 138KV	491.3104	-0.33659	WERE	CITY OF AUGUSTA 69KV	12	-0.00194	-0.33465	16
AEPW	WILKES 138KV	491.3104	-0.33659	WERE	CITY OF BURLINGTON 69KV	23.022	-0.0019	-0.33479	16
AEPW	WILKES 138KV	491.3104	-0.33659	LEPA	CITY OF HOUMA SLUB 115KV	57	0.00207	-0.33669	16
AEPW	WILKES 138KV	491.3104	-0.33659	WERE	CLAY CENTER JUNCTION 115KV	6.7	-0.00174	-0.33485	16
AEPW	WILKES 138KV	491.3104	-0.33659	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.61	-0.0018	-0.33479	16
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	COGENTRIX 345KV	200	-0.00241	-0.33418	16
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	COMANCHE 138KV	145	-0.00307	-0.33352	16
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	COMANCHE 69KV	60	-0.00314	-0.33345	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	CUNNINGHAM 230KV	56	-0.00264	-0.33395	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	CZ 69KV	37.283	-0.00258	-0.33401	16
AEPW	WILKES 138KV	491.3104	-0.33659	CELE	DOLET HILLS 345KV	371.2379	0.00952	-0.34611	16
AEPW	WILKES 138KV	491.3104	-0.33659	EMDE	ELK RIVER 345KV	67.574	-0.0019	-0.33469	16
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	ELLIS 69KV	6	-0.00177	-0.33482	16
AEPW	WILKES 138KV	491.3104	-0.33659	CELE	EVANGELINE 230KV	194.5714	0.00347	-0.34006	16
AEPW	WILKES 138KV	491.3104	-0.33659	WERE	EVANS ENERGY CENTER 138KV	277.9482	0.00195	-0.33464	16
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	FITZHUGH 161KV	124.7	-0.00155	-0.33504	16
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	FLINT CREEK 161KV	428	-0.00204	-0.33455	16
AEPW	WILKES 138KV	491.3104	-0.33659	OKGE	FPLWIND2 34KV	59	-0.00282	-0.33377	16
AEPW	WILKES 138KV	491.3104	-0.33659	WFEC	G06-24 0.6000 34KV	19	-0.00281	-0.33378	16
AEPW	WILKES 138KV	491.3104	-0.33659	CELE	STICOLUMB 13.800 138KV	12	-0.00269	-0.33328	16
AEPW	WILKES 138KV	491.3104	-0.33659	CELE	GTWKRAF1 13.800 230KV	55	0.00549	-0.34208	16
AEPW	WILKES 138KV	491.3104	-0.33659	CELE	G7EVAN 22.000 138KV	155.3809	0.00343	-0.34002	16
AEPW	WILKES 138KV	491.3104	-0.33659	GRDA	GRDA1 161KV	139.1873	-0.00218	-0.3344	16
AEPW	WILKES 138KV	491.3104	-0.33659	GRDA	GRDA1 345KV	170	-0.00217	-0.33442	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	HARRINGTON 230KV	1040	-0.00254	-0.33405	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	HOBBES PLT2 118.000 115KV	300	-0.00264	-0.33395	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	HOBBES PLT3 118.000 230KV	210	-0.00264	-0.33395	16
AEPW	WILKES 138KV	491.3104	-0.33659	WERE	HOLTON 115KV	6	-0.0016	-0.33499	16
AEPW	WILKES 138KV	491.3104	-0.33659	OKGE	HORSESHOE LAKE 138KV	125	-0.00295	-0.33364	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	HUBRCO2 69KV	6.796	-0.00254	-0.33405	16
AEPW	WILKES 138KV	491.3104	-0.33659	WFEC	HUGO 138KV	440	-0.01033	-0.32626	16
AEPW	WILKES 138KV	491.3104	-0.33659	WERE	HUTCHINSON ENERGY CENTER 115KV	60	-0.00186	-0.33473	16
AEPW	WILKES 138KV	491.3104	-0.33659	LEPA	IRVING SUB 69KV	6	-0.00216	-0.333878	16
AEPW	WILKES 138KV	491.3104	-0.33659	WERE	JEFFREY ENERGY CENTER 230KV	450	-0.00168	-0.33491	16
AEPW	WILKES 138KV	491.3104	-0.33659	WERE	JEFFREY ENERGY CENTER 345KV	900	-0.00168	-0.33491	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	JONES 230KV	104	-0.00267	-0.33392	16
AEPW	WILKES 138KV	491.3104	-0.33659	SWPA	JONESBORO 161KV	82.6	-0.00055	-0.33604	16
AEPW	WILKES 138KV	491.3104	-0.33659	GRDA	KERR 115KV	133	-0.00217	-0.33442	16
AEPW	WILKES 138KV	491.3104	-0.33659	EMDE	LARKES 161KV	100	-0.00175	-0.33486	16
AEPW	WILKES 138KV	491.3104	-0.33659	WERE	LAWRENCE ENERGY CENTER 230KV	224.2432	0.00164	-0.33495	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	LP-MACK2 69KV	60	-0.00267	-0.33392	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	MAJESTC_WND3115.00 115KV	6	-0.00255	-0.33404	16
AEPW	WILKES 138KV	491.3104	-0.33659	OKGE	MCCLAIN 138KV	470	-0.00297	-0.33362	16
AEPW	WILKES 138KV	491.3104	-0.33659	WFEC	MORLND 138KV	263.2137	-0.00262	-0.33377	16
AEPW	WILKES 138KV	491.3104	-0.33659	EMDE	MIRVY511 34.500 230KV	100	-0.00168	-0.33489	16
AEPW	WILKES 138KV	491.3104	-0.33659	OKGE	MUSKOGEE 161KV	60	-0.00234	-0.33425	16
AEPW	WILKES 138KV	491.3104	-0.33659	OKGE	MUSKOGEE 345KV	1548	-0.0023	-0.33429	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	MUSTANG 115KV	276.3799	-0.00264	-0.33395	16
AEPW	WILKES 138KV	491.3104	-0.33659	OKGE	MUSTANG 138KV	93	-0.00292	-0.33367	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	MUSTANG 230KV	79	-0.00264	-0.33395	16
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	NORTHEASTERN STATION 138KV	480	-0.00228	-0.33433	16
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	NORTHEASTERN STATION 345KV	625	-0.00234	-0.33435	16
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	OEC 345KV	263	-0.00234	-0.33425	16
AEPW	WILKES 138KV	491.3104	-0.33659	OMPFA	OMPFA-KAW 69KV	16.58631	-0.00254	-0.33405	16
AEPW	WILKES 138KV	491.3104	-0.33659	EMDE	OZARK BEACH 161KV	16	-0.00148	-0.33511	16
AEPW	WILKES 138KV	491.3104	-0.33659	GRDA	PENSACOLA 161KV	11	-0.00209	-0.3345	16
AEPW	WILKES 138KV	491.3104	-0.33659	GRDA	PENSACOLA 69KV	11	-0.00208	-0.33451	16
AEPW	WILKES 138KV	491.3104	-0.33659	EMDE	RIVERTON 161KV	38	-0.00186	-0.33473	16
AEPW	WILKES 138KV	491.3104	-0.33659	EMDE	RIVERTON 69KV	44.58395	-0.00185	-0.33474	16
AEPW	WILKES 138KV	491.3104	-0.33659	CELE	RODEMACHER 230KV	693.3329	0.00396	-0.34055	16
AEPW	WILKES 138KV	491.3104	-0.33659	GRDA	SALINA 161KV	35.64967	-0.00218	-0.33441	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	SAN JUAN 230KV	36	-0.00262	-0.33397	16
AEPW	WILKES 138KV	491.3104	-0.33659	OKGE	SEMINOLE 138KV	93.10606	-0.00317	-0.33342	16
AEPW	WILKES 138KV	491.3104	-0.33659	OKGE	SEMINOLE 345KV	306.0835	-0.003	-0.33359	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	SIDRCH 69KV	15.796	-0.00254	-0.33405	16
AEPW	WILKES 138KV	491.3104	-0.33659	SWPA	SIKESTON 161KV	235	-0.00054	-0.33605	16
AEPW	WILKES 138KV	491.3104	-0.33659	WFEC	SLEEPING BEAR 138KV	15	-0.00282	-0.33377	16
AEPW	WILKES 138KV	491.3104	-0.33659	OKGE	SMITH COGEN 138KV	106	-0.00293	-0.33366	16
AEPW	WILKES 138KV	491.3104	-0.33659	OKGE	SOONER 138KV	539	-0.00263	-0.33396	16
AEPW	WILKES 138KV	491.3104	-0.33659	OKGE	SOONER 345KV	537	-0.00268	-0.33391	16
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	SOUTHWESTERN STATION 138KV	107.6265	-0.00316	-0.33341	16
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	SOUTHWESTERN STATION 138KV	559	-0.00318	-0.33341	16
AEPW	WILKES 138KV	491.3104	-0.33659	EMDE	STATE LINE 161KV	453.6868	-0.00184	-0.33475	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	STEER WATER 115KV	24	-0.00257	-0.33402	16
AEPW	WILKES 138KV	491.3104	-0.33659	CELE	TECHE 138KV	228.6951	0.00278	-0.33938	16
AEPW	WILKES 138KV	491.3104	-0.33659	WERE	TECUMSEH ENERGY CENTER 115KV	88	-0.00165	-0.33494	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	TOLK 230KV	1041.037	-0.00263	-0.33397	16
AEPW	WILKES 138KV	491.3104	-0.33659	AEPW	WEATHERFORD 34KV	12	-0.00295	-0.33364	16
AEPW	WILKES 138KV	491.3104	-0.33659	SPS	WILWIND 230KV	48	-0.00254	-0.33405	16
AEPW	LIEBERMAN 138KV	264	-0.02789	AEPW	EASTMAN 138KV	359	0.0254	-0.05329	101
AEPW	LIEBERMAN 138KV	264	-0.02789	AEPW	LEBROCK 345KV	519	0.02503	-0.05292	102
AEPW	LIEBERMAN 138KV	264	-0.02789	AEPW	WELSH 345KV	1044	0.02447	-0.05236	103
AEPW	FULTON 115KV	153	-0.02648	AEPW	EASTMAN 138KV	359	0.0254	-0.05188	104
AEPW	FULTON 115KV	153	-0.02648	AEPW	LEBROCK 345KV	519	0.02503	-0.05151	104
AEPW	FULTON 115KV	153	-0.02648	AEPW	WELSH 345KV	1044	0.02447	-0.05095	106
AEPW	LIEBERMAN 138KV	264	-0.02789	AEPW	PIRKEY GENERATION 138KV	288	0.01208	-0.03997	135
AEPW	FULTON 115KV	153	-0.02648	AEPW	PIRKEY GENERATION 138KV	288	0.01208	-0.03856	139
AEPW	LIEBERMAN 138KV	264	-0.02789	CELE	DOLET HILLS 345KV	371.2379	0.00952	-0.03741	144
AEPW	FULTON 115KV	153	-0.02648	CELE	DOLET HILLS 345KV	371.2379	0.00952	-0.036	148
AEPW	LIEBERMAN 138KV	264	-0.02789	CELE	GTWKRAF1 13.800 230KV	55	0.00549	-0.03338	161
AEPW	ARSENAL HILL 69KV	110	-0.00634	AEPW	EASTMAN 138KV	359	0.0254	-0.03174	169
AEPW	LIEBERMAN 138KV	264	-0.02789	CELE	RODEMACHER 230KV	693.3329	0.00396	-0.03185	169
AEPW	ARSENAL HILL 69KV	110	-0.00634	AEPW	LEBROCK 345KV	519	0.02503	-0.03137	171
AEPW	LIEBERMAN 138KV	264	-0.02789	CELE	EVANGELINE 230KV	194.5714	0.00347	-0.03136	172
AEPW	LIEBERMAN 138KV	264	-0.02789	CELE	G7EVAN 22.000 138KV	155.3809	0.00343	-0.03132	172
AEPW	LIEBERMAN 138KV	264	-0.02789	CELE	ACADIA 138KV	174	0.00302	-0.03091	174
AEPW	ARSENAL HILL 69KV	110	-0.00634	AEPW	WELSH 345KV	1044	0.02447	-0.03081	175
AEPW	LIEBERMAN 138KV	264	-0.02789	CELE	TECHE 138KV	228.6951	0.00278	-0.03068	175
AEPW	FULTON 115KV	153	-0.02648	CELE	RODEMACHER 230KV	693.3329	0.00396	-0.03044	177

Maximum Decrement and Maximum Increment were determined from the Source and Sink Operating Points in the study models where limiting facility was identified.

Factor = Source GSF - Sink GSF

Redispatch Amount = Relief Amount / Factor

Upgrade: EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1  
EAST MANHATTAN - NW MANHATTAN 230/115KV  
East Manhattan to McDowell 230 kV  
Limiting Facility: EAST MANHATTAN (EMANHTX3) 230/115/13.8KV TRANSFORMER CKT  
Direction: FROM >TO  
Line Outage: MCDOWELL CREEK (MCDWL 1X) 230/115/13.8KV TRANSFORMER  
Flowgate: 2007AG2AFS81T12063210SP  
Date Redispatch Needed: Starting 2010 6/1 - 10/1 Until EOC of Upgrade  
Season

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	CLAY CENTER JUNCTION 115KV	13.375	-0.30219	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.45276	33
WERE	CLAY CENTER JUNCTION 115KV	13.375	-0.30219	MKEC	CLIFTON 115KV	68	0.08481	-0.387	38
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.37369	40
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MKEC	CLIFTON 115KV	68	0.08481	-0.3793	48
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.27319	54
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	JEFFREY ENERGY CENTER 345KV	874	0.02464	-0.24776	60
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	BPS GT1G 13.800 115KV	80	0.08661	-0.23173	64
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	BPS GT2G 13.800 115KV	45.19951	0.00861	-0.23173	64
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	BPS ST3G 13.800 115KV	49.99482	0.00861	-0.23173	64
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	CASS JG 15.000 345KV	42.51923	0.00338	-0.22648	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	CASS ZG 15.000 345KV	52.99999	0.00338	-0.22648	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	COL COG7 115.00 115KV	75	0.00334	-0.22648	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	COOPER1G 22.000 345KV	551.2902	0.0033	-0.22642	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	DENVER G 34.500 115KV	34.32393	0.00402	-0.22714	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	EGY CTRG 13.800 115KV	54	0.00408	-0.22721	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	FREM BG 13.800 69KV	93	0.00328	-0.2264	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	FT CAL1G 22.000 4KV	378	0.00327	-0.22639	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	GT-2 G 13.800 115KV	40	0.00354	-0.22666	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACP	IATAN 345KV	1806	0.00397	-0.22709	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACP	IATAN 345KV	371	0.00397	-0.22709	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	N OMA TG 13.800 2KV	48.5	0.00331	-0.22643	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	N OMA 2G 13.800 2KV	80.59999	0.0033	-0.22642	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	N OMA 3G 13.800 2KV	80.59999	0.0033	-0.22642	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	N OMA 4G 15.000 2KV	107.4	0.0033	-0.22642	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	N OMA 5G 20.000 4KV	173.9	0.0033	-0.22642	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	NEBCTY1G 18.000 4KV	466	0.0034	-0.22652	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	NEBCTY2G 23.000 345KV	503	0.0034	-0.22652	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	PLATTE1G 13.800 115KV	71.51868	0.00353	-0.22665	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	SHELDN1G 13.800 115KV	68.40001	0.00521	-0.22833	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	SHELDN2G 13.800 115KV	81	0.00521	-0.22833	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACP	BULL CREEK 161KV	61.6	0.00103	-0.22415	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACP	CITY OF HIGGINSVILLE 69KV	36	0.00048	-0.2236	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	CNTRLPL2 34.500 115KV	99	0.0003	-0.22342	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	GENTL1M1G 23.000 230KV	463	0.00295	-0.22607	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	GENTL1M2G 24.000 345KV	443.3698	0.00293	-0.22604	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACP	HAWTHORN 161KV	517.7498	0.00102	-0.22414	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIPU	LAKE ROAD 161KV	35	0.00256	-0.22568	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIPU	LAKE ROAD 34KV	92	0.00256	-0.22568	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACP	MONTROSE 161KV	359.7142	0.00018	-0.22331	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACY	NEARMAN 161KV	77	0.0008	-0.22402	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACY	NEARMAN 161KV	235	0.0008	-0.22402	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACY	QUINDARO 161KV	129.4176	0.00091	-0.22403	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACY	QUINDARO 69KV	136.3562	0.00091	-0.22403	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIPU	SIBLEY 161KV	228.9597	0.00077	-0.22389	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIPU	SIBLEY 69KV	45.99999	0.00084	-0.22396	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIPU	SOUTH HARPER 161KV	67.00598	-0.00023	-0.22289	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MKEC	A. M. MULLERGEN GENERATOR 115KV	63	-0.00265	-0.22047	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	AES 161KV	320	-0.0011	-0.22202	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	ARSENAL HILL 138KV	458	-0.00088	-0.22226	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	ARSENAL HILL 69KV	90	-0.00087	-0.22225	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMDE	ASBURY 161KV	192	-0.00128	-0.22186	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	CENTENIAL WIND 34KV	120	-0.00243	-0.22089	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	CHANUTE 69KV	54	-0.00193	-0.22198	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MKEC	CIMARRON RIVER 115KV	44	-0.00118	-0.22198	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	CITY OF BURLINGTON 69KV	55.4	-0.00278	-0.22034	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	COGENTRIX 345KV	222.0668	-0.00168	-0.22144	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	COMANCHE 138KV	145	-0.00211	-0.22101	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	COMANCHE 69KV	60	-0.00211	-0.22101	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	EASTMAN 138KV	356.1947	-0.00094	-0.22144	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMDE	ELK RIVER 345KV	44.986	-0.00363	-0.21949	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	EMPORIA ENERGY CENTER 345KV	610	-0.0007	-0.22242	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	FITZHUGH 161KV	125.4	-0.001	-0.22212	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	FLINT CREEK 161KV	428	-0.00138	-0.22176	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	PPLWIND2 34KV	59	-0.00245	-0.22067	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MKEC	GRAY COUNTRY WIND FARM 115KV	35	-0.00243	-0.22071	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	HORSESHOE LAKE 138KV	796	-0.00223	-0.22009	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MKEC	JUDSON LARGE 115KV	95.93536	-0.00241	-0.22071	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIDW	KNOLL 115KV	75.60001	-0.00138	-0.22176	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	KNOXLEE 138KV	225	-0.00093	-0.22219	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMDE	LARUSSEL 161KV	100	-0.00106	-0.22206	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	LEBROCK 345KV	517.1024	-0.00093	-0.22219	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	LIEBERMAN 138KV	174	-0.00088	-0.22233	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	MCLAIN 138KV	470	-0.00228	-0.22086	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	MUSKOGEE 161KV	166	-0.00153	-0.22159	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	MUSKOGEE 345KV	1548	-0.00157	-0.22155	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	MUSTANG 138KV	351	-0.0023	-0.22082	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	MUSTANG 69KV	51.72	-0.0023	-0.22082	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	NORTHEASTERN STATION 138KV	468	-0.00168	-0.22146	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	NORTHEASTERN STATION 345KV	623	-0.00168	-0.22146	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	OEC 345KV	390.4081	-0.00164	-0.22148	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	PIRKEY GENERATION 138KV	288	-0.00093	-0.22219	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	REDBUD 345KV	43.60958	-0.00222	-0.22009	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMDE	RIVERTON 161KV	100.0327	-0.00128	-0.22183	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMD	RIVERTON 161KV	44.07187	-0.00128	-0.22183	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	SEMINOLE 138KV	334.858	-0.00211	-0.22101	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	SEMINOLE 345KV	1019	-0.00213	-0.22099	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	SMITH COGEN 138KV	106	-0.00228	-0.22083	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	SOONER 138KV	538	-0.00277	-0.22035	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	SOONER 345KV	537	-0.00282	-0.22003	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	SOUTHWESTERN STATION 138KV	267	-0.00212	-0.221	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	SOUTHWESTERN STATION 138KV	712	-0.00213	-0.221	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	SPGOK1&2 13.200 345KV	78	-0.00244	-0.22068	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMDE	STATE LINE 161KV	520	-0.00125	-0.22187	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	TONTITOWN 161KV	140	-0.00138	-0.22174	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	TULSA POWER STATION 138KV	129.8887	-0.00168	-0.22144	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	WELLS 345KV	1044	-0.00102	-0.22211	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	WILKES 138KV	410.8099	-0.00096	-0.22216	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	WILKES 345KV	308	-0.00095	-0.22217	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	CITY OF WINFIELD 69KV	31.2	-0.00408	-0.21903	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	EVANS ENERGY CENTER 138KV	560	-0.00532	-0.2178	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	GILL ENERGY CENTER 138KV	159	-0.00498	-0.21814	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	GILL ENERGY CENTER 69KV	53	-0.00498	-0.21817	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	LAWRENCE ENERGY CENTER 230KV	223.9292	-0.00728	-0.21583	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	HUTCHINSON ENERGY CENTER 115KV	230	-0.01521	-0.20791	71
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	TECUMSEH ENERGY CENTER 115KV	133	-0.01888	-0.20427	72
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIDW	SMOKEY HILLS 34KV	25	-0.02018	-0.20296	73
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.02897	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.17954	82
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.02128	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.17186	86
MIDW	SNOKEY HILLS 34KV	75	-0.02018	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.17073	87
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.01521	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.16578	89
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.00728	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.15786	94
WERE	GETTY 69KV	35	-0.00491	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.15548	95
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.00498	EMDE	MIRWYG11 34.500 230KV	100	0		

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

AEWP	SOUTHWESTERN STATION 138KV	350	-0.00212	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.15269	97
OKGE	SPGCK3&4 13.200 345KV	111	-0.00244	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15301	97
AEWP	TINKER 5G 138KV	62	-0.00222	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15279	97
AEWP	TONTTOWN 161KV	186	-0.00198	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15196	97
AEWP	TULSA POWER STATION 138KV	177.1113	-0.00168	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15225	97
AEWP	TULSA POWER STATION 69KV	80	-0.00168	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15225	97
AEWP	WELEETKA 138KV	162	-0.00176	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15233	97
MIPU	ARIES 5 161KV	576.6669	0.00006	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15051	98
AEWP	ARSENAL HILL 138KV	337.2	-0.00086	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15143	98
AEWP	EASTMAN 138KV	128.2153	-0.00094	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15191	98
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.0007	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15127	98
AEWP	FULTON 115KV	153	-0.00083	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.1514	98
MIPU	GREENWOOD 161KV	255.8	0.00011	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15046	98
AEWP	KNOXLEE 138KV	176	-0.00093	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.1515	98
EMDE	LARUSSEL 161KV	171	-0.00106	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15163	98
AEWP	LEBROCK 345KV	179.8976	-0.00093	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.1515	98
AEWP	LIEBERMAN 138KV	45.99999	-0.00088	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15145	98
AEWP	LONESTAR POWER PLANT 69KV	50	-0.00097	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15154	98
KACP	PAOLA 5 161.00 161KV	82.5	-0.00019	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15076	98
KACP	PAOLA COMBUSTION TURBINES 161KV	76	-0.00019	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15076	98
MIPU	RALPH GREEN 69KV	73.7	0.00004	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15053	98
EMDE	RIVERTON 161KV	182.9673	-0.00129	EMDC	MRWYG11 34.500 230KV	100	0.15057	-0.15196	98
MIPU	SOUTH HARPER 161KV	247.994	-0.00023	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.1508	98
EMDE	STATE LINE 161KV	90	-0.00125	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15182	98
AEWP	WILKES 138KV	52.19009	-0.00096	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15153	98
KACP	BULL CREEK 161KV	246.4	0.00103	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14954	99
KACP	HAWTHORN 161KV	245.2502	0.00102	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14955	99
KACY	KAW 69KV	242	0.00092	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14965	99
KACP	MARSHALL 161KV	54.1	0.00056	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.15001	99
KACP	NORTHEAST 13KV	223	0.00101	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14956	99
KACP	NORTHEAST 161KV	224	0.00101	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14956	99
KACY	QUINDARO 161KV	107.5824	0.00091	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14966	99
KACY	QUINDARO 69KV	40.64384	0.00091	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14966	99
NPPD	ARISING 34.500 115KV	49.92448	0.00298	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14758	100
NPPD	KINGSLEY 13.800 115KV	47.95829	0.00298	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14767	100
MIPU	LAKE ROAD 161KV	91	0.00256	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14801	100
NPPD	MCCOOK G 13.800 115KV	51	0.00248	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14809	100
NPPD	SIDNEY 4 230.00 230KV	230.6148	0.00291	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14766	100
NPPD	SARPY 3G 13.800 115KV	54	0.00354	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14703	101
NPPD	CANADYIG 13.800 115KV	125	0.00322	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14734	101
MIDW	COLBY 115KV	36.41598	0.00432	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14625	101
OPPD	FREM 1G 13.800 69KV	40	0.00328	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14729	101
NPPD	G1-3 G 13.800 115KV	40	0.00354	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14703	101
KACP	IATAN 345KV	129	0.00397	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.1466	101
OPPD	JONES 1G 13.800 69KV	59.3	0.00332	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14725	101
OPPD	JONES 2G 13.800 69KV	59.3	0.00332	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14725	101
OPPD	NCLJRS 9 69.000 69KV	55.3	0.00397	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.1466	101
OPPD	SARPY 1G 13.800 69KV	55.3	0.00336	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14722	101
OPPD	SARPY 2G 13.800 69KV	55.3	0.00336	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14721	101
OPPD	SARPY 3G 13.800 4KV	49.17342	0.00332	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14725	101
OPPD	SARPY 4G 13.800 161KV	48.1	0.00332	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14725	101
OPPD	SARPY 5G 13.800 161KV	48.1	0.00332	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14725	101
NPPD	SHELDON 13.800 115KV	53	0.00352	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14538	102
NPPD	BPS 4T2G 13.800 115KV	34.80049	0.00861	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14196	104
NPPD	BPS 3T3G 13.800 115KV	40.00518	0.00861	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14196	104
NPPD	HEBRON G 13.800 115KV	52	0.00798	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.14258	104
WERE	JEFFREY ENERGY CENTER 345KV	108	0.02464	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.12593	118
WERE	BFU - CITY OF MCPHERSON 115KV	232	-0.02897	MKEC	CLIFTON 115KV	65	0.08481	-0.11378	130
MIDW	SMOKEY HILLS 34KV	75	-0.02016	MKEC	CLIFTON 115KV	65	0.08481	-0.10497	141
WERE	JEFFREY ENERGY CENTER 230KV	54	0.05007	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.1005	147
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.01521	MKEC	CLIFTON 115KV	65	0.08481	-0.10002	148
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.00498	MKEC	CLIFTON 115KV	65	0.08481	-0.08979	165
OKGE	HORSESHOE LAKE 138KV	64	-0.00222	MKEC	CLIFTON 115KV	65	0.08481	-0.08703	170
OKGE	REDBUD 345KV	1156.39	-0.00222	MKEC	CLIFTON 115KV	65	0.08481	-0.08703	170
OKGE	SEMINOLE 138KV	200.142	-0.00211	MKEC	CLIFTON 115KV	65	0.08481	-0.08693	170
AEWP	SOUTHWESTERN STATION 138KV	152	-0.00212	MKEC	CLIFTON 115KV	65	0.08481	-0.08693	170
AEWP	SOUTHWESTERN STATION 138KV	350	-0.00212	MKEC	CLIFTON 115KV	65	0.08481	-0.08693	170
OKGE	SPGCK3&4 13.200 345KV	111	-0.00244	MKEC	CLIFTON 115KV	65	0.08481	-0.08725	170
OKGE	TINKER 5G 138KV	62	-0.00222	MKEC	CLIFTON 115KV	65	0.08481	-0.08703	170
AEWP	COGENETRIX 345KV	671.9331	-0.00168	MKEC	CLIFTON 115KV	65	0.08481	-0.08649	171
AEWP	KIOWA 345KV	1336.177	-0.00168	MKEC	CLIFTON 115KV	65	0.08481	-0.08663	171
AEWP	OEC 345KV	1756.622	-0.00168	MKEC	CLIFTON 115KV	65	0.08481	-0.08645	171
AEWP	TULSA POWER STATION 138KV	177.1113	-0.00168	MKEC	CLIFTON 115KV	65	0.08481	-0.08649	171
AEWP	TULSA POWER STATION 69KV	80	-0.00168	MKEC	CLIFTON 115KV	65	0.08481	-0.08649	171
AEWP	WELEETKA 138KV	162	-0.00176	MKEC	CLIFTON 115KV	65	0.08481	-0.08657	171
AEWP	ELKIN GN 1 13.800 69KV	60	-0.00138	MKEC	CLIFTON 115KV	65	0.08481	-0.08619	172
EMDE	LARUSSEL 161KV	171	-0.00106	MKEC	CLIFTON 115KV	65	0.08481	-0.08587	172
AEWP	MID-CONTINENT 138KV	142.11	-0.00152	MKEC	CLIFTON 115KV	65	0.08481	-0.08639	172
EMDE	RIVERTON 161KV	182.9673	-0.00129	MKEC	CLIFTON 115KV	65	0.08481	-0.0861	172
EMDE	STATE LINE 161KV	90	-0.00125	MKEC	CLIFTON 115KV	65	0.08481	-0.08606	172
AEWP	TONTTOWN 161KV	186.12	-0.00138	MKEC	CLIFTON 115KV	65	0.08481	-0.08619	172
AEWP	ARSENAL HILL 138KV	337.2	-0.00086	MKEC	CLIFTON 115KV	65	0.08481	-0.08567	173
AEWP	EASTMAN 138KV	128.2153	-0.00094	MKEC	CLIFTON 115KV	65	0.08481	-0.08575	173
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.0007	MKEC	CLIFTON 115KV	65	0.08481	-0.08551	173
AEWP	FULTON 115KV	153	-0.00083	MKEC	CLIFTON 115KV	65	0.08481	-0.08564	173
AEWP	KNOXLEE 138KV	176	-0.00093	MKEC	CLIFTON 115KV	65	0.08481	-0.08574	173
AEWP	LEBROCK 345KV	179.8976	-0.00093	MKEC	CLIFTON 115KV	65	0.08481	-0.08574	173
KACP	PAOLA 5 161.00 161KV	82.5	-0.00019	MKEC	CLIFTON 115KV	65	0.08481	-0.085	174
KACP	PAOLA COMBUSTION TURBINES 161KV	76	-0.00019	MKEC	CLIFTON 115KV	65	0.08481	-0.085	174
MIPU	SOUTH HARPER 161KV	247.994	-0.00023	MKEC	CLIFTON 115KV	65	0.08481	-0.08504	174
MIPU	ARIES 161KV	576.6669	0.00006	MKEC	CLIFTON 115KV	65	0.08481	-0.08475	175
MIPU	GREENWOOD 161KV	255.8	0.00011	MKEC	CLIFTON 115KV	65	0.08481	-0.0847	175
MIPU	RALPH GREEN 69KV	73.7	0.00004	MKEC	CLIFTON 115KV	65	0.08481	-0.08477	175
KACP	BULL CREEK 161KV	246.4	0.00103	MKEC	CLIFTON 115KV	65	0.08481	-0.08378	177
KACP	HAWTHORN 161KV	245.2502	0.00102	MKEC	CLIFTON 115KV	65	0.08481	-0.08379	177
KACY	KAW 69KV	242	0.00092	MKEC	CLIFTON 115KV	65	0.08481	-0.08389	177
KACP	NORTHEAST 13KV	223	0.00101	MKEC	CLIFTON 115KV	65	0.08481	-0.0838	177
KACP	NORTHEAST 161KV	224	0.00101	MKEC	CLIFTON 115KV	65	0.08481	-0.0838	177
KACY									

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

Source	Relief	Source GSF	Sink GSF	Factor	Aggregate Redispatch Amount (MW)	
WERE EMPORIA ENERGY CENTER 345KV	201	-0.0007	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.05077	292
MIPU SOUTH HARPER 161KV	247.994	-0.00023	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.05003	294
MIPU ARIES 161KV	576.6669	-0.00068	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.05001	296
MIPU GREENWOOD 161KV	255.9	-0.00011	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.04996	296
KACY KAW 69KV	242	0.00052	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.04915	301
KACY QUINDARO 161KV	107.5824	0.00091	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.04916	301
KACP BULL CREEK 161KV	246.4	0.00103	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.04904	302
KACP HAWTHORN 161KV	245.2502	0.00102	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.04905	302
KACP NORTH EAST 13KV	223	0.00101	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.04906	302
KACP NORTH EAST 161KV	224	0.00101	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.04906	302
NPPD SIDNEY 4 230.00 230KV	230.6148	0.00291	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.04716	314
NPPD CANADY1G 13.800 115KV	125	0.0023	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.04684	316
KACP IATAN 345KV	129	0.00397	WERE JEFFREY ENERGY CENTER 230KV	440	0.05007 -0.0461	321
WERE HUTCHINSON ENERGY CENTER 115KV	214	-0.01521	WERE JEFFREY ENERGY CENTER 345KV	874	0.02464 -0.03985	372
WERE BPU - CITY OF MCPHERSON 115KV	232	-0.02897	KACP IATAN 345KV	1806	0.00397 -0.03294	450
WERE BPU - CITY OF MCPHERSON 115KV	232	-0.02897	KACP IATAN 345KV	371	0.00397 -0.03294	450
WERE BPU - CITY OF MCPHERSON 115KV	232	-0.02897	OPPD NEBCTY1G 18.000 4KV	466	0.0034 -0.03237	457
WERE BPU - CITY OF MCPHERSON 115KV	232	-0.02897	OPPD NEBCTY2G 23.000 345KV	503	0.0034 -0.03237	457
WERE BPU - CITY OF MCPHERSON 115KV	232	-0.02897	NPPD COOPER1G 22.000 345KV	551.2802	0.0033 -0.03227	459
WERE BPU - CITY OF MCPHERSON 115KV	232	-0.02897	OPPD FT CAL1G 22.000 4KV	376	0.00327 -0.03224	459
WERE BPU - CITY OF MCPHERSON 115KV	232	-0.02897	OPPD N OMA 5G 20.000 4KV	173.9	0.0033 -0.03227	459
WERE BPU - CITY OF MCPHERSON 115KV	232	-0.02897	NPPD GENTLM1G 23.000 230KV	463	0.00282 -0.03192	464
WERE BPU - CITY OF MCPHERSON 115KV	232	-0.02897	NPPD GENTLM2G 24.000 345KV	443.9508	0.00282 -0.03192	464

Maximum Decrement and Maximum Increment were determined from the Source and Sink Operating Points in the study models where limiting facility was identified.

Factor = Source GSF - Sink GSF

Redispatch Amount = Relief Amount / Factor

Upgrade: EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1  
 East Manhattan to Mctowl 230 kV  
 Limiting Facility: EAST MANHATTAN (EMANH3X) 230/115/18.0KV TRANSFORMER CKT  
 Direction: FROM->TO  
 Line Outage: AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1  
 Flowgate: 2007AG2AFS81T2783210SP  
 Date Redispatch Needed: Starting 2010 8/1 - 10/1 Until EOC of Upgrade  
 Season Flowgate Identified: 2010 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount
1281706	2.1	10.4
1286201	8.3	10.4

Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	CLAY CENTER JUNCTION 115KV	13.375	-0.19403	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.39995	26
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.35019	30
WERE	CLAY CENTER JUNCTION 115KV	13.375	-0.19403	MKEC	CLIFTON 115KV	65	0.11765	-0.31168	33
WERE	CLAY CENTER JUNCTION 115KV	13.375	-0.19403	WERE	JEFFREY ENERGY CENTER 230KV	440	0.08177	-0.28589	40
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	MKEC	CLIFTON 115KV	65	0.11765	-0.26192	40
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	WERE	JEFFREY ENERGY CENTER 230KV	440	0.08177	-0.23604	44
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.02328	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.2292	45
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.02033	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.22625	46
WERE	TECUMSEH ENERGY CENTER 115KV	28	-0.02184	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.22776	46
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.01418	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.22011	47
WERE	LAWRENCE ENERGY CENTER 230KV	45.07058	-0.01675	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.22267	47
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.01053	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.21645	48
MIDW	SMOKEY HILLS 34KV	75	-0.01291	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.21883	48
WERE	GETTY 69KV	35	-0.00613	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.21205	49
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.00602	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.21194	49
WERE	GILL ENERGY CENTER 69KV	48	-0.00604	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.21196	49
WERE	WACO 138KV	30	-0.00607	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.21199	49
MIPU	ARIES 161KV	576.6669	-0.00189	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20781	50
AEPW	ARSENAL HILL 138KV	337.2	-0.00107	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20699	50
EMDE	ASBURY 161KV	21	-0.00218	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.2081	50
WERE	CHANUTE 69KV	41.1	-0.003	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20892	50
WERE	CITY OF ERIE 69KV	22.53	-0.003	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20892	50
WERE	CITY OF IOLA 69KV	27.428	-0.00281	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20873	50
AEPW	COGENTRIX 345KV	671.9331	-0.00228	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20818	50
AEPW	EASTMAN 138KV	128.2153	-0.00119	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20707	50
AEPW	ELKIN GN 1 13.800 69KV	60	-0.00201	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20793	50
AEPW	ELLIS 138KV	20	-0.00154	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20746	50
AEPW	FULTON 115KV	153	-0.00104	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20696	50
MIPU	GREENWOOD 161KV	255.9	-0.00174	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20766	50
OKGE	HORSESHOE LAKE 138KV	64	-0.00254	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20856	50
AEPW	KIOWA 345KV	1336.177	-0.00218	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.2081	50
AEPW	KNOXLEE 138KV	176	-0.00115	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20707	50
EMDE	LARUSSELL 161KV	171	-0.00185	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20777	50
AEPW	LEBROCK 345KV	179.8976	-0.00115	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20707	50
AEPW	LEBERMAN 138KV	45.99999	-0.00105	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20701	50
AEPW	LONGSTAR POWER PLANT 69KV	50	-0.0012	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20712	50
OKGE	MCCLAINE 138KV	50	-0.00265	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20857	50
AEPW	MID-CONTINENT 138KV	142.11	-0.00217	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20809	50
KACP	MONTROSE 161KV	21.2858	-0.00113	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20705	50
OKGE	MUSKOGEE 345KV	32	-0.00211	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20803	50
OKGE	MUSTANG 138KV	24.5	-0.00271	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20863	50
OKGE	MUSTANG 69KV	54.2783	-0.0021	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20862	50
MIPU	NEVADA 69KV	20.3	-0.00148	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20741	50
AEPW	NORTHEASTERN STATION 138KV	19.99997	-0.00233	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20825	50
AEPW	NORTHEASTERN STATION 345KV	19.99997	-0.00238	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.2083	50
AEPW	OC 345KV	1756.622	-0.00225	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20817	50
KACP	PAOLA 5 161.00 161KV	82.5	-0.00184	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20776	50
KACP	PAOLA COMBUSTION TURBINES 161KV	76	-0.00184	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20776	50
MIPU	RALPH GREEN 69KV	73.7	-0.00187	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20779	50
OKGE	REDBUD 345KV	1156.39	-0.00267	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20859	50
EMDE	RIVERTON 161KV	182.9673	-0.00213	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20805	50
EMDE	RIVERTON 69KV	21.92113	-0.00208	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.208	50
KACP	S OTTAWA 161.00 161KV	20.8	-0.00068	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20861	50
OKGE	SEMINOLE 138KV	200.142	-0.00249	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20841	50
OKGE	SOUTH 4TH ST 69KV	42.7	-0.00338	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.2093	50
MIPU	SOUTH HARPER 161KV	247.994	-0.00274	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20866	50
AEPW	SOUTHWESTERN STATION 138KV	350	-0.00222	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20814	50
AEPW	SOUTHWESTERN STATION 138KV	152	-0.00222	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20814	50
OKGE	SPACKH4 13.200 345KV	171	-0.00285	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20881	50
EMDE	STATE LINE 161KV	90	-0.00200	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.208	50
OKGE	TINKER 5G 138KV	62	-0.00262	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20854	50
AEPW	TONTTOWN 161KV	186.12	-0.00201	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20793	50
AEPW	TULSA POWER STATION 138KV	177.1113	-0.00227	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20819	50
AEPW	TULSA POWER STATION 69KV	80	-0.00227	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20819	50
AEPW	WLEETKA 138KV	162	-0.00223	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20815	50
AEPW	WILKES 138KV	52.19028	-0.00114	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20711	50
KACP	BULL CREEK 161KV	246.4	0.00078	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20516	51
KACP	GARDNER 161KV	31	0.00062	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.2053	51
KACP	HAWTHORN 161KV	245.2502	0.00052	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.2054	51
KACY	KAW 69KV	242	0.00048	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20544	51
KACP	MARSHALL 161KV	54.1	0.00008	EMDE	MRWYG11 34.500 230KV	100	0.20592	-0.20583	51
KACP	NORTH EAST 13KV	223	0.00055	EMDE					

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

OPPD	FREM 6G 13.800 69KV	18	0.00558	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.20034	52
OPPD	FREM 7G 13.800 69KV	23	0.00558	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.20034	52
NPPD	GENTLM2G 24.000 345KV	20.63918	0.00632	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19962	52
NPPD	GT-3 G 13.800 115KV	40	0.00632	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19962	52
KACP	IATAN 345KV	129	0.00696	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19896	52
OPPD	JONES 1G 13.800 69KV	59.3	0.00558	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.20034	52
OPPD	JONES 2G 13.800 69KV	59.3	0.00558	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.20034	52
NPPD	KINGSLYG 13.800 115KV	47.95299	0.00627	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19965	52
MIPU	LAKE ROAD 161KV	91	0.00368	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.20202	52
NPPD	MCCOOK G 13.800 115KV	51	0.00632	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19962	52
OPPD	NCLJ303 8 69.000 69KV	35.3	0.00668	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19912	52
OPPD	SARPY 1G 13.800 69KV	55.3	0.00562	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.20003	52
OPPD	SARPY 2G 13.800 69KV	55.3	0.00562	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.20028	52
OPPD	SARPY 3G 13.800 4KV	49.17342	0.00558	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.20034	52
OPPD	SARPY 4G 13.800 161KV	48.1	0.00558	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.20034	52
OPPD	SARPY 5G 13.800 161KV	48.1	0.00558	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.20034	52
NPPD	SIDNEY 4 230.00 230KV	230.6148	0.0062	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19972	52
NPPD	SUB-H G 115.00 115KV	31.3	0.00639	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19953	52
MIDW	COLBY 115KV	36.41598	0.01116	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19476	53
OPPD	S993 8 69.000 69KV	19.9	0.00773	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19819	53
NPPD	SHELDONG 13.800 115KV	52	0.00842	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19795	53
NPPD	BFS GT2G 13.800 115KV	34.80048	0.01324	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19268	54
NPPD	BFS ST3G 13.800 115KV	40.00518	0.01324	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19268	54
NPPD	HEBRON G 13.800 115KV	52	0.01248	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.19347	54
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	WERE	JEFFREY ENERGY CENTER 345KV	874	0.04418	-0.18843	55
WERE	ABILENE ENERGY CENTER 115KV	108	0.04418	EMDE	MIRWYG11 34.500 230KV	100	0.20592	-0.16176	64
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	BFS GT1G 13.800 115KV	80	0.01324	-0.15751	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	BFS GT2G 13.800 115KV	45.19857	0.01324	-0.15751	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	BFS ST3G 13.800 115KV	49.99482	0.01324	-0.15751	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	MIDW	KNOLL 115KV	75.60001	0.00833	-0.1526	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	SHELDN1G 13.800 115KV	68.40001	0.00842	-0.15269	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	SHELDN2G 13.800 115KV	81	0.00842	-0.15269	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OPPD	CASS 1G 15.000 345KV	42.51929	0.00563	-0.1499	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OPPD	CASS 2G 15.000 345KV	52.99999	0.00563	-0.1499	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	COL COG 115.00 115KV	75	0.0058	-0.15007	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	DENVER G 34.500 115KV	34.32993	0.00702	-0.15129	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	EGY CTRG 13.800 115KV	54	0.00712	-0.15139	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	GENTLM1G 23.000 230KV	463	0.00631	-0.15058	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	GENTLM2G 24.000 345KV	443.3608	0.00632	-0.15059	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	GT-2 G 13.800 115KV	40	0.00638	-0.15068	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	KACP	IATAN 345KV	1808	0.00698	-0.15123	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	KACP	IATAN 345KV	371	0.00698	-0.15123	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OPPD	NEBCTY1G 18.000 4KV	466	0.00568	-0.14995	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OPPD	NEBCTY2G 23.000 345KV	503	0.00568	-0.14995	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	PLATTE1G 13.800 115KV	71.51868	0.0064	-0.15067	69
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	MKEC	A. M. MULLERGEN GENERATOR 115KV	63	0.00538	-0.14963	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	MKEC	CIMARRON RIVER 115KV	44	0.00382	-0.14809	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	WERE	CNTRPL2 34.500 115KV	99	0.00538	-0.14965	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	NPPD	COOPER1G 22.000 345KV	551.2802	0.00548	-0.14976	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OPPD	FREM 8G 13.800 69KV	90	0.00558	-0.14985	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OPPD	FT CAL1G 22.000 4KV	376	0.00548	-0.14976	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	MIPU	LAKE ROAD 161KV	35	0.00368	-0.14817	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	MIPU	LAKE ROAD 345KV	92	0.00368	-0.14817	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OPPD	N OMA 1G 13.800 2KV	48.5	0.00553	-0.14982	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OPPD	N OMA 2G 13.800 2KV	80.59999	0.00553	-0.1498	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OPPD	N OMA 3G 13.800 2KV	80.59999	0.00553	-0.1498	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OPPD	N OMA 4G 15.000 2KV	107.4	0.00553	-0.1498	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OPPD	N OMA 5G 20.000 4KV	173.9	0.00553	-0.1498	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	MKEC	GRAY COUNTY WIND FARM 115KV	38	0.00227	-0.14698	70
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	MKEC	JUDSON LARGE 115KV	95.93538	0.0027	-0.14697	71
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	KACP	BULL CREEK 161KV	61.6	0.00048	-0.14503	72
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	KACP	CITY OF HIGGINSVILLE 69KV	36	-0.00044	-0.14383	72
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	KACP	HAWTHORN 161KV	517.7498	0.00052	-0.14479	72
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	KACY	NEARMAN 161KV	77	0.00048	-0.14473	72
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	KACY	NEARMAN 345KV	235	0.00048	-0.14473	72
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	KACY	QUINDARO 161KV	129.478	0.00047	-0.14474	72
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	KACY	QUINDARO 69KV	136.3562	0.00048	-0.14475	72
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	MIPU	SIBLEY 161KV	228.9597	0.00007	-0.1442	72
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	MIPU	SIBLEY 69KV	45.99999	0.0001	-0.14437	72
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OKGE	AES 161KV	320	-0.0015	-0.14277	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OKGE	ARSENAL HILL 138KV	455	-0.00103	-0.1433	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	ARSENAL HILL 69KV	90	0.00107	-0.1432	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	EMDE	ASBURY 161KV	192	-0.00218	-0.14209	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	COGENTRIX 345KV	222.0668	-0.00228	-0.14201	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	COMANCHE 138KV	145	-0.00217	-0.1421	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	COMANCHE 69KV	60	-0.00218	-0.14209	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	EASTMAN 138KV	356.7947	-0.00113	-0.14312	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	FITZHIGH 161KV	125	-0.00137	-0.14213	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	FLINT CREEK 161KV	428	-0.002	-0.14227	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	KNOXLEE 138KV	225	-0.00115	-0.14312	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	EMDE	LARUSSEL 161KV	100	-0.00185	-0.14242	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	LEBROCK 345KV	517.1024	-0.00115	-0.14312	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	LIEBERMAN 138KV	174	-0.00108	-0.14318	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	KACP	MONTAG 161KV	359.7	-0.00112	-0.14312	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OKGE	MUSKOGEE 161KV	166	-0.00207	-0.1422	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OKGE	MUSKOGEE 345KV	1548	-0.00211	-0.14216	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	NORTHEASTERN STATION 138KV	480	-0.00233	-0.14194	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	NORTHEASTERN STATION 345KV	625	-0.00238	-0.14189	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	OEC 345KV	390.4081	-0.00225	-0.14202	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	EMDE	PRIVATE GENERATION 138KV	288	-0.00115	-0.14312	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	EMDE	RIVERTON 161KV	100.0327	-0.00213	-0.14214	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	EMDE	RIVERTON 69KV	44.07887	-0.00208	-0.14219	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OKGE	SEMINOLE 138KV	334.858	-0.00248	-0.14178	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	OKGE	SEMINOLE 345KV	1019	-0.00252	-0.14175	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	SOUTHWESTERN STATION 138KV	712	-0.00222	-0.14205	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	SOUTHWESTERN STATION 345KV	287	-0.00222	-0.14205	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	EMDE	STATE LINE 161KV	523	0.00208	-0.14219	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	TONTI TOWN 161KV	140	-0.00201	-0.14228	73
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	AEWP	TULSA POWER STATION 138KV	129.8887	-0.00227	-0.142	73

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	WERE	EMPORIA ENERGY CENTER 345KV	610	-0.01418	-0.13008	80
MIDW	SMOKEY HILLS 34KV	75	-0.01291	MKEC	CLIFTON 115KV	66	0.11768	-0.13056	80
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.01063	MKEC	CLIFTON 115KV	66	0.11768	-0.12818	81
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	WERE	LAWRENCE ENERGY CENTER 230KV	223.9294	-0.01675	-0.12752	82
WERE	GETTY 69KV	35	-0.00613	MKEC	CLIFTON 115KV	66	0.11768	-0.12378	84
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.00602	MKEC	CLIFTON 115KV	66	0.11768	-0.12367	84
WERE	GILL ENERGY CENTER 69KV	48	-0.00604	MKEC	CLIFTON 115KV	66	0.11768	-0.12369	84
WERE	WACO 138KV	30	-0.00607	MKEC	CLIFTON 115KV	66	0.11768	-0.12372	84
WERE	ABILENE ENERGY CENTER 115KV	66	-0.14427	WERE	TECUMSEH ENERGY CENTER 115KV	153	-0.02184	-0.12243	85
WERE	CHANUTE 69KV	41.1	-0.00338	MKEC	CLIFTON 115KV	66	0.11768	-0.12065	86
OKGE	SOUTH 4TH ST 69KV	42.7	-0.00338	MKEC	CLIFTON 115KV	66	0.11768	-0.12103	86
OKGE	SPGC3&4 13.200 345KV	111	-0.00289	MKEC	CLIFTON 115KV	66	0.11768	-0.12054	86
MIPU	ARIES 161KV	576.6669	-0.00189	MKEC	CLIFTON 115KV	66	0.11768	-0.11954	87
AEPW	COGENTRIX 345KV	671.9331	-0.00226	MKEC	CLIFTON 115KV	66	0.11768	-0.11991	87
AEPW	ELKIN GN 1 13.800 69KV	60	-0.00201	MKEC	CLIFTON 115KV	66	0.11768	-0.11966	87
MIPU	GREENWOOD 161KV	255.8	-0.00174	MKEC	CLIFTON 115KV	66	0.11768	-0.11939	87
OKGE	HORSESHOE LAKE 138KV	64	-0.00264	MKEC	CLIFTON 115KV	66	0.11768	-0.12029	87
AEPW	KIOWA 345KV	1336.177	-0.00218	MKEC	CLIFTON 115KV	66	0.11768	-0.11983	87
EMDE	LARUSSEL 161KV	171	-0.00185	MKEC	CLIFTON 115KV	66	0.11768	-0.1195	87
OKGE	MCCLAIN 138KV	50	-0.00265	MKEC	CLIFTON 115KV	66	0.11768	-0.1203	87
AEPW	MID-CONTINENT 138KV	142.11	-0.00217	MKEC	CLIFTON 115KV	66	0.11768	-0.11982	87
OKGE	MUSKOGEE 345KV	32	-0.0021	MKEC	CLIFTON 115KV	66	0.11768	-0.11976	87
OKGE	MUSTANG 69KV	54.27831	-0.0027	MKEC	CLIFTON 115KV	66	0.11768	-0.12035	87
AEPW	OEC 345KV	1756.622	-0.00225	MKEC	CLIFTON 115KV	66	0.11768	-0.1199	87
KACP	PAOLA 5 161.00 161KV	82.5	-0.00184	MKEC	CLIFTON 115KV	66	0.11768	-0.11949	87
KACP	PAOLA COMBUSTION TURBINES 161KV	76	-0.00184	MKEC	CLIFTON 115KV	66	0.11768	-0.11949	87
MIPU	RALPH GREEN 69KV	73.7	-0.00187	MKEC	CLIFTON 115KV	66	0.11768	-0.11952	87
OKGE	REDBUD 345KV	1156.39	-0.00267	MKEC	CLIFTON 115KV	66	0.11768	-0.12032	87
EMDE	RIVERTON 161KV	182.9673	-0.00213	MKEC	CLIFTON 115KV	66	0.11768	-0.11978	87
OKGE	SEMINOLE 138KV	200.142	-0.00249	MKEC	CLIFTON 115KV	66	0.11768	-0.12014	87
MIPU	SOUTH HARPER 161KV	247.994	-0.00274	MKEC	CLIFTON 115KV	66	0.11768	-0.12039	87
AEPW	SOUTHWESTERN STATION 138KV	152	-0.00222	MKEC	CLIFTON 115KV	66	0.11768	-0.11987	87
AEPW	SOUTHWESTERN STATION 138KV	350	-0.00222	MKEC	CLIFTON 115KV	66	0.11768	-0.11987	87
EMDE	STATE LINE 161KV	90	-0.00205	MKEC	CLIFTON 115KV	66	0.11768	-0.11973	87
OKGE	TINKER SG 138KV	62	-0.00262	MKEC	CLIFTON 115KV	66	0.11768	-0.12027	87
AEPW	TONTITOWN 161KV	186.12	-0.00201	MKEC	CLIFTON 115KV	66	0.11768	-0.11966	87
AEPW	TULSA POWER STATION 138KV	177.1113	-0.00227	MKEC	CLIFTON 115KV	66	0.11768	-0.11992	87
AEPW	TULSA POWER STATION 69KV	80	-0.00227	MKEC	CLIFTON 115KV	66	0.11768	-0.11992	87
AEPW	WELETKA 138KV	162	-0.00223	MKEC	CLIFTON 115KV	66	0.11768	-0.11988	87
AEPW	ARSENAL HILL 138KV	337.2	-0.00107	MKEC	CLIFTON 115KV	66	0.11768	-0.11872	88
AEPW	EASTMAN 138KV	128.2153	-0.00115	MKEC	CLIFTON 115KV	66	0.11768	-0.1188	88
AEPW	FULTON 115KV	153	-0.00104	MKEC	CLIFTON 115KV	66	0.11768	-0.11869	88
AEPW	KNOXLEE 138KV	176	-0.00115	MKEC	CLIFTON 115KV	66	0.11768	-0.1188	88
AEPW	LEBROCK 345KV	179.8976	-0.00115	MKEC	CLIFTON 115KV	66	0.11768	-0.1188	88
AEPW	LIEBERMAN 138KV	45.99999	-0.00109	MKEC	CLIFTON 115KV	66	0.11768	-0.11874	88
AEPW	LONESTAR POWER PLANT 69KV	50	-0.0012	MKEC	CLIFTON 115KV	66	0.11768	-0.11885	88
AEPW	WILKES 138KV	52.19009	-0.00118	MKEC	CLIFTON 115KV	66	0.11768	-0.11894	88
KACP	BULL CREEK 161KV	246.4	0.00076	MKEC	CLIFTON 115KV	66	0.11768	-0.11689	89
KACP	GARDNER 161KV	31	0.00062	MKEC	CLIFTON 115KV	66	0.11768	-0.11703	89
KACP	HAWTHORN 161KV	245.2502	0.00052	MKEC	CLIFTON 115KV	66	0.11768	-0.11713	89
KACP	KAW 69KV	242	0.00048	MKEC	CLIFTON 115KV	66	0.11768	-0.11717	89
KACP	MARSHALL 161KV	54.1	0.00055	MKEC	CLIFTON 115KV	66	0.11768	-0.11756	89
KACP	NORTHEAST 13KV	223	0.00055	MKEC	CLIFTON 115KV	66	0.11768	-0.1171	89
KACP	NORTHEAST 161KV	224	0.00055	MKEC	CLIFTON 115KV	66	0.11768	-0.1171	89
KACP	QUINDARO 161KV	107.5824	0.00047	MKEC	CLIFTON 115KV	66	0.11768	-0.11718	89
KACP	QUINDARO 69KV	40.64384	0.00048	MKEC	CLIFTON 115KV	66	0.11768	-0.11717	89
MIPU	TWA 161KV	32.1	0.00154	MKEC	CLIFTON 115KV	66	0.11768	-0.11611	90
WERE	JEFFREY ENERGY CENTER 230KV	54	0.09177	EMDE	MIRWY11 34.500 230KV	100	0.20592	-0.11415	91
WERE	TECUMSEH ENERGY CENTER 69KV	41	0.02322	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.10501	91
MIPU	LAKE ROAD 161KV	91	0.00338	MKEC	CLIFTON 115KV	66	0.11768	-0.11375	92
NPPD	AINSWING 34.500 115KV	49.59249	0.00564	MKEC	CLIFTON 115KV	66	0.11768	-0.11201	93
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.02033	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.1121	93
OPPD	FREM 1G 13.800 69KV	40	0.00558	MKEC	CLIFTON 115KV	66	0.11768	-0.11207	93
OPPD	JONES 1G 13.800 69KV	59.3	0.00558	MKEC	CLIFTON 115KV	66	0.11768	-0.11207	93
OPPD	JONES 2G 13.800 69KV	59.3	0.00558	MKEC	CLIFTON 115KV	66	0.11768	-0.11207	93
OPPD	SARPY 1G 13.800 69KV	55.3	0.00562	MKEC	CLIFTON 115KV	66	0.11768	-0.11203	93
OPPD	SARPY 2G 13.800 69KV	55.3	0.00564	MKEC	CLIFTON 115KV	66	0.11768	-0.11201	93
OPPD	SARPY 3G 13.800 4KV	49.17342	0.00558	MKEC	CLIFTON 115KV	66	0.11768	-0.11207	93
OPPD	SARPY 4G 13.800 161KV	48.1	0.00558	MKEC	CLIFTON 115KV	66	0.11768	-0.11207	93
OPPD	SARPY 5G 13.800 161KV	48.1	0.00558	MKEC	CLIFTON 115KV	66	0.11768	-0.11207	93
NPPD	SONEY 3 230.00 230KV	230.6148	0.0063	MKEC	CLIFTON 115KV	66	0.11768	-0.11145	93
NPPD	BURDICK 3G 13.800 115KV	54	0.00338	MKEC	CLIFTON 115KV	66	0.11768	-0.11126	94
NPPD	CANADY 1G 13.800 115KV	125	0.0064	MKEC	CLIFTON 115KV	66	0.11768	-0.11125	94
NPPD	GT-3 G 13.800 115KV	40	0.00639	MKEC	CLIFTON 115KV	66	0.11768	-0.11126	94
KACP	IATAN 345KV	129	0.00696	MKEC	CLIFTON 115KV	66	0.11768	-0.11069	94
NPPD	KINGSLYG 13.800 115KV	47.95929	0.00627	MKEC	CLIFTON 115KV	66	0.11768	-0.11138	94
NPPD	MCCOOK G 13.800 115KV	51	0.0068	MKEC	CLIFTON 115KV	66	0.11768	-0.11135	94
OPPD	MCLEOD 3G 69.000 69KV	35.3	0.0068	MKEC	CLIFTON 115KV	66	0.11768	-0.1088	94
NPPD	SHELDON 13.800 115KV	52	0.00842	MKEC	CLIFTON 115KV	66	0.11768	-0.10923	95
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.01675	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.10852	96
MIDW	COLBY 115KV	36.41598	0.01116	MKEC	CLIFTON 115KV	66	0.11768	-0.10649	96
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.01419	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.10596	98
NPPD	HEBRON G 13.800 115KV	52	0.01245	MKEC	CLIFTON 115KV	66	0.11768	-0.1052	99
NPPD	BPS GT2G 13.800 115KV	34.80044	0.01324	MKEC	CLIFTON 115KV	66	0.11768	-0.10441	100
NPPD	BPS ST3G 13.800 115KV	40.00518	0.01324	MKEC	CLIFTON 115KV	66	0.11768	-0.10441	100
MIDW	SMOKEY HILLS 34KV	75	-0.01291	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.10468	100
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.01053	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.1023	102
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.00602	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09779	107
WERE	GILL ENERGY CENTER 69KV	48	-0.00604	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09781	107
OKGE	SOUTH 4TH ST 69KV	42.7	-0.00338	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09515	108
WERE	CHANUTE 69KV	41.1	-0.00338	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09477	110
OKGE	HORSESHOE LAKE 138KV	64	-0.00264	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09441	110
OKGE	MCCLAIN 138KV	50	-0.00265	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09442	110
OKGE	MUSTANG 69KV	54.27831	-0.0027	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09447	110
OKGE	REDBUD 345KV	1156.39	-0.00267	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09444	110
MIPU	SOUTH HARPER 161KV	247.994	-0.00274	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09451	110
OKGE	SPGC3&4 13.200 345KV	111	-0.00289	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09466	110
OKGE	TINKER SG 138KV	62	-0.00262	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09439	110
MIPU	ARIES 161KV	576.6669	-0.00189	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09366	111
AEPW	COGENTRIX 345KV	671.9331	-0.00226	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09403	111
AEPW	ELKIN GN 1 13.800 69KV	60	-0.00201	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09378	111
MIPU	GREENWOOD 161KV	255.8	-0.00174	WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09351	111
AEPW	KIOWA 345KV	1336.177	-0.00218	WERE	JEFFREY ENERGY CENTER 230KV	440			

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

Source	Relief	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)	
KACP BULL CREEK 161KV	246.4 0.0076 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09101	114
KACP HAWTHORN 161KV	245.2502 0.00052 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09126	114
KACP KAW 69KV	242 0.00048 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09129	114
KACP MARSHALL 161KV	54.1 0.00058 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09168	114
KACP NORTHEAST 13KV	223 0.00055 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09122	114
KACP NORTHEAST 161KV	224 0.00055 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09122	114
KACP QUINDARO 161KV	107.5824 0.00047 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.0913	114
KACP QUINDARO 69KV	40.64384 0.00048 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09129	114
MIPU LAKE ROAD 161KV	91 0.0038 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08787	119
NPPD ANSINING 34.500 115KV	49.59248 0.00564 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08613	121
OPPD JONES 1G 13.800 69KV	59.3 0.00558 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08619	121
OPPD JONES 2G 13.800 69KV	59.3 0.00558 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08619	121
OPPD SARPY 1G 13.800 69KV	55.3 0.00562 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08615	121
OPPD SARPY 2G 13.800 69KV	55.3 0.00564 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08613	121
OPPD SARPY 3G 13.800 4KV	49.17342 0.00558 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08619	121
OPPD SARPY 4G 13.800 161KV	48.1 0.00558 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08619	121
OPPD SARPY 5G 13.800 161KV	48.1 0.00558 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08619	121
NPPD BURDIC3G 13.800 115KV	54 0.00639 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08538	122
NPPD CANADY1G 13.800 115KV	125 0.0064 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08537	122
NPPD KINGSLYG 13.800 115KV	47.95929 0.00627 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.0855	122
NPPD MCCOOK G 13.800 115KV	51 0.0063 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08547	122
NPPD SIDNEY 1 230.00 230KV	230.6148 0.0062 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08557	122
KACP IATAN 345KV	129 0.00696 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08491	123
NPPD SHELDONG 13.800 115KV	52 0.00842 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08335	125
NPPD HEBRON G 13.800 115KV	52 0.01245 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.07932	131
WERE JEFFREY ENERGY CENTER 345KV	108 0.04416 MKEC	CLIFTON 115KV	65	0.11765	-0.07349	142
WERE BPU - CITY OF MCPHERSON 115KV	232 -0.20333 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.06449	162
WERE EMPORIA ENERGY CENTER 345KV	201 -0.1418 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.05535	179
MIDW SMOKEY HILLS 34KV	75 -0.11291 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.07707	183
WERE HUTCHINSON ENERGY CENTER 115KV	214 -0.01053 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.05468	190
WERE GILL ENERGY CENTER 138KV	84.99999 -0.06062 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.05018	208
WERE JEFFREY ENERGY CENTER 345KV	108 0.04416 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.04761	219
OKGE SPOCK3&4 13.200 345KV	111 -0.02089 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04705	221
OKGE REDUD 345KV	1156.39 -0.0267 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04683	222
MIPU SOUTH HARPER 161KV	247.984 0.00274 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.0469	222
OKGE SEMINOLE 138KV	200.142 -0.02448 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04665	223
AEPW COGENTRIX 345KV	671.9331 -0.02226 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04642	224
AEPW OEC 345KV	1756.622 -0.00225 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04641	224
AEPW TULSA POWER STATION 138KV	177.1113 -0.00227 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04643	224
AEPW TULSA POWER STATION 69KV	89 -0.00227 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04643	224
AEPW KIDWA 345KV	1336.177 -0.00218 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04634	225
AEPW MID-CONTINENT 138KV	142.111 -0.00217 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04633	225
EMDE RIVERTON 161KV	182.9673 -0.00213 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04629	225
AEPW SOUTHWESTERN STATION 138KV	350 -0.00222 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04638	225
AEPW SOUTHWESTERN STATION 138KV	152 -0.00222 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04638	225
EMDE STATE LINE 161KV	90 -0.00208 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04624	225
AEPW WILETKA 138KV	163 -0.00223 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04639	225
MIPU ARIES 161KV	576.6669 -0.00185 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04605	226
EMDE LARUSSEL 161KV	171 -0.00185 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04601	226
KACP PAOLA 5 161.00 161KV	82.5 -0.00184 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.046	226
KACP PAOLA COMBUSTION TURBINES 161KV	76 -0.00184 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.046	226
AEPW TONTOWN 161KV	186.12 -0.00201 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04617	226
MIPU GREENWOOD 161KV	255.248 -0.00185 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04589	226
AEPW ARSENAL HILL 138KV	337.2 -0.00107 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04523	230
AEPW EASTMAN 138KV	128.2153 -0.00115 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04531	230
AEPW FULTON 115KV	153 -0.00104 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.0452	230
AEPW KNOXLEE 138KV	176 -0.00115 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04531	230
AEPW LEBROCK 345KV	179.8978 -0.00115 WERE	JEFFREY ENERGY CENTER 345KV	874	0.04416	-0.04531	230
KACP KAW 69KV	242 0.00048 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09129	114
KACP QUINDARO 161KV	107.5824 0.00047 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.0913	114
KACP HAWTHORN 161KV	245.2502 0.00052 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09126	114
KACP NORTHEAST 13KV	223 0.00055 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09122	114
KACP NORTHEAST 161KV	224 0.00055 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09122	114
KACP BULL CREEK 161KV	246.4 0.00076 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.09101	114
MIPU LAKE ROAD 161KV	91 0.0038 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08787	119
NPPD ANSINING 34.500 115KV	49.59248 0.00564 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08613	121
NPPD CANADY1G 13.800 115KV	125 0.0064 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08537	122
KACP IATAN 345KV	129 0.00696 WERE	JEFFREY ENERGY CENTER 230KV	440	0.09177	-0.08491	123

Maximum Decrement and Maximum Increment were determined from the Source and Sink Operating Points in the study models where limiting facility was identified.

Factor = Source GSF \* Sink GSF  
Redispatch Amount = Relief Amount / Factor

Upgrade: EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1  
East Manhattan to Modowell 230 kV  
Limiting Facility: EAST MANHATTAN (EMANHT3X) 230/115/18.0KV TRANSFORMER CKT  
Direction: FROM->TO  
Line Outage: MODOWELL CREEK - MORRIS COUNTY 230KV CKT 1  
Flowgate: 2007AG2AFS81T2843210SP  
Date Redispatch Needed: Starting 2010 6/1 - 10/1 Until EOC of Upgrade  
Season Flowgate Identified: 2010 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount
1281706	3.1	14.8
1286201	11.7	14.8

Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	CLAY CENTER JUNCTION 115KV	13.375	-0.30218	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.45276	33
WERE	CLAY CENTER JUNCTION 115KV	13.375	-0.30218	MKEC	CLIFTON 115KV	65	0.08481	-0.36177	38
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMDE	MRWYG11 34.500 230KV	100	0.15057	-0.37369	40
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MKEC	CLIFTON 115KV	65	0.08481	-0.30793	48
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.27319	54
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	JEFFREY ENERGY CENTER 345KV	874	0.02464	-0.24776	60
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	BPS GT2G 13.800 115KV	80	0.00861	-0.23173	64
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	BPS ST3G 13.800 115KV	45.1985	0.00861	-0.23173	64
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	BPS ST3G 13.800 115KV	49.99482	0.00861	-0.23173	64
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	CASS 1G 15.000 345KV	42.51929	0.00336	-0.22648	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	CASS 2G 15.000 345KV	52.99999	0.00336	-0.22648	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	COL COG7 115.000 115KV	75	0.00334	-0.22646	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	COOPER1G 22.000 345KV	551.2002	0.00328	-0.22642	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	DENVER G 34.500 115KV	34.32933	0.00402	-0.22714	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	EGY CTG 13.800 115KV	54	0.00409	-0.22721	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	FREM 8G 13.800 69KV	90	0.00328	-0.2264	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	FT CAL1G 22.000 4KV	376	0.00327	-0.22639	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	GT-2 G 13.800 115KV	40	0.00354	-0.22666	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACP	IATAN 345KV	1806	0.00397	-0.22709	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACP	IATAN 345KV	371	0.00397	-0.22709	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	N OMA 1G 13.800 2KV	48	0.00333	-0.22642	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	N OMA 2G 13.800 2KV	80.59999	0.0033	-0.22642	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	N OMA 3G 13.800 2KV	80.59999	0.0033	-0.22642	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	N OMA 4G 15.000 2KV	107.4	0.0033	-0.22642	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	N OMA 5G 20.000 4KV	173.9	0.0033	-0.22642	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	NEBCTY1G 18.000 4KV	466	0.0034	-0.22652	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OPPD	NEBCTY2G 23.000 345KV	503	0.0034	-0.22652	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	PLATTE1G 13.800 115KV	71.51888	0.00353	-0.22665	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	SHELDN1G 13.800 115KV	68.40001	0.00521	-0.22833	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	SHELDN2G 13.800 115KV	81	0.00521	-0.22833	65
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACP	BULL CREEK 161KV	61.6	0.00103	-0.22415	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACP	CITY OF HIGGINSVILLE 69KV	36	0.00048	-0.2238	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	CENTRAL 2 34.500 115KV	95	0.0003	-0.22342	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	GENTLMTG 23.000 230KV	463	0.00295	-0.22607	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	NPPD	GENTLM2G 24.000 345KV				

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACY	NEARMAN 161KV	77	0.0009	-0.22402	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACY	NEARMAN 20KV	235	0.0009	-0.22402	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACY	QUINDARO 161KV	128.1176	0.00091	-0.22403	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	KACY	QUINDARO 69KV	138.3563	0.00091	-0.22403	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIFU	SIBLEY 161KV	228.9597	0.00077	-0.22389	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIFU	SIBLEY 69KV	45.99999	0.00084	-0.22396	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIFU	SOUTH HARPER 161KV	67.00598	-0.00023	-0.22289	66
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MKEC	A. M. MULLERGEN GENERATOR 115KV	63	-0.00265	-0.22047	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	ARES 161KV	320	-0.0011	-0.22202	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	ARSENAL HILL 138KV	455	-0.00086	-0.22226	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	ARSENAL HILL 69KV	90	-0.00087	-0.22225	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMDE	ASBURY 161KV	192	-0.00126	-0.22186	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	CENTENAL WIND 34KV	120	-0.00243	-0.22069	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	CHANUTE 69KV	54.8	-0.00193	-0.22119	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	CIMARRON RIVER 115KV	44	-0.00116	-0.22196	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	CITY OF BURLINGTON 69KV	55.4	-0.00278	-0.22034	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	COGENTRIX 345KV	222.0666	-0.00168	-0.22144	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	COMANCHE 138KV	145	-0.00211	-0.22101	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	COMANCHE 69KV	60	-0.00211	-0.22101	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	EASTMAN 138KV	356.7947	-0.00094	-0.22218	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMDE	ELK RIVER 345KV	44.986	-0.00363	-0.21949	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	EMPORIA ENERGY CENTER 345KV	910	-0.0007	-0.22242	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	FITZHUGH 161KV	125.4	-0.001	-0.22212	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	FLINT CREEK 161KV	428	-0.00136	-0.22176	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	FPLWIND2 34KV	59	-0.00245	-0.22067	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.00241	-0.22071	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	HORSESHOE LAKE 138KV	799	-0.00222	-0.22039	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MKEC	JUDSON LARGE 115KV	95.9336	-0.00241	-0.22037	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIDW	KNOLL 115KV	75.60001	-0.00136	-0.22176	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	KNOXLEE 138KV	225	-0.00093	-0.22219	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMDE	LARUSSEL 161KV	100	-0.00106	-0.22206	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	LEBROCK 345KV	517.1024	-0.00093	-0.22219	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	LIEBERMAN 138KV	174	-0.00088	-0.22224	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	MCCOLAIN 138KV	470	-0.00224	-0.22086	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	MUSKOGEE 161KV	166	-0.00153	-0.22159	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	MUSKOGEE 345KV	1548	-0.00157	-0.22155	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	MUSTANG 138KV	351	-0.0023	-0.22082	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	MUSTANG 69KV	51.72168	-0.0023	-0.22082	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	NORTHEASTERN STATION 138KV	480	-0.00168	-0.22146	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	NORTHWESTERN STATION 345KV	625	-0.00168	-0.22146	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	OEC 345KV	390.4081	-0.00164	-0.22148	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	PIRKEY GENERATION 138KV	288	-0.00093	-0.22219	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	REDBUD 345KV	43.60958	-0.00222	-0.2209	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMDE	RIVERTON 161KV	100.0327	-0.00128	-0.22183	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	EMDE	RIVERTON 69KV	44.07887	-0.00128	-0.22186	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	SEMINOLE 138KV	334.858	-0.0021	-0.22101	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	SEMINOLE 345KV	1019	-0.00213	-0.22093	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	SMITH COGEN 138KV	106	-0.00222	-0.22083	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	SOONER 138KV	538	-0.00277	-0.22035	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	SOONER 345KV	537	-0.00282	-0.2203	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	SOUTHWESTERN STATION 138KV	281	-0.00212	-0.221	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	SOUTHWESTERN STATION 138KV	712	-0.00212	-0.221	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	OKGE	SPOCK182 13.200 345KV	78	-0.00244	-0.22068	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIDW	STATE LINE 161KV	520	-0.00125	-0.22187	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	TONTITOWN 161KV	140	-0.00138	-0.22174	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	TULSA POWER STATION 138KV	129.8887	-0.00168	-0.22144	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	WELSH 345KV	1044	-0.00102	-0.2221	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	WILKES 138KV	410.8099	-0.00098	-0.22216	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	AEPW	WILKES 345KV	308	-0.00098	-0.22217	67
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	CITY OF WINFIELD 69KV	31.2	-0.00408	-0.21903	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	EVANS ENERGY CENTER 138KV	560	-0.00532	-0.2178	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	GILL ENERGY CENTER 138KV	155	-0.00498	-0.21814	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	GILL ENERGY CENTER 69KV	52	-0.00498	-0.21817	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	LAWRENCE ENERGY CENTER 230KV	223.9294	-0.00728	-0.21583	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	HUTCHINSON ENERGY CENTER 115KV	230	-0.01521	-0.20791	68
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	WERE	TECUMSEH ENERGY CENTER 115KV	133	-0.01885	-0.20427	71
WERE	ABILENE ENERGY CENTER 115KV	66	-0.22312	MIDW	SMOKEY HILLS 34KV	29	-0.02018	-0.20296	73
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.02897	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.17954	82
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.02129	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.17186	86
WERE	SMOKEY HILLS 34KV	75	-0.02018	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.17073	87
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.01521	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.16578	88
WERE	LAWRENCE ENERGY CENTER 230KV	45.07058	-0.00728	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15786	94
WERE	GETTY 69KV	35	-0.00491	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15548	95
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.00498	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15555	95
WERE	GILL ENERGY CENTER 69KV	48	-0.00498	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15552	95
WERE	CHANUTE 69KV	41.1	-0.00193	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.1525	97
WERE	COGENTRIX 345KV	671.9331	-0.00168	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15223	97
WERE	ELKIN GA 13.800 69KV	69	-0.00168	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15185	97
WERE	OKGE	64	-0.00222	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15279	97
WERE	KIOWA 345KV	1336.177	-0.00182	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15239	97
WERE	MCCOLAIN 138KV	50	-0.00226	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15283	97
WERE	MID-CONTINENT 138KV	142.11	-0.00152	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15209	97
WERE	MUSTANG 69KV	54.27831	-0.0022	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15287	97
WERE	OEC 345KV	1736.622	-0.00168	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15221	97
WERE	REDBUD 345KV	1156.39	-0.00222	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15273	97
WERE	SEMINOLE 138KV	200.142	-0.00211	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15268	97
WERE	SOUTH 4TH ST 69KV	42.7	-0.00282	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15339	97
WERE	SOUTHWESTERN STATION 138KV	152	-0.00212	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15269	97
WERE	SOUTHWESTERN STATION 138KV	350	-0.00212	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15269	97
WERE	SPOCK344 13.200 345KV	111	-0.00244	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15301	97
WERE	TINKER SG 138KV	62	-0.00222	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15273	97
WERE	TONTITOWN 161KV	186.12	-0.00138	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15195	97
WERE	TULSA POWER STATION 138KV	177.1113	-0.00168	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15225	97
WERE	TULSA POWER STATION 69KV	80	-0.00168	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15225	97
WERE	WLELETRA 138KV	162	-0.00178	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15233	97
WERE	ARES 161KV	576.6669	-0.00098	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15051	98
WERE	ARSENAL HILL 138KV	337.2	-0.00098	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15143	98
WERE	EASTMAN 138KV	128.2153	-0.00094	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15151	98
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.0007	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15127	98
WERE	FULTON 115KV	153	-0.00083	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.1514	98
WERE	GREENWOOD 161KV	255.8	0.00011	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15046	98
WERE	KNOXLEE 138KV	176	-0.00095	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.1515	98
WERE	LARUSSEL 161KV	171	-0.00106	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15163	98
WERE	LEBROCK 345KV	179.8976	-0.00093	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.1515	98
WERE	LIEBERMAN 138KV	45.99999	-0.00088	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15145	98
WERE	LONESTAR POWER PLANT 69KV	50	-0.00097	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15154	98
WERE	PAOLA 5 161.00 161KV	82.5	-0.0019	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15076	98
WERE	PAOLA COMBUSTION TURBINES 161KV	76	-0.0019	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15076	98
WERE	RALPH GREEN 69KV	73.7	0.00004	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15053	98
WERE	RIVERTON 161KV	182.9673	-0.00129	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15196	98
WERE	SOUTH HARPER 161KV	247.994	-0.00023	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.1508	98
WERE	STATE LINE 161KV	90	-0.00125	EMDE	MRWYG11 34.500 230KV	100	1.5057	-0.15182	98

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

NPPD	BURDIC3G 13.800 115KV	54	0.00354	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14703	101
NPPD	CANADY1G 13.800 115KV	125	0.00323	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14734	101
MIDW	COLBY 115KV	36.41598	0.00432	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14625	101
OPPD	FREM 1G 13.800 69KV	40	0.00328	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14729	101
NPPD	GT-3 G 13.800 115KV	40	0.00354	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14703	101
KACP	IATAN 345KV	129	0.00397	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14666	101
OPPD	JONES 1G 13.800 69KV	59.3	0.00332	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14725	101
OPPD	JONES 2G 13.800 69KV	59.3	0.00332	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14725	101
OPPD	NCJ903 8 69.000 69KV	55.3	0.00397	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14666	101
OPPD	SARPY 1G 13.800 69KV	55.3	0.00332	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14722	101
OPPD	SARPY 2G 13.800 69KV	55.3	0.00332	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14722	101
OPPD	SARPY 3G 13.800 4KV	49.17342	0.00332	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14725	101
OPPD	SARPY 4G 13.800 161KV	48.1	0.00332	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14725	101
OPPD	SARPY 5G 13.800 161KV	48.1	0.00332	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14725	101
NPPD	SHELDONG 13.800 115KV	52	0.00621	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14538	102
NPPD	BPS GT2G 13.800 115KV	34.80048	0.00861	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14196	104
NPPD	BPS ST3G 13.800 115KV	40.00518	0.00861	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14196	104
NPPD	HEBRON G 13.800 115KV	52	0.00799	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.14258	104
WERE	JEFFREY ENERGY CENTER 345KV	108	0.02464	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.12593	118
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.02897	MKEC	CLIFTON 115KV	65	0.08481	-0.11378	130
MIDW	SMOKEY HILLS 34KV	75	-0.02016	MKEC	CLIFTON 115KV	65	0.08481	-0.10497	141
WERE	JEFFREY ENERGY CENTER 230KV	54	0.05007	EMDE	MIRWYG11 34.500 230KV	100	0.15057	-0.10005	147
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.01521	MKEC	CLIFTON 115KV	65	0.08481	-0.10002	148
WERE	GILL ENERGY CENTER 138KV	84.99993	-0.00498	MKEC	CLIFTON 115KV	65	0.08481	-0.08979	165
OKGE	HORSESHOE LAKE 138KV	64	-0.00222	MKEC	CLIFTON 115KV	65	0.08481	-0.08703	170
OKGE	REDBUD 345KV	1156.39	-0.00222	MKEC	CLIFTON 115KV	65	0.08481	-0.08703	170
OKGE	SEMINOLE 138KV	200.142	-0.00211	MKEC	CLIFTON 115KV	65	0.08481	-0.08692	170
AEPW	SOUTHWESTERN STATION 138KV	152	-0.00212	MKEC	CLIFTON 115KV	65	0.08481	-0.08693	170
AEPW	SOUTHWESTERN STATION 138KV	350	-0.00212	MKEC	CLIFTON 115KV	65	0.08481	-0.08693	170
OKGE	SPGCK384 13.200 345KV	111	-0.00244	MKEC	CLIFTON 115KV	65	0.08481	-0.08725	170
OKGE	TINKER 5G 138KV	62	-0.00222	MKEC	CLIFTON 115KV	65	0.08481	-0.08703	170
AEPW	COGENTRIX 345KV	671.9331	-0.00168	MKEC	CLIFTON 115KV	65	0.08481	-0.08649	171
AEPW	KIOWA 345KV	1336.177	-0.00182	MKEC	CLIFTON 115KV	65	0.08481	-0.08663	171
AEPW	OC 345KV	1756.622	-0.00168	MKEC	CLIFTON 115KV	65	0.08481	-0.08645	171
AEPW	TULSA POWER STATION 138KV	177.1113	-0.00168	MKEC	CLIFTON 115KV	65	0.08481	-0.08649	171
AEPW	TULSA POWER STATION 69KV	80	-0.00168	MKEC	CLIFTON 115KV	65	0.08481	-0.08649	171
AEPW	WELETKA 138KV	162	-0.00176	MKEC	CLIFTON 115KV	65	0.08481	-0.08657	171
AEPW	ELKIN_GN 1 13.800 69KV	60	-0.00138	MKEC	CLIFTON 115KV	65	0.08481	-0.08619	172
EMDE	LARUSSEL 161KV	171	-0.00106	MKEC	CLIFTON 115KV	65	0.08481	-0.08587	172
AEPW	MID-CONTINENT 138KV	142.11	-0.00152	MKEC	CLIFTON 115KV	65	0.08481	-0.08633	172
EMDE	RIVERTON 161KV	182.9673	-0.00128	MKEC	CLIFTON 115KV	65	0.08481	-0.08611	172
EMDE	STATE LINE 161KV	90	-0.00125	MKEC	CLIFTON 115KV	65	0.08481	-0.08606	172
AEPW	TONTITOWN 161KV	186.12	-0.00138	MKEC	CLIFTON 115KV	65	0.08481	-0.08619	172
AEPW	ARSENAL HILL 138KV	337.2	-0.00086	MKEC	CLIFTON 115KV	65	0.08481	-0.08567	173
AEPW	EASTMAN 138KV	128.2153	-0.00094	MKEC	CLIFTON 115KV	65	0.08481	-0.08575	173
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.0007	MKEC	CLIFTON 115KV	65	0.08481	-0.08551	173
AEPW	FULTON 115KV	153	-0.00083	MKEC	CLIFTON 115KV	65	0.08481	-0.08564	173
AEPW	KNOXLEE 138KV	176	-0.00093	MKEC	CLIFTON 115KV	65	0.08481	-0.08574	173
AEPW	LEBROCK 345KV	179.8976	-0.00093	MKEC	CLIFTON 115KV	65	0.08481	-0.08574	173
KACP	PAOLA 5 161.00 161KV	82.5	-0.00019	MKEC	CLIFTON 115KV	65	0.08481	-0.085	174
KACP	PAOLA COMBUSTION TURBINES 161KV	76	-0.00019	MKEC	CLIFTON 115KV	65	0.08481	-0.085	174
MIPU	SOUTH HARPER 161KV	247.984	-0.00022	MKEC	CLIFTON 115KV	65	0.08481	-0.08504	174
MIPU	ARIES 161KV	576.6668	0.00008	MKEC	CLIFTON 115KV	65	0.08481	-0.08475	175
MIPU	GREENWOOD 161KV	255.8	0.00011	MKEC	CLIFTON 115KV	65	0.08481	-0.08477	175
MIPU	RALPH GREEN 69KV	73.7	0.00004	MKEC	CLIFTON 115KV	65	0.08481	-0.08477	175
KACP	BULL CREEK 161KV	246.4	0.00103	MKEC	CLIFTON 115KV	65	0.08481	-0.08378	177
KACP	HAWTHORN 161KV	245.2502	0.00102	MKEC	CLIFTON 115KV	65	0.08481	-0.08379	177
KACY	KAW 69KV	242	0.00092	MKEC	CLIFTON 115KV	65	0.08481	-0.08389	177
KACP	NORTHEAST 13KV	223	0.00101	MKEC	CLIFTON 115KV	65	0.08481	-0.08388	177
KACP	NORTHEAST 161KV	224	0.00101	MKEC	CLIFTON 115KV	65	0.08481	-0.08388	177
KACY	QUINDARO 161KV	107.5824	0.00091	MKEC	CLIFTON 115KV	65	0.08481	-0.08399	177
MIPU	LAKE ROAD 161KV	91	0.00256	MKEC	CLIFTON 115KV	65	0.08481	-0.08225	180
NPPD	SIDNEY 4 230.00 230KV	230.6148	0.00291	MKEC	CLIFTON 115KV	65	0.08481	-0.08199	181
NPPD	CANADY1G 13.800 115KV	125	0.00323	MKEC	CLIFTON 115KV	65	0.08481	-0.08158	182
KACP	IATAN 345KV	129	0.00397	MKEC	CLIFTON 115KV	65	0.08481	-0.08084	183
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.02897	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.07904	187
MIDW	SMOKEY HILLS 34KV	75	-0.02016	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.07023	211
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.01521	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.06528	227
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.02897	WERE	JEFFREY ENERGY CENTER 345KV	874	0.02464	-0.05361	276
OKGE	SPGCK384 13.200 345KV	111	-0.00244	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05251	282
OKGE	REDBUD 345KV	1156.39	-0.00222	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05229	283
OKGE	SEMINOLE 138KV	200.142	-0.00211	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05218	284
AEPW	SOUTHWESTERN STATION 138KV	350	-0.00212	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05219	284
AEPW	SOUTHWESTERN STATION 138KV	152	-0.00212	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05219	284
AEPW	KIOWA 345KV	1336.177	-0.00182	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05189	285
AEPW	COGENTRIX 345KV	671.9331	-0.00168	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05176	286
AEPW	OC 345KV	1756.622	-0.00168	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05171	286
AEPW	TULSA POWER STATION 138KV	177.1113	-0.00168	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05175	286
AEPW	WELETKA 138KV	162	-0.00176	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05183	286
AEPW	MID-CONTINENT 138KV	142.11	-0.00152	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05159	287
EMDE	RIVERTON 161KV	182.9673	-0.00128	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05136	288
AEPW	TONTITOWN 161KV	186.12	-0.00138	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05145	288
AEPW	EASTMAN 138KV	128.2153	-0.00094	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05101	290
AEPW	KNOXLEE 138KV	176	-0.00093	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05111	290
EMDE	LARUSSEL 161KV	171	-0.00106	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05113	290
AEPW	LEBROCK 345KV	179.8976	-0.00093	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.051	290
AEPW	ARSENAL HILL 138KV	337.2	-0.00086	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05093	291
AEPW	FULTON 115KV	153	-0.00083	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05099	291
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.0007	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05077	292
MIPU	SOUTH HARPER 161KV	247.984	-0.00022	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05038	294
MIPU	ARIES 161KV	576.6668	0.00008	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.05001	296
MIPU	GREENWOOD 161KV	255.8	0.00011	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.04996	296
KACY	KAW 69KV	242	0.00092	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.04915	301
KACP	QUINDARO 161KV	107.5824	0.00091	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.04916	301
KACP	BULL CREEK 161KV	246.4	0.00103	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.04904	302
KACP	HAWTHORN 161KV	245.2502	0.00102	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.04905	302
KACP	NORTHEAST 13KV	223	0.00101	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.04906	302
KACP	NORTHEAST 161KV	224	0.00101	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.04906	302
NPPD	SIDNEY 4 230.00 230KV	230.6148	0.00291	WERE	JEFFREY ENERGY CENTER 230KV	440	0.05007	-0.04716	314
NPPD	CANADY1G 13.800 115KV	125	0.00323	WERE	JEFFREY ENERGY CENTER 230KV	44			

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.38136	35
WERE	WACO 138KV	30	-0.27887	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.38136	35
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.35421	38
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	WERE	HUTCHINSON ENERGY CENTER 115KV	275.4319	0.11627	-0.29514	45
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	WERE	HUTCHINSON ENERGY CENTER 69KV	30	0.01608	-0.29495	45
WERE	WACO 138KV	30	-0.27887	WERE	HUTCHINSON ENERGY CENTER 115KV	275.4319	0.11627	-0.29514	45
WERE	WACO 138KV	30	-0.27887	WERE	HUTCHINSON ENERGY CENTER 69KV	30	0.01608	-0.29495	45
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	WERE	CLAY CENTER JUNCTION 115KV	16.9	0.01193	-0.2908	46
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	WERE	EMPORIA ENERGY CENTER 345KV	610	0.01428	-0.29316	46
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	WERE	JEFFREY ENERGY CENTER 230KV	440	0.00997	-0.28884	46
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	WERE	JEFFREY ENERGY CENTER 345KV	874	0.01028	-0.28913	46
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	WERE	SMOKEY HILLS 34KV	25	0.01021	-0.28908	46
WERE	WACO 138KV	30	-0.27887	WERE	CLAY CENTER JUNCTION 115KV	16.9	0.01193	-0.2908	46
WERE	WACO 138KV	30	-0.27887	WERE	EMPORIA ENERGY CENTER 345KV	610	0.01428	-0.29316	46
WERE	WACO 138KV	30	-0.27887	WERE	JEFFREY ENERGY CENTER 230KV	440	0.00997	-0.28884	46
WERE	WACO 138KV	30	-0.27887	WERE	JEFFREY ENERGY CENTER 345KV	874	0.01028	-0.28913	46
WERE	WACO 138KV	30	-0.27887	MIDW	SMOKEY HILLS 34KV	25	0.01021	-0.28908	46
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	MIDW	ARIES 161KV	17.69665	0.00278	-0.28165	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	MIDW	CLIFTON 115KV	65	0.00522	-0.29409	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	KACP	HAWTHORN 161KV	517.7923	0.00292	-0.28179	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	KACP	IATAN 345KV	1806	0.00428	-0.28315	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	KACP	IATAN 345KV	371	0.00428	-0.28315	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	MIDW	KNOLL 115KV	75.60001	0.00308	-0.28192	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	MIDW	LAKE ROAD 161KV	38	0.00311	-0.28198	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	MIDW	LAKE ROAD 345KV	92	0.00311	-0.28198	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	WERE	LAWRENCE ENERGY CENTER 230KV	223.9288	0.00762	-0.28649	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	EMDE	MRWYG11 34.500 230KV	100	0.00756	-0.28643	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	KACY	NEARMAN 161KV	77	0.00318	-0.28206	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	KACY	NEARMAN 20KV	235	0.00318	-0.28206	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	KACY	QUINDARO 161KV	129.4143	0.00317	-0.28204	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	KACY	QUINDARO 69KV	92	0.00318	-0.28204	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	MIDW	SIBLEY 161KV	228.9514	0.00271	-0.28158	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	MIDW	SIBLEY 69KV	45.99999	0.00276	-0.28163	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	MIDW	SOUTH HARPER 161KV	67.06152	0.00298	-0.28185	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	WERE	TECUMSEH ENERGY CENTER 115KV	133	0.0075	-0.28637	47
WERE	WACO 138KV	30	-0.27887	MIDW	ARIES 161KV	17.69665	0.00278	-0.28165	47
WERE	WACO 138KV	30	-0.27887	MIDW	CLIFTON 115KV	65	0.00522	-0.29409	47
WERE	WACO 138KV	30	-0.27887	KACP	HAWTHORN 161KV	517.7923	0.00292	-0.28179	47
WERE	WACO 138KV	30	-0.27887	KACP	IATAN 345KV	1806	0.00428	-0.28315	47
WERE	WACO 138KV	30	-0.27887	KACP	IATAN 345KV	371	0.00428	-0.28315	47
WERE	WACO 138KV	30	-0.27887	MIDW	KNOLL 115KV	75.60001	0.00308	-0.28192	47
WERE	WACO 138KV	30	-0.27887	MIDW	LAKE ROAD 161KV	38	0.00311	-0.28198	47
WERE	WACO 138KV	30	-0.27887	MIDW	LAKE ROAD 345KV	92	0.00311	-0.28198	47
WERE	WACO 138KV	30	-0.27887	EMDE	LAWRENCE ENERGY CENTER 230KV	223.9288	0.00762	-0.28649	47
WERE	WACO 138KV	30	-0.27887	EMDE	MRWYG11 34.500 230KV	100	0.00756	-0.28643	47
WERE	WACO 138KV	30	-0.27887	KACY	NEARMAN 161KV	77	0.00318	-0.28206	47
WERE	WACO 138KV	30	-0.27887	KACY	NEARMAN 20KV	235	0.00318	-0.28206	47
WERE	WACO 138KV	30	-0.27887	KACY	QUINDARO 161KV	129.4143	0.00317	-0.28204	47
WERE	WACO 138KV	30	-0.27887	KACY	QUINDARO 69KV	92	0.00318	-0.28204	47
WERE	WACO 138KV	30	-0.27887	MIDW	SIBLEY 161KV	228.9514	0.00271	-0.28158	47
WERE	WACO 138KV	30	-0.27887	MIDW	SIBLEY 69KV	45.99999	0.00276	-0.28163	47
WERE	WACO 138KV	30	-0.27887	MIDW	SOUTH HARPER 161KV	67.06152	0.00298	-0.28185	47
WERE	WACO 138KV	30	-0.27887	WERE	TECUMSEH ENERGY CENTER 115KV	133	0.0075	-0.28637	47
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OKGE	AES 161KV	320	-0.00102	-0.27785	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	AEPW	ARSENAL HILL 138KV	455	-0.00021	-0.27866	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	AEPW	ARSENAL HILL 69KV	92	-0.00021	-0.27866	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	EMDE	ASBURY 161KV	192	-0.00272	-0.27615	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	NPPD	BPS GT1G 13.800 115KV	80	0.00213	-0.281	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	NPPD	BPS GT2G 13.800 115KV	45.19951	0.00213	-0.281	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	NPPD	BPS GT3G 13.800 115KV	49.99482	0.00213	-0.281	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	KACP	BULL CREEK 161KV	81	0.00261	-0.28148	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OPPD	CASS 1G 15.000 345KV	42.51923	0.00185	-0.28072	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OPPD	CASS 2G 15.000 345KV	52.99999	0.00185	-0.28072	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OKGE	CENTENIAL WIND 34KV	120	0.00053	-0.2794	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	KACP	CITY OF HIGGINSVILLE 69KV	36	0.0021	-0.28097	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	AEPW	COGENTRIX 345KV	221.3008	-0.00168	-0.27718	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	NPPD	COL COG 115.00 115KV	79	0.00132	-0.28019	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	AEPW	COMMANCHE 138KV	145	0.00308	-0.27923	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	AEPW	COMMANCHE 69KV	60	0.00304	-0.27921	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	NPPD	COOPERTG 22.000 345KV	551.2802	0.00224	-0.28111	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	NPPD	D.HENRYG 34.500 115KV	18	0.00114	-0.28001	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	NPPD	DENVER G 34.500 115KV	34.32393	0.00113	-0.28	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	AEPW	EASTMAN 138KV	356.7324	-0.0002	-0.27867	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	NPPD	ENGTG 13.800 115KV	54	0.00115	-0.28002	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	NPPD	FITZGHUGH 161KV	125	-0.00097	-0.27749	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	AEPW	FLINT CREEK 161KV	428	-0.00198	-0.27689	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OKGE	FPLWIND2 34KV	59	0.00034	-0.27921	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OPPD	FREM 8G 13.800 69KV	90	0.00157	-0.28044	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OPPD	FT CALG 12.000 4KV	376	0.00173	-0.2806	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	NPPD	GENTLMH 23.000 230KV	463	-0.00021	-0.27866	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	NPPD	GENTLM2 24.000 345KV	443.0568	-0.00021	-0.27866	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	NPPD	GT-2 G 13.800 115KV	40	0.00098	-0.27985	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OKGE	HORSESHOE LAKE 138KV	796	0.00041	-0.27928	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OKGE	HORSESHOE LAKE 69KV	16	0.00024	-0.27911	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	AEPW	KNOXLEE 138KV	282	-0.0002	-0.27867	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	EMDE	LARUSSEL 161KV	100	-0.002	-0.27867	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	AEPW	LEBROCK 345KV	517.0293	-0.0002	-0.27867	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	AEPW	LEBERMAN 138KV	174	-0.00021	-0.27866	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OKGE	MCLAIN 138KV	470	0.00072	-0.27959	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	KACP	MONTROSE 161KV	359.7058	0.00217	-0.28104	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OKGE	MUSKOGEE 161KV	166	-0.0016	-0.27727	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OKGE	MUSKOGEE 345KV	1548	-0.00148	-0.27738	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OKGE	MUSTANG 138KV	351	0.00078	-0.27963	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OKGE	MUSTANG 69KV	52.52197	0.00073	-0.2796	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OPPD	N OMA 1G 13.800 2KV	48.5	0.00178	-0.28066	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OPPD	N OMA 2G 13.800 2KV	80.59999	0.00178	-0.28066	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OPPD	N OMA 3G 13.800 2KV	80.59999	0.00178	-0.28066	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OPPD	N OMA 4G 15.000 2KV	107.4	0.00178	-0.28066	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OPPD	N OMA 5G 20.000 4KV	173	0.00178	-0.28066	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	OPPD	NEECTY1G 18.000 4KV	468	0.00198		

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887/AEPW	WILKES 138KV	410.4529	-0.0002	-0.27867	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887/AEPW	WILKES 345KV	308	-0.0002	-0.27867	48
WERE	WACO 138KV	30	-0.27887/OKGE	AES 161KV	320	-0.00102	-0.27785	48
WERE	WACO 138KV	30	-0.27887/AEPW	ARSENAL HILL 138KV	455	-0.00021	-0.27866	48
WERE	WACO 138KV	30	-0.27887/AEPW	ARSENAL HILL 69KV	90	-0.00021	-0.27866	48
WERE	WACO 138KV	30	-0.27887/EMDE	ASBURY 161KV	192	-0.00272	-0.27615	48
WERE	WACO 138KV	30	-0.27887/NPPD	BPS GT1G 13.800 115KV	80	0.00213	-0.281	48
WERE	WACO 138KV	30	-0.27887/NPPD	BPS GT2G 13.800 115KV	45.19951	0.00213	-0.281	48
WERE	WACO 138KV	30	-0.27887/NPPD	BPS ST3G 13.800 115KV	49.99482	0.00213	-0.281	48
WERE	WACO 138KV	30	-0.27887/KACP	BULL CREEK 161KV	61.8	0.00261	-0.28148	48
WERE	WACO 138KV	30	-0.27887/OPPD	CASS IG 15.000 345KV	42.51929	0.00185	-0.28072	48
WERE	WACO 138KV	30	-0.27887/OPPD	CASS 2G 15.000 345KV	52.99999	0.00185	-0.28072	48
WERE	WACO 138KV	30	-0.27887/OKGE	CENTENIAL WIND 34KV	120	0.00053	-0.2794	48
WERE	WACO 138KV	30	-0.27887/KACP	CITY OF HIGGINSVILLE 69KV	36	0.0021	-0.28097	48
WERE	WACO 138KV	30	-0.27887/AEPW	COGENTRIX 345KV	221.3008	-0.00168	-0.27718	48
WERE	WACO 138KV	30	-0.27887/NPPD	COL COG7 115.00 115KV	75	0.00132	-0.28019	48
WERE	WACO 138KV	30	-0.27887/AEPW	COMANCHE 138KV	145	0.00038	-0.27923	48
WERE	WACO 138KV	30	-0.27887/AEPW	COMANCHE 69KV	60	0.00034	-0.27921	48
WERE	WACO 138KV	30	-0.27887/NPPD	COOPERIG 22.000 345KV	551.2802	0.00224	-0.28111	48
WERE	WACO 138KV	30	-0.27887/NPPD	D.HENRYG 34.500 115KV	18	0.00114	-0.28001	48
WERE	WACO 138KV	30	-0.27887/NPPD	DENVER G 34.500 115KV	34.32393	0.00113	-0.28	48
WERE	WACO 138KV	30	-0.27887/AEPW	EASTMAN 138KV	358.7324	-0.0002	-0.27867	48
WERE	WACO 138KV	30	-0.27887/NPPD	EGY CTRG 13.800 115KV	54	0.00115	-0.28002	48
WERE	WACO 138KV	30	-0.27887/AEPW	FITZHUGH 161KV	125.4	-0.00097	-0.2779	48
WERE	WACO 138KV	30	-0.27887/AEPW	FLINT CREEK 161KV	428	-0.00198	-0.27689	48
WERE	WACO 138KV	30	-0.27887/OKGE	FPLWIND2 34KV	59	0.00034	-0.27921	48
WERE	WACO 138KV	30	-0.27887/OPPD	FREM BG 13.800 69KV	90	0.00157	-0.28044	48
WERE	WACO 138KV	30	-0.27887/OPPD	FT COG 22.000 4KV	376	0.00173	-0.2806	48
WERE	WACO 138KV	30	-0.27887/NPPD	GENTLMTG 23.000 230KV	463	-0.00021	-0.27866	48
WERE	WACO 138KV	30	-0.27887/NPPD	GENTLMTG 24.000 345KV	443.0568	-0.00028	-0.27859	48
WERE	WACO 138KV	30	-0.27887/NPPD	GT-2 G 13.800 115KV	40	0.00098	-0.27985	48
WERE	WACO 138KV	30	-0.27887/OKGE	HORSESHOE LAKE 138KV	796	0.00041	-0.27928	48
WERE	WACO 138KV	30	-0.27887/OKGE	HORSESHOE LAKE 69KV	16	0.00024	-0.27911	48
WERE	WACO 138KV	30	-0.27887/AEPW	KNOXLEE 138KV	282	-0.0002	-0.27867	48
WERE	WACO 138KV	30	-0.27887/AEPW	LARUSSEL 161KV	100	-0.002	-0.27887	48
WERE	WACO 138KV	30	-0.27887/AEPW	LEBROCK 345KV	517.0293	-0.0002	-0.27867	48
WERE	WACO 138KV	30	-0.27887/AEPW	LIEBERMAN 138KV	174	-0.00021	-0.27866	48
WERE	WACO 138KV	30	-0.27887/OKGE	MCCLEIN 138KV	470	0.00072	-0.27959	48
WERE	WACO 138KV	30	-0.27887/KACP	MONTROSE 161KV	359.7056	0.00217	-0.28104	48
WERE	WACO 138KV	30	-0.27887/OKGE	MUSKOGEE 161KV	166	-0.0016	-0.27727	48
WERE	WACO 138KV	30	-0.27887/OKGE	MUSKOGEE 345KV	1548	-0.00145	-0.27738	48
WERE	WACO 138KV	30	-0.27887/OKGE	MUSTANG 138KV	351	0.00078	-0.27963	48
WERE	WACO 138KV	30	-0.27887/OKGE	MUSTANG 69KV	52.52197	0.00073	-0.2796	48
WERE	WACO 138KV	30	-0.27887/OPPD	N OMA 1G 13.800 2KV	48.5	0.00178	-0.28066	48
WERE	WACO 138KV	30	-0.27887/OPPD	N OMA 2G 13.800 2KV	80.59999	0.00178	-0.28066	48
WERE	WACO 138KV	30	-0.27887/OPPD	N OMA 3G 13.800 2KV	80.59999	0.00178	-0.28066	48
WERE	WACO 138KV	30	-0.27887/OPPD	N OMA 4G 15.000 2KV	107	0.00178	-0.28066	48
WERE	WACO 138KV	30	-0.27887/OPPD	N OMA 5G 20.000 4KV	173.5	0.00178	-0.28066	48
WERE	WACO 138KV	30	-0.27887/OPPD	NEBCTY1G 18.000 4KV	468	0.00198	-0.28083	48
WERE	WACO 138KV	30	-0.27887/OPPD	NEBCTY2G 23.000 345KV	503	0.00198	-0.28083	48
WERE	WACO 138KV	30	-0.27887/AEPW	NORTHEASTERN STATION 138KV	480	-0.00287	-0.276	48
WERE	WACO 138KV	30	-0.27887/AEPW	NORTHEASTERN STATION 345KV	629	-0.00269	-0.27618	48
WERE	WACO 138KV	30	-0.27887/AEPW	OEC 345KV	293.378	-0.00194	-0.27693	48
WERE	WACO 138KV	30	-0.27887/EMDE	OZARK BEACH 161KV	16	0.00137	-0.2775	48
WERE	WACO 138KV	30	-0.27887/AEPW	PIRKEY GENERATION 138KV	288	-0.0002	-0.27867	48
WERE	WACO 138KV	30	-0.27887/NPPD	PLATTEIG 13.800 115KV	71.51868	0.00095	-0.27982	48
WERE	WACO 138KV	30	-0.27887/OKGE	REBUD 345KV	42.0956	0.00034	-0.27921	48
WERE	WACO 138KV	30	-0.27887/EMDE	RIVERTON 161KV	99.9177	-0.00257	-0.2763	48
WERE	WACO 138KV	30	-0.27887/EMDE	RIVERTON 69KV	44.07541	-0.00244	-0.27643	48
WERE	WACO 138KV	30	-0.27887/OKGE	SEMINOLE 138KV	334.8975	0.00033	-0.27924	48
WERE	WACO 138KV	30	-0.27887/OKGE	SEMINOLE 345KV	1019	0.00047	-0.27934	48
WERE	WACO 138KV	30	-0.27887/NPPD	SHELDN1G 13.800 115KV	68.40001	0.00183	-0.2807	48
WERE	WACO 138KV	30	-0.27887/NPPD	SHELDN2G 13.800 115KV	81	0.00183	-0.2807	48
WERE	WACO 138KV	30	-0.27887/NPPD	SIDNEY 4 230.00 230KV	19.3852	-0.00018	-0.27871	48
WERE	WACO 138KV	30	-0.27887/OKGE	SMITH COGEN 138KV	106	0.00074	-0.27961	48
WERE	WACO 138KV	30	-0.27887/OKGE	SOONER 345KV	537	0.00076	-0.27963	48
WERE	WACO 138KV	30	-0.27887/AEPW	SOUTHWESTERN STATION 138KV	712	0.00031	-0.27918	48
WERE	WACO 138KV	30	-0.27887/AEPW	SOUTHWESTERN STATION 138KV	287	0.00031	-0.27918	48
WERE	WACO 138KV	30	-0.27887/OKGE	SPGCK1&2 13.200 345KV	78	0.00011	-0.27978	48
WERE	WACO 138KV	30	-0.27887/EMDE	STATE LINE 161KV	520	-0.00245	-0.27642	48
WERE	WACO 138KV	30	-0.27887/AEPW	TONTITOWN 161KV	140	-0.00191	-0.27696	48
WERE	WACO 138KV	30	-0.27887/AEPW	TULSA POWER STATION 138KV	147	-0.00184	-0.27703	48
WERE	WACO 138KV	30	-0.27887/AEPW	WELSH 345KV	1044	-0.0002	-0.27867	48
WERE	WACO 138KV	30	-0.27887/AEPW	WILKES 138KV	410.4529	-0.0002	-0.27867	48
WERE	WACO 138KV	30	-0.27887/AEPW	WILKES 345KV	308	-0.0002	-0.27867	48
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887/MKEC	A. M. MULLERGREEN GENERATOR 115KV	63	-0.00383	-0.27504	49
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887/WERE	CHANUTE 69KV	54.8	-0.00738	-0.27149	49
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887/WERE	CITY OF BURLINGTON 69KV	55	-0.005	-0.27377	49
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887/WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	-0.0051	-0.27377	49
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887/OKGE	SOONER 138KV	535	-0.00517	-0.2737	49
WERE	WACO 138KV	30	-0.27887/MKEC	A. M. MULLERGREEN GENERATOR 115KV	63	-0.00383	-0.27504	49
WERE	WACO 138KV	30	-0.27887/WERE	CHANUTE 69KV	54.8	-0.00738	-0.27149	49
WERE	WACO 138KV	30	-0.27887/WERE	CITY OF BURLINGTON 69KV	55	-0.005	-0.27377	49
WERE	WACO 138KV	30	-0.27887/WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	-0.0051	-0.27377	49
WERE	WACO 138KV	30	-0.27887/OKGE	SOONER 138KV	535	-0.00517	-0.2737	49
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887/MKEC	CIMARRON RIVER 115KV	44	-0.0138	-0.26507	50
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/WERE	EMPORIA ENERGY CENTER 345KV	610	0.01428	-0.26601	50
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/WERE	HUTCHINSON ENERGY CENTER 115KV	275.4318	0.01627	-0.26799	50
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/WERE	HUTCHINSON ENERGY CENTER 69KV	36	0.01608	-0.2678	50
WERE	WACO 138KV	30	-0.27887/MKEC	CIMARRON RIVER 115KV	44	-0.0138	-0.26507	50
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887/EMDE	ELK RIVER 345KV	44.986	-0.01453	-0.26434	51
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/WERE	JEFFREY ENERGY CENTER 230KV	440	0.00997	-0.26169	51
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/WERE	JEFFREY ENERGY CENTER 345KV	874	0.01028	-0.26198	51
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/MIDW	SMOKEY HILLS 34KV	29	0.01021	-0.26193	51
WERE	WACO 138KV	30	-0.27887/EMDE	ELK RIVER 345KV	44.986	-0.01453	-0.26434	51
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/MKEC	CLIFTON 115KV	65	0.0052	-0.25694	52
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/KACP	IATAN 345KV	371	0.00428	-0.256	52
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/KACP	IATAN 345KV	1806	0.00428	-0.256	52
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/MIDW	KNOLL 115KV	75.60001	0.00305	-0.25477	52
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/MIPU	LAKE ROAD 161KV	35	0.00311	-0.25483	52
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/MIPU	LAKE ROAD 34KV	62	0.00311	-0.25483	52
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/WERE	LAWRENCE ENERGY CENTER 230KV	223.8286	0.00763	-0.25934	52
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/EMDE	MRWYG11 34.500 230KV	100	0.00758	-0.25928	52
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/KACY	NEARMAN 161KV	77	0.00318	-0.25491	52
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/KACY	NEARMAN 20KV	235	0.00318	-0.25491	52
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/KACY	QUINDARO 161KV	129.413	0.00317	-0.25489	52
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/KACY	QUINDARO 69KV	136.3627	0.00316	-0.25488	52
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/WERE	TECUMSEH ENERGY CENTER 115KV	133	0.0075	-0.25922	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887/MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.02565	-0.25322	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887/MKEC	JUDSON LARGE 115KV	95.97768	-0.02592	-0.25295	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/OKGE	AES 161KV	320	-0.00102	-0.2507	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/MIPU	ARIES 161KV	17.69668	0.00278	-0.2545	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/AEPW	ARSENAL HILL 138KV	455	-0.00021	-0.25151	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/AEPW	ARSENAL HILL 69KV	90	-0.00021	-0.25151	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/NPPD	BPS GT1G 13.800 115KV	80	0.00213	-0.25385	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/NPPD	BPS GT2G 13.800 115KV	45.19951	0.00213	-0.25385	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/NPPD	BPS ST3G 13.800 115KV	49.99482	0.00213	-0.25385	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/KACP	BULL CREEK 161KV	61.8	0.00261	-0.25433	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/OPPD	CASS IG 15.000 345KV	42.51929	0.00185	-0.25357	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/OPPD	CASS 2G 15.000 345KV	52.99999	0.00185	-0.25357	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172/					

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	GILL ENERGY CENTER 69KV	48	-0.25172	NPPD	COOPER1G 22.000 345KV	561.2802	0.00224	-0.25396	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	NPPD	D HENRYG 34.500 115KV	18	0.00114	-0.25286	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	NPPD	DENVER 34.500 115KV	34.32393	0.00113	-0.25285	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	EASTMAN 138KV	386.7324	-0.0002	-0.25153	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	NPPD	EGY CTRG 13.800 115KV	54	0.00115	-0.25287	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	FITZHUGH 161KV	125.4	-0.00097	-0.25075	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	FPLWIND2 34KV	59	0.00034	-0.25206	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OPPD	FREM 8G 13.800 69KV	90	0.00157	-0.25329	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OPPD	FT CALIG 22.000 4KV	376	0.00173	-0.25346	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	NPPD	GENTLMG 23.000 230KV	463	-0.00021	-0.25151	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	NPPD	GENTLMG 24.000 345KV	443.0568	-0.00028	-0.25144	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	NPPD	GT-2 G 13.800 115KV	40	0.00098	-0.2527	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	KACP	HAWTHORN 161KV	517.7923	0.00292	-0.25464	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	HORSESHOE LAKE 138KV	796	0.00041	-0.25213	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	KNOXLEE 138KV	282	-0.0002	-0.25152	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	LEBROCK 345KV	517.0293	-0.0002	-0.25152	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	LIEBERMAN 138KV	174	-0.00021	-0.25151	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	MCLAIN 138KV	470	0.00072	-0.25244	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	KACP	MONTROSE 161KV	359.7056	0.00217	-0.25389	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	MUSKOGEE 161KV	166	-0.0016	-0.25012	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	MUSKOGEE 345KV	1548	-0.00148	-0.25023	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	MUSTANG 138KV	351	0.00078	-0.25248	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	MUSTANG 69KV	52.52197	0.00078	-0.25245	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OPPD	N OMA 1G 13.800 2KV	48.5	0.00178	-0.25351	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OPPD	N OMA 2G 13.800 2KV	80.59999	0.00178	-0.25351	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OPPD	N OMA 3G 13.800 2KV	80.59999	0.00178	-0.25351	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OPPD	N OMA 4G 15.000 2KV	107.4	0.00178	-0.25351	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OPPD	N OMA 5G 20.000 4KV	173	0.00178	-0.25351	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OPPD	NEECTY1G 13.000 4KV	488	0.00198	-0.25368	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OPPD	NEECTY2G 23.000 345KV	503	0.00198	-0.25368	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	PIRKEY GENERATION 138KV	288	-0.0002	-0.25152	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	NPPD	PLATTE1G 13.800 115KV	71.51868	0.00095	-0.25267	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	REDBUD 345KV	42.0956	0.00034	-0.25206	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	SEMINOLE 138KV	334.8975	0.00037	-0.25209	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	SEMINOLE 345KV	1015	0.00047	-0.25219	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	NPPD	SHELDN1G 13.800 115KV	68.40001	0.00183	-0.25355	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	NPPD	SHELDN2G 13.800 115KV	81	0.00183	-0.25355	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	MIPU	SIBLEY 161KV	228.9514	0.00271	-0.25443	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	MIPU	SIBLEY 69KV	45.99999	0.00278	-0.25448	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	NPPD	SIDNEY 4 230.00 230KV	19.3852	-0.00018	-0.25156	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	SMITH COGEN 138KV	106	0.00077	-0.25248	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	SOONER 345KV	537	0.00078	-0.25248	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	MIPU	SOUTH HARPER 161KV	67.06152	0.00298	-0.2547	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	SOUTHWESTERN STATION 138KV	712	0.00031	-0.25203	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	SOUTHWESTERN STATION 138KV	287	0.00031	-0.25203	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	SPGCK1&2 13.200 345KV	78	0.00091	-0.25263	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	WELLS 345KV	1044	-0.0002	-0.25152	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	WILKES 138KV	410.4523	-0.0002	-0.25152	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	WILKES 345KV	308	-0.0002	-0.25152	53
WERE	WACO 138KV	30	-0.27887	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.02565	-0.25322	53
WERE	WACO 138KV	30	-0.27887	MKEC	JUDSON LARGE 115KV	95.97768	-0.02592	-0.25295	53
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	MKEC	A. M. MULLERGEN GENERATOR 115KV	63	0.00383	-0.24788	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	EMDE	ASBURY 161KV	192	-0.00272	-0.249	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	WERE	CITY OF BURLINGTON 69KV	55.4	-0.0051	-0.24662	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	-0.0051	-0.24662	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	FLINT CREEK 161KV	428	-0.00198	-0.24974	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	EMDE	LARUSSEL 161KV	100	-0.002	-0.24972	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	NORTHEASTERN STATION 138KV	480	-0.00287	-0.24885	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	NORTHEASTERN STATION 345KV	625	-0.00287	-0.24885	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	OEC 345KV	293.1378	-0.00194	-0.24978	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	EMDE	RIVERTON 161KV	99.9177	-0.00257	-0.24915	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	EMDE	RIVERTON 69KV	44.07541	-0.00244	-0.24928	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	OKGE	SOONER 138KV	535	-0.00517	-0.24655	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	EMDE	STATE LINE 161KV	520	-0.00245	-0.24927	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	TONTITOWN 161KV	140	-0.00191	-0.24981	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	AEPW	TULSA POWER STATION 138KV	147	-0.00184	-0.24988	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	WERE	CHANUTE 69KV	54.8	-0.00738	-0.24434	55
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	MKEC	CIMARRON RIVER 115KV	44	-0.0138	-0.23792	54
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	EMDE	ELK RIVER 345KV	44.986	-0.01453	-0.23719	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	WERE	CITY OF AUGUSTA 69KV	20	-0.04594	-0.23293	57
WERE	WACO 138KV	30	-0.27887	WERE	CITY OF AUGUSTA 69KV	20	-0.04594	-0.23293	57
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.02565	-0.23267	57
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	MKEC	JUDSON LARGE 115KV	95.97768	-0.02592	-0.22258	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.27887	WERE	CITY OF WINFIELD 69KV	31.2	-0.07499	-0.20388	66
WERE	WACO 138KV	30	-0.27887	WERE	CITY OF WINFIELD 69KV	31.2	-0.07499	-0.20388	66
WERE	GILL ENERGY CENTER 69KV	48	-0.25172	WERE	CITY OF WINFIELD 69KV	31.2	-0.07499	-0.17673	76
WERE	SETTLE 69KV	38	-0.03301	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.1355	99
WERE	CHAMUTE 69KV	41	-0.00278	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10987	122
EMDE	RIVERTON 161KV	183.0823	-0.00257	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10506	127
EMDE	STATE LINE 161KV	90	-0.00245	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10494	127
AEPW	COGENTRIX 345KV	672.6992	-0.00169	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10418	128
AEPW	ELKIN GN 13.800 69KV	60	-0.00192	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10441	128
EMDE	LARUSSEL 161KV	171	-0.002	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10449	128
AEPW	MID-CONTINENT 138KV	142.11	-0.00222	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10473	128
AEPW	OEC 345KV	1853.892	-0.00194	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10443	128
AEPW	TONTITOWN 161KV	186.12	-0.00191	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.1044	128
AEPW	TULSA POWER STATION 138KV	160	-0.00184	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10433	128
AEPW	TULSA POWER STATION 69KV	60	-0.00184	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10433	128
NPPD	MCCOOK G 13.800 115KV	51	-0.00121	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.1037	129
AEPW	WELLETA 138KV	163	-0.00268	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10336	129
AEPW	ARSENAL HILL 138KV	337.2	-0.00027	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.1027	130
AEPW	EASTMAN 138KV	128.2778	-0.0002	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10269	130
AEPW	FULTON 115KV	153	-0.00025	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10274	130
NPPD	KINGSLYG 13.800 115KV	47.95929	-0.00027	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10276	130
AEPW	KIOWA 345KV	1336.588	-0.00007	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10256	130
AEPW	KNOXLEE 138KV	119	-0.0002	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10269	130
AEPW	LEBROCK 345KV	179.9706	-0.00007	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10269	130
AEPW	LIEBERMAN 138KV	45.99999	-0.00021	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.1027	130
NPPD	SIDNEY 4 230.00 230KV	230.6148	-0.00016	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10265	130
AEPW	WILKES 138KV	52.54706	-0.0002	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10269	130
NPPD	AINSWING 34.500 115KV	49.59249	0.00071	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10178	131
NPPD	CANADYIG 13.800 115KV	123	0.00028	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.1022	131
OKGE	HORSESHOE LAKE 138KV	64	0.00047	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10206	131
OKGE	MCLAIN 138KV	50	0.00072	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10177	131
OKGE	MUSTANG 69KV	53.47802	0.00073	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10176	131
OKGE	REDBUD 345KV	1157.904	0.00034	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10215	131
OKGE	SEMINOLE 138KV	200.1025	0.00037	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10212	131
AEPW	SOUTHWESTERN STATION 138KV	152	0.00031	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10218	131
AEPW	SOUTHWESTERN STATION 138KV	350	0.00031	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10218	131
OKGE	TINKER 5G 138KV	62	0.00057	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10192	131
NPPD	BURDIC3G 13.800 115KV	54	0.00098	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10151	132
KACP	MARSHALL 161KV	54.1	0.00147	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10102	132
OKGE	SPGCK3&4 13.200 345KV	111	0.00091	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10158	132
NPPD	HEBRON G 13.800 115KV	52	0.00174	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.10075	133
OPPD	JONES 1G 13.800 69KV	59.3	0.00167	WERE	EVANS ENERGY CENTER				

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

MIPU	GREENWOOD 161KV	255.8	0.00277	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.09972	134
KACP	HAWTHORN 161KV	245.2077	0.00292	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.09957	134
KACP	NORTHEAST 138KV	223	0.003	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.09949	134
KACP	NORTHEAST 161KV	224	0.003	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.09949	134
MIPU	RALPH GREEN 69KV	73.7	0.00269	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.0998	134
MIPU	SOUTH HARPER 161KV	247.9384	0.00298	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.09951	134
KACY	KAW 69KV	242	0.00319	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.09934	135
MIPU	LAKE ROAD 161KV	91	0.00311	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.09938	135
KACY	QUINDARO 161KV	107.5857	0.00317	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.09932	135
KACP	IATAN 345KV	129	0.00428	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.09821	136
WERE	JEFFREY ENERGY CENTER 230KV	54	0.00897	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.09252	145
WERE	JEFFREY ENERGY CENTER 345KV	108	0.01026	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.09223	145
MIDW	SMOKEY HILLS 34KV	75	0.01021	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.09228	145
WERE	ABILENE ENERGY CENTER 115KV	66	0.01268	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.08984	149
WERE	BPU - CITY OF MCPHERSON 115KV	232	0.01479	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.0877	152
WERE	EMPORIA ENERGY CENTER 345KV	201	0.01428	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.0882	152
WERE	HUTCHINSON ENERGY CENTER 115KV	128.5681	0.01627	WERE	EVANS ENERGY CENTER 138KV	560	0.10248	-0.08622	155

Maximum Decrement and Maximum Increment were determined from the Source and Sink Operating Points in the study models where limiting facility was identified.

Factor = Source GSF - Sink GSF

Redispatch Amount = Relief Amount / Factor

Upgrade: GILL ENERGY CENTER WEST - WACO 138KV CKT 1  
 Limiting Facility: GILL ENERGY CENTER WEST - WACO 138KV CKT 1  
 Direction: FROM->TO  
 Line Outage: COWSKIN - EVANS ENERGY CENTER SOUTH 138KV CKT 1  
 Flowgate: 2007AG2AFS81T193310SP  
 Date Redispatch Needed: 6/1/10 - 10/1/10  
 Season Flowgate Identified: 2010 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount										
1286201	3.8	3.8	Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	WACO 138KV	30	-1	MKEC	A. M. MULLERGEN GENERATOR 115KV	63	0	-1	4			
WERE	WACO 138KV	30	-1	OKGE	AES 161KV	320	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	AINSWN1G 34.500 115KV	10.205	0	-1	4			
WERE	WACO 138KV	30	-1	MIPU	ARIES 161KV	4.960196	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	ARSENAL HILL 138KV	453	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	ARSENAL HILL 69KV	90	0	-1	4			
WERE	WACO 138KV	30	-1	EMDE	ASBURY 161KV	192	0	-1	4			
WERE	WACO 138KV	30	-1	MIDW	ATWOOD 115KV	1.625496	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	BPS GT1G 13.800 115KV	80	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	BPS GT2G 13.800 115KV	44.32	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	BPS ST3G 13.800 115KV	49.022	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	BROKENEG 69.000 115KV	8.3	0	-1	4			
WERE	WACO 138KV	30	-1	KACP	BULL CREEK 161KV	61.6	0	-1	4			
WERE	WACO 138KV	30	-1	OPPD	CASS 1G 15.000 345KV	42.51929	0	-1	4			
WERE	WACO 138KV	30	-1	OPPD	CASS 2G 15.000 345KV	52.99999	0	-1	4			
WERE	WACO 138KV	30	-1	OKGE	CENTENIAL WIND 34KV	44	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	CHARLITE 69KV	54.8	0	-1	4			
WERE	WACO 138KV	30	-1	MKEC	CIMARRON RIVER 115KV	33	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	CITY OF AUGUSTA 69KV	20	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	CITY OF BURLINGTON 69KV	55.4	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	CITY OF ERIE 69KV	4	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	CITY OF FREDONIA 69KV	5.269998	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	CITY OF GIRARD 69KV	3.6	0	-1	4			
WERE	WACO 138KV	30	-1	KACP	CITY OF HIGGINSVILLE 69KV	36	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	CITY OF IOLA 69KV	10.2	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	CITY OF MULVANE 69KV	9.729	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	CITY OF WINFIELD 69KV	31.2	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	CLAY CENTER JUNCTION 115KV	16.5	0	-1	4			
WERE	WACO 138KV	30	-1	MKEC	CLIFTON 115KV	3.374023	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	CONTRPL 2 34.500 115KV	98	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	COGENTRIX 345KV	86.5	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	COL COG7 115.00 115KV	75	0	-1	4			
WERE	WACO 138KV	30	-1	MIDW	COLBY 115KV	12.01502	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	COLMS2G 13.800 115KV	3.001	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	COLMS3G 13.800 115KV	3.001	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	COMANCHE 138KV	145	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	COMANCHE 69KV	60	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	COOPER1G 22.000 345KV	535.747	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	CRETE G 34.500 115KV	15.7	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	D HENRYG 34.500 115KV	18	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	DENVER G 34.500 115KV	33.905	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	EASTMAN 138KV	157.540	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	EGY CTRG 13.800 115KV	54	0	-1	4			
WERE	WACO 138KV	30	-1	EMDE	ELK RIVER 345KV	44.986	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	ELLIS 69KV	6	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	EMPORIA ENERGY CENTER 345KV	610	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	EVANS ENERGY CENTER 138KV	560	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	FARRBYG 34.500 115KV	15.3	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	FITZHUGH 161KV	125.4	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	FLINT CREEK 161KV	428	0	-1	4			
WERE	WACO 138KV	30	-1	OKGE	FPLWIND2 34KV	16	0	-1	4			
WERE	WACO 138KV	30	-1	OPPD	FREM 8G 13.800 69KV	90	0	-1	4			
WERE	WACO 138KV	30	-1	OPPD	FT CALTG 22.000 4KV	376	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	GENTLM2G 23.000 230KV	461.318	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	GENTLM2G 24.000 345KV	430.5284	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	GILL ENERGY CENTER 138KV	155	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	GILL ENERGY CENTER 69KV	52	0	-1	4			
WERE	WACO 138KV	30	-1	MKEC	GRAY COUNTY WIND FARM 115KV	110	0	-1	4			
WERE	WACO 138KV	30	-1	MIDW	GREAT BEND PLANT 69KV	9.25	0	-1	4			
WERE	WACO 138KV	30	-1	KACP	GREAT PLAINS ENERGY WIND GENERATION AT SPEARVILLE 230KV	100	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	GT-2 G 13.800 115KV	40	0	-1	4			
WERE	WACO 138KV	30	-1	KACP	HAWTHORN 161KV	485.2	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	HOLTON 115KV	12.2	0	-1	4			
WERE	WACO 138KV	30	-1	OKGE	HORSESHOE LAKE 138KV	796	0	-1	4			
WERE	WACO 138KV	30	-1	OKGE	HORSESHOE LAKE 69KV	16	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	HUTCHINSON ENERGY CENTER 115KV	257.9033	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	HUTCHINSON ENERGY CENTER 69KV	30	0	-1	4			
WERE	WACO 138KV	30	-1	KACP	IATAN 345KV	371	0	-1	4			
WERE	WACO 138KV	30	-1	KACP	IATAN 345KV	1806	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	JEFFREY ENERGY CENTER 230KV	440	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	JEFFREY ENERGY CENTER 345KV	874	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	JEFFREY G 8.000 115KV	3.001	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	JOHN 1 G 6.9000 115KV	3.001	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	JOHN 2 G 6.9000 115KV	3.001	0	-1	4			
WERE	WACO 138KV	30	-1	MKEC	JUDSON LARGE 115KV	95.37077	0	-1	4			
WERE	WACO 138KV	30	-1	NPPD	KINGSLYG 13.800 115KV	2.001	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	KIOWA 345KV	3.198808	0	-1	4			
WERE	WACO 138KV	30	-1	MIDW	KNOX 115KV	75.60001	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	KNOXLEE 138KV	282	0	-1	4			
WERE	WACO 138KV	30	-1	MIPU	LAKE ROAD 34KV	92	0	-1	4			
WERE	WACO 138KV	30	-1	EMDE	LARUSSEL 161KV	100	0	-1	4			
WERE	WACO 138KV	30	-1	WERE	LAWRENCE ENERGY CENTER 230KV	223.9929	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	LEBROCK 345KV	367.1163	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	LIEBERMAN 138KV	174	0	-1	4			
WERE	WACO 138KV	30	-1	IAEPW	LONESTAR POWER PLANT 69KV	27	0	-1	4			
WERE	WACO 138KV	30	-1	OKGE	MCLAIN 138KV	470	0	-1	4			
WERE	WACO 138KV	30	-1	KACP	MONTROSE 161KV	307.363	0	-1	4			
WERE	WACO 138KV	30	-1	OKGE	MUSKOGEE 161KV	166	0	-1	4			
WERE	WACO 138KV	30	-1	OKGE	MUSKOGEE 345KV	1548	0	-1	4			
WERE	WACO 138KV	30	-1	OKGE	MUSTANG 138KV	351	0	-1	4			

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

Source	Sink	Source GSF	Sink GSF	Factor	Aggregate Redispatch Amount (MW)
WERE WACO 138KV	-1 OKGE MUSTANG 69KV	30	90	0	-1
WERE WACO 138KV	-1 OPPD N OMA 1G 13.800 2KV	30	48.5	0	-1
WERE WACO 138KV	-1 OPPD N OMA 2G 13.800 2KV	30	80.59999	0	-1
WERE WACO 138KV	-1 OPPD N OMA 3G 13.800 2KV	30	80.59999	0	-1
WERE WACO 138KV	-1 OPPD N OMA 4G 15.000 2KV	30	107.4	0	-1
WERE WACO 138KV	-1 OPPD N OMA 5G 20.000 4KV	30	173.9	0	-1
WERE WACO 138KV	-1 NPPD N.PLATTIG 13.800 115KV	30	15.107	0	-1
WERE WACO 138KV	-1 KACY NEARMAN 161KV	30	77	0	-1
WERE WACO 138KV	-1 KACY NEARMAN 20KV	30	235	0	-1
WERE WACO 138KV	-1 OPPD NEBCTY1G 13.000 4KV	30	466	0	-1
WERE WACO 138KV	-1 OPPD NEBCTY2G 23.000 345KV	30	503	0	-1
WERE WACO 138KV	-1 AEPW NORTHEASTERN STATION 138KV	30	480	0	-1
WERE WACO 138KV	-1 AEPW NORTHEASTERN STATION 345KV	30	625	0	-1
WERE WACO 138KV	-1 AEPW OEC 346KV	30	555.4863	0	-1
WERE WACO 138KV	-1 NPPD ORD G 34.500 115KV	30	3	0	-1
WERE WACO 138KV	-1 WERE OXFORD 138KV	30	3	0	-1
WERE WACO 138KV	-1 EMDE OZARK BEACH 161KV	30	16	0	-1
WERE WACO 138KV	-1 AEPW PIRKEY GENERATION 138KV	30	288	0	-1
WERE WACO 138KV	-1 NPPD PLATTEIG 13.800 115KV	30	69.44599	0	-1
WERE WACO 138KV	-1 MKEC PRATT 3 115.00 115KV	30	12.276	0	-1
WERE WACO 138KV	-1 KACY QUINDARO 161KV	30	117.0069	0	-1
WERE WACO 138KV	-1 KACY QUINDARO 69KV	30	123.6635	0	-1
WERE WACO 138KV	-1 OKGE REDBLD 345KV	30	11.79899	0	-1
WERE WACO 138KV	-1 EMDE RIVERTON 161KV	30	190.2537	0	-1
WERE WACO 138KV	-1 EMDE RIVERTON 69KV	30	43.98939	0	-1
WERE WACO 138KV	-1 KACP S.OTTWAS 161.00 161KV	30	5.199998	0	-1
WERE WACO 138KV	-1 OPPD SARPY 3G 13.800 4KV	30	1.815392	0	-1
WERE WACO 138KV	-1 WERE SCRANTNS 115.00 115KV	30	1.467	0	-1
WERE WACO 138KV	-1 OKGE SEMINOLE 138KV	30	329.385	0	-1
WERE WACO 138KV	-1 OKGE SEMINOLE 345KV	30	1019	0	-1
WERE WACO 138KV	-1 NPPD SHELDN1G 13.800 115KV	30	68.40001	0	-1
WERE WACO 138KV	-1 NPPD SHELDN2G 13.800 115KV	30	80.56	0	-1
WERE WACO 138KV	-1 MIPU SIBLEY 161KV	30	228.5508	0	-1
WERE WACO 138KV	-1 MIPU SIBLEY 69KV	30	25.36536	0	-1
WERE WACO 138KV	-1 NPPD SIDNEY 4 230.00 230KV	30	19.008	0	-1
WERE WACO 138KV	-1 OKGE SMITH COGEN 138KV	30	106	0	-1
WERE WACO 138KV	-1 MIDW SMOKEY HILLS 34KV	30	50	0	-1
WERE WACO 138KV	-1 OKGE SOONER 138KV	30	535	0	-1
WERE WACO 138KV	-1 OKGE SOONER 345KV	30	537	0	-1
WERE WACO 138KV	-1 OKGE SOUTH 4TH ST 69KV	30	12.71973	0	-1
WERE WACO 138KV	-1 WERE SOUTH SENECA 115KV	30	11.2	0	-1
WERE WACO 138KV	-1 AEPW SOUTHWESTERN STATION 138KV	30	712	0	-1
WERE WACO 138KV	-1 AEPW SOUTHWESTERN STATION 138KV	30	287	0	-1
WERE WACO 138KV	-1 OKGE SPGCK1&2 13.200 345KV	30	78	0	-1
WERE WACO 138KV	-1 OKGE SPGCK3&4 13.200 345KV	30	12	0	-1
WERE WACO 138KV	-1 EMDE STATE LINE 161KV	30	538	0	-1
WERE WACO 138KV	-1 NPPD STUART 7 115.00 115KV	30	2.1	0	-1
WERE WACO 138KV	-1 WERE TEGUMSEH ENERGY CENTER 115KV	30	133	0	-1
WERE WACO 138KV	-1 OKGE TINKER 5G 138KV	30	60	0	-1
WERE WACO 138KV	-1 AEPW TONTITOWN 161KV	30	140	0	-1
WERE WACO 138KV	-1 AEPW TULSA POWER STATION 138KV	30	240.0898	0	-1
WERE WACO 138KV	-1 NPPD W.POINTG 34.500 115KV	30	7.4	0	-1
WERE WACO 138KV	-1 AEPW WEAVERFORD 34KV	30	72	0	-1
WERE WACO 138KV	-1 AEPW WELSH 345KV	30	1044	0	-1
WERE WACO 138KV	-1 KACP W.GARDNR5 161.00 161KV	30	6.2	0	-1
WERE WACO 138KV	-1 AEPW WILKES 138KV	30	410.8666	0	-1
WERE WACO 138KV	-1 AEPW WILKES 345KV	30	308	0	-1

Maximum Decrement and Maximum Increment were determined from the Source and Sink Operating Points in the study models where limiting facility was identified.  
 Factor = Source GSF - Sink GSF  
 Redispatch Amount = Relief Amount / Factor

Upgrade: GILL ENERGY CENTER WEST - WACO 138KV CKT 1  
 Limiting Facility: GILL ENERGY CENTER WEST - WACO 138KV CKT 1  
 Direction: FROM->TO  
 Line Outage: COWSKIN - EVANS ENERGY CENTER SOUTH 138KV CKT 1  
 Flowgate: 2007AG2AFS81T3031413SP  
 Date Redispatch Needed: Starting 2011 6/1 - 10/1 Unit EOC of Upgrade  
 Season Flowgate Identified: 2013 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount							
1286201	4.6	4.6							
Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE WACO 138KV		30	-1 MKEC	A. M. MULLERGEN GENERATOR 115KV		63	0	-1	5
WERE WACO 138KV		30	-1 WERE	ADILENE ENERGY CENTER 115KV		40	0	-1	5
WERE WACO 138KV		30	-1 OKGE	ARIS 161KV		320	0	-1	5
WERE WACO 138KV		30	-1 NPPD	AINSWN1G 34.500 115KV		10.38864	0	-1	5
WERE WACO 138KV		30	-1 MIPU	ARIES 161KV		282.6805	0	-1	5
WERE WACO 138KV		30	-1 AEPW	ARSENAL HILL 138KV		455	0	-1	5
WERE WACO 138KV		30	-1 EMDE	ASBURY 161KV		192	0	-1	5
WERE WACO 138KV		30	-1 WERE	BPU - CITY OF MCPHERSON 115KV		152	0	-1	5
WERE WACO 138KV		30	-1 KACP	BULL CREEK 161KV		308	0	-1	5
WERE WACO 138KV		30	-1 OPPD	CASS 1G 15.000 345KV		53.3	0	-1	5
WERE WACO 138KV		30	-1 OPPD	CASS 2G 15.000 345KV		53.3	0	-1	5
WERE WACO 138KV		30	-1 OKGE	CENTENIAL WIND 34KV		120	0	-1	5
WERE WACO 138KV		30	-1 WERE	CHANUTE 69KV		58.45001	0	-1	5
WERE WACO 138KV		30	-1 MKEC	CIMARRON RIVER 115KV		44	0	-1	5
WERE WACO 138KV		30	-1 WERE	CITY OF AUGUSTA 69KV		20	0	-1	5
WERE WACO 138KV		30	-1 WERE	CITY OF BURLINGTON 69KV		55.4	0	-1	5
WERE WACO 138KV		30	-1 WERE	CITY OF ERIE 69KV		24	0	-1	5
WERE WACO 138KV		30	-1 WERE	CITY OF FREDONIA 69KV		6.8	0	-1	5
WERE WACO 138KV		30	-1 WERE	CITY OF GIRARD 69KV		3.6	0	-1	5
WERE WACO 138KV		30	-1 KACP	CITY OF HIGGINSVILLE 69KV		35.001	0	-1	5
WERE WACO 138KV		30	-1 WERE	CITY OF IOLA 69KV		10.2	0	-1	5
WERE WACO 138KV		30	-1 WERE	CITY OF MULVANE 69KV		10.358	0	-1	5
WERE WACO 138KV		30	-1 WERE	CITY OF WINFIELD 69KV		31.2	0	-1	5
WERE WACO 138KV		30	-1 WERE	CLAY CENTER JUNCTION 115KV		16.5	0	-1	5
WERE WACO 138KV		30	-1 MKEC	CLIFTON 115KV		65	0	-1	5
WERE WACO 138KV		30	-1 WERE	CNTRLPL2 34.500 115KV		99	0	-1	5
WERE WACO 138KV		30	-1 WERE	COPLEY COUNTY NO. 2 SHARPE 69KV		19.99	0	-1	5
WERE WACO 138KV		30	-1 AEPW	COCENTRIX 345KV		212.9467	0	-1	5
WERE WACO 138KV		30	-1 NPPD	COL COG7 115.00 115KV		75	0	-1	5
WERE WACO 138KV		30	-1 MIDW	COLBY 115KV		12.16478	0	-1	5
WERE WACO 138KV		30	-1 NPPD	COLMBS2G 13.800 115KV		3.055602	0	-1	5
WERE WACO 138KV		30	-1 NPPD	COLMBS3G 13.800 115KV		3.055602	0	-1	5
WERE WACO 138KV		30	-1 NPPD	COMANCHE 138KV		145	0	-1	5
WERE WACO 138KV		30	-1 AEPW	COMANCHE 69KV		60	0	-1	5
WERE WACO 138KV		30	-1 NPPD	COOPERTG 22.000 345KV		549.9063	0	-1	5
WERE WACO 138KV		30	-1 NPPD	DENVER G 34.500 115KV		12.32423	0	-1	5
WERE WACO 138KV		30	-1 AEPW	EASTMAN 138KV		356.0529	0	-1	5
WERE WACO 138KV		30	-1 NPPD	EGY CTRG 13.800 115KV		54	0	-1	5
WERE WACO 138KV		30	-1 NPPD	EGYCTR2G 22.000 115KV		197.1	0	-1	5
WERE WACO 138KV		30	-1 WERE	ELK RIVER 345KV		149.855	0	-1	5
WERE WACO 138KV		30	-1 AEPW	ELKIN GN 1 13.800 69KV		5.000001	0	-1	5
WERE WACO 138KV		30	-1 AEPW	ELLIS 69KV		11	0	-1	5
WERE WACO 138KV		30	-1 WERE	EMPORIA ENERGY CENTER 345KV		610	0	-1	5
WERE WACO 138KV		30	-1 WERE	EVANS ENERGY CENTER 138KV		562.0034	0	-1	5
WERE WACO 138KV		30	-1 AEPW	FITZHUGH 161KV		126	0	-1	5
WERE WACO 138KV		30	-1 AEPW	FLINT CREEK 161KV		428	0	-1	5
WERE WACO 138KV		30	-1 OKGE	FLPNWD2 34KV		102	0	-1	5
WERE WACO 138KV		30	-1 OPPD	FREM 6G 13.800 69KV		6.802	0	-1	5
WERE WACO 138KV		30	-1 OPPD	FREM 7G 13.800 69KV		16.606	0	-1	5
WERE WACO 138KV		30	-1 OPPD	FREM 8G 13.800 69KV		90.8	0	-1	5
WERE WACO 138KV		30	-1 OPPD	FT CAL1G 22.000 4KV		366	0	-1	5
WERE WACO 138KV		30	-1 AEPW	FULTON 115KV		32.99999	0	-1	5

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	WACO 138KV		30	-1 NPPD	GENTLM1G 23.000 230KV	463	0	-1	5
WERE	WACO 138KV		30	-1 NPPD	GENTLM2G 24.000 345KV	441.2178	0	-1	5
WERE	WACO 138KV		30	-1 WERE	GILL ENERGY CENTER 138KV	155	0	-1	5
WERE	WACO 138KV		30	-1 WERE	GILL ENERGY CENTER 69KV	75	0	-1	5
WERE	WACO 138KV		30	-1 MKEC	GRAY COUNTY WIND FARM 115KV	38	0	-1	5
WERE	WACO 138KV		30	-1 MIDW	GREAT BEND PLANT 69KV	7.024148	0	-1	5
WERE	WACO 138KV		30	-1 KACP	GREAT PLAINS ENERGY WIND GENERATION AT SPEARVILLE 230KV	7	0	-1	5
WERE	WACO 138KV		30	-1 MIPU	GREENWOOD 161KV	247	0	-1	5
WERE	WACO 138KV		30	-1 NPPD	GT 2 G 13.800 115KV	39.31553	0	-1	5
WERE	WACO 138KV		30	-1 KACP	HAWTHORN 161KV	768	0	-1	5
WERE	WACO 138KV		30	-1 WERE	HOLTON 115KV	12.2	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	HORSESHOE LAKE 138KV	796	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	HORSESHOE LAKE 69KV	16	0	-1	5
WERE	WACO 138KV		30	-1 WERE	HUTCHINSON ENERGY CENTER 115KV	356	0	-1	5
WERE	WACO 138KV		30	-1 WERE	HUTCHINSON ENERGY CENTER 69KV	30	0	-1	5
WERE	WACO 138KV		30	-1 KACP	JATAN 345KV	1808	0	-1	5
WERE	WACO 138KV		30	-1 KACP	JATAN 345KV	371	0	-1	5
WERE	WACO 138KV		30	-1 WERE	JEFFREY ENERGY CENTER 230KV	440	0	-1	5
WERE	WACO 138KV		30	-1 WERE	JEFFREY ENERGY CENTER 345KV	874	0	-1	5
WERE	WACO 138KV		30	-1 NPPD	JEFFREY G 9.000 115KV	3.055602	0	-1	5
WERE	WACO 138KV		30	-1 NPPD	JOHN T G 6.900 115KV	3.055602	0	-1	5
WERE	WACO 138KV		30	-1 MKEC	JUDSON LARGE 115KV	95.05118	0	-1	5
WERE	WACO 138KV		30	-1 NPPD	KINGSLYG 13.800 115KV	2.037407	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	KIOWA 345KV	6.936519	0	-1	5
WERE	WACO 138KV		30	-1 MIDW	KNOLL 115KV	75.60001	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	KNOXLEE 138KV	164	0	-1	5
WERE	WACO 138KV		30	-1 MIPU	LAKE ROAD 161KV	111	0	-1	5
WERE	WACO 138KV		30	-1 MIPU	LAKE ROAD 34KV	92	0	-1	5
WERE	WACO 138KV		30	-1 EMDE	LARUSSEL 161KV	100	0	-1	5
WERE	WACO 138KV		30	-1 WERE	LAWRENCE ENERGY CENTER 230KV	224.0353	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	LEBROCK 345KV	320.7084	0	-1	5
WERE	WACO 138KV		30	-1 KACP	MARSHALL 161KV	15	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	MCCLAIN 138KV	470	0	-1	5
WERE	WACO 138KV		30	-1 KACP	MONTROSE 161KV	360.1015	0	-1	5
WERE	WACO 138KV		30	-1 EMDE	MRVYG11 34.500 230KV	100	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	MUSKOGEE 161KV	166	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	MUSKOGEE 345KV	1548	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	MUSTANG 138KV	351	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	MUSTANG 69KV	90	0	-1	5
WERE	WACO 138KV		30	-1 NPPD	N OMA 1G 13.800 2KV	27.021	0	-1	5
WERE	WACO 138KV		30	-1 OPPD	N OMA 2G 13.800 2KV	55.031	0	-1	5
WERE	WACO 138KV		30	-1 OPPD	N OMA 3G 13.800 2KV	55.031	0	-1	5
WERE	WACO 138KV		30	-1 OPPD	N OMA 4G 15.000 2KV	80.03999	0	-1	5
WERE	WACO 138KV		30	-1 OPPD	N OMA 5G 20.000 4KV	115.062	0	-1	5
WERE	WACO 138KV		30	-1 NPPD	N PLAT1G 13.800 115KV	15.37983	0	-1	5
WERE	WACO 138KV		30	-1 OPPD	NOBRO 6.690 000 69KV	10.704	0	-1	5
WERE	WACO 138KV		30	-1 KACP	NEARMAN 161KV	77	0	-1	5
WERE	WACO 138KV		30	-1 KACP	NEARMAN 20KV	235	0	-1	5
WERE	WACO 138KV		30	-1 OPPD	NEBCTY1G 18.000 4KV	466	0	-1	5
WERE	WACO 138KV		30	-1 OPPD	NEBCTY2G 23.000 345KV	503	0	-1	5
WERE	WACO 138KV		30	-1 MIPU	NEVADA 69KV	18	0	-1	5
WERE	WACO 138KV		30	-1 KACP	NORTHEAST 138KV	127.3078	0	-1	5
WERE	WACO 138KV		30	-1 KACP	NORTHEAST 161KV	111	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	NORTHEASTERN STATION 138KV	480	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	NORTHEASTERN STATION 345KV	566	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	OEC 345KV	379.0804	0	-1	5
WERE	WACO 138KV		30	-1 WERE	OXFORD 138KV	3	0	-1	5
WERE	WACO 138KV		30	-1 EMDE	OZARK BEACH 161KV	16	0	-1	5
WERE	WACO 138KV		30	-1 KACP	PAOLA COMBUSTION TURBINES 161KV	77	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	PIRKEY GENERATION 138KV	288	0	-1	5
WERE	WACO 138KV		30	-1 NPPD	PLATTE1G 13.800 115KV	71.33617	0	-1	5
WERE	WACO 138KV		30	-1 MKEC	PRATT 3 115.00 115KV	12.278	0	-1	5
WERE	WACO 138KV		30	-1 KACP	QUINDARO 161KV	133.0655	0	-1	5
WERE	WACO 138KV		30	-1 KACP	QUINDARO 69KV	140	0	-1	5
WERE	WACO 138KV		30	-1 MIPU	RALPH GREEN 69KV	71	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	REBUD 345KV	455.9001	0	-1	5
WERE	WACO 138KV		30	-1 EMDE	RIVERTON 161KV	69	0	-1	5
WERE	WACO 138KV		30	-1 EMDE	RIVERTON 69KV	44.1424	0	-1	5
WERE	WACO 138KV		30	-1 KACP	S OTTWA5 161.00 161KV	8.899998	0	-1	5
WERE	WACO 138KV		30	-1 OPPD	S993 8.69 000 69KV	5.502	0	-1	5
WERE	WACO 138KV		30	-1 OPPD	SARPY 1G 13.800 69KV	5.909022	0	-1	5
WERE	WACO 138KV		30	-1 OPPD	SARPY 3G 13.800 4KV	45.12089	0	-1	5
WERE	WACO 138KV		30	-1 OPPD	SARPY 4G 13.800 161KV	41.516	0	-1	5
WERE	WACO 138KV		30	-1 OPPD	SARPY 5G 13.800 161KV	41.516	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	SEMINOLE 138KV	477.5549	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	SEMINOLE 345KV	1019	0	-1	5
WERE	WACO 138KV		30	-1 NPPD	SHELDN1G 13.800 115KV	65.50228	0	-1	5
WERE	WACO 138KV		30	-1 NPPD	SHELDN2G 13.800 115KV	76.79918	0	-1	5
WERE	WACO 138KV		30	-1 MIPU	SIBLEY 161KV	229.0836	0	-1	5
WERE	WACO 138KV		30	-1 MIPU	SIBLEY 69KV	45.99999	0	-1	5
WERE	WACO 138KV		30	-1 NPPD	SIDNEY 4 230.00 230KV	19.35181	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	SMITH COGEN 138KV	106	0	-1	5
WERE	WACO 138KV		30	-1 MIDW	SMOKEY HILLS 34KV	78	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	SOONER 138KV	539	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	SOONER 345KV	537	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	SOUTH 4TH ST 69KV	37	0	-1	5
WERE	WACO 138KV		30	-1 MIPU	SOUTH HARPER 161KV	315	0	-1	5
WERE	WACO 138KV		30	-1 WERE	SOUTH SENECA 115KV	11.2	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	SOUTHWESTERN STATION 138KV	679.958	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	SOUTHWESTERN STATION 138KV	230	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	SPGCK1&2 13.200 345KV	60	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	SPGCK3&4 13.200 345KV	30	0	-1	5
WERE	WACO 138KV		30	-1 EMDE	STATE LINE 161KV	506.1493	0	-1	5
WERE	WACO 138KV		30	-1 WERE	TECUMSEH ENERGY CENTER 115KV	161	0	-1	5
WERE	WACO 138KV		30	-1 WERE	TECUMSEH ENERGY CENTER 69KV	26	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	TINKER 5G 138KV	60	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	TONTTOWN 161KV	210	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	TURK 138KV	443	0	-1	5
WERE	WACO 138KV		30	-1 MIPU	TWA 161KV	27	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	WEATHERFORD 34KV	148	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	WELSH 345KV	1044	0	-1	5
WERE	WACO 138KV		30	-1 KACP	WIGARDNRS 161.00 161KV	6.2	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	WILKES 138KV	259.3959	0	-1	5
WERE	WACO 138KV		30	-1 AEPW	WILKES 345KV	308	0	-1	5
WERE	WACO 138KV		30	-1 OKGE	WOODWARD 24KV	10	0	-1	5

Maximum Decrement and Maximum Increment were determined from the Source and Sink Operating Points in the study models where limiting facility was identified.

Factor = Source GSF - Sink GSF

Redispatch Amount = Relief Amount / Factor

Upgrade: NEOSHO - NORTHEAST PARSONS 138KV CKT 1  
 Limiting Facility: NEOSHO - NORTHEAST PARSONS 138KV CKT 1  
 Direction: FROM->TO  
 Line Outage: COFFEYVILLE TAP - DEARING 138KV CKT 1  
 Flowgate: 2007AG2AFS81T963310SP  
 Date Redispatch Needed: Starting 2010 6/1 - 10/1 Until EOC of Upgrade  
 Season Flowgate Identified: 2010 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount
1281708	1.4	8.5
1286201	7.1	8.5

Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	AES 161KV	320	0.00168	-0.4494	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	AINSWING 34.500 115KV	10.205	-0.00487	-0.44285	19

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	ARSENAL HILL 138KV	458	0.0001	-0.44782	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	ARSENAL HILL 69KV	90	0.0001	-0.44782	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	EMDE	ASBURY 161KV	192	-0.00123	-0.44669	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	BPS GT1G 13.800 115KV	80	-0.00581	-0.44191	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	BPS GT2G 13.800 115KV	44.32	-0.00581	-0.44191	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	BPS ST3G 13.800 115KV	49.022	-0.00581	-0.44191	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	BROKENBG 69.000 115KV	8.3	-0.00532	-0.4424	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	KACP	BULL CREEK 161KV	61.6	-0.00583	-0.44189	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OPPD	CASS 1G 15.000 345KV	42.51929	-0.00481	-0.44291	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OPPD	CASS 15.000 345KV	52.99999	-0.00481	-0.44291	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	CENTENIAL WIND 34KV	44	-0.00328	-0.44444	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	MKEC	CIMARRON RIVER 115KV	33	-0.00866	-0.43906	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	KACP	CITY OF HIGGINSVILLE 69KV	36	-0.00362	-0.4441	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	WERE	CNTRPL2 34.500 115KV	99	-0.00778	-0.43993	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	COGENTRIX 345KV	865	0.00294	-0.45066	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	COL COX1 115.00 115KV	75	-0.00471	-0.44301	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	MIDW	COLBY 115KV	12.01502	-0.00798	-0.43974	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	COMANCHE 138KV	145	-0.0025	-0.44522	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	COMANCHE 69KV	60	-0.00245	-0.44527	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	COOPER1G 22.000 345KV	535.747	-0.00508	-0.44263	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	CRETE G 34.500 115KV	157	-0.00528	-0.44244	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	D HENRYG 34.500 115KV	18	-0.00521	-0.44251	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	DENVER G 34.500 115KV	33.905	-0.00521	-0.44251	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	EASTMAN 138KV	157.545	0.00005	-0.44777	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	EGY CTRG 13.800 115KV	54	-0.00622	-0.4425	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	EMDE	ELK RIVER 345KV	44.986	-0.0074	-0.44032	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	FAIRBRYG 34.500 115KV	15.5	-0.00603	-0.44169	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	FITZ HUGH 161KV	123.0	0.0162	-0.44834	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	FLINT CREEK 161KV	428	-0.00362	-0.45136	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	FLWIND2 34KV	18	-0.00355	-0.44417	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OPPD	FREM 8G 13.800 69KV	90	-0.00465	-0.44307	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OPPD	FT CAL1G 22.000 4KV	376	-0.00466	-0.44306	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	GENTLM1G 23.000 230KV	461.318	-0.00567	-0.44205	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	GENTLM2G 24.000 345KV	430.2564	-0.00571	-0.44201	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	MKEC	GRAY COUNTY WIND FARM 115KV	110	-0.00998	-0.43774	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	KACP	GENERATION AT SPEARVILLE 230KV	100	-0.00907	-0.43865	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	GT-2 G 13.800 115KV	40	-0.00513	-0.44259	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	KACP	HAWTHORN 161KV	482	-0.00514	-0.44258	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	WERE	HOLTON 115KV	12.5	-0.0093	-0.43842	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	HORSESHOE LAKE 138KV	798	-0.00183	-0.4458	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	HORSESHOE LAKE 69KV	16	-0.00154	-0.44618	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	KACP	IATAN 345KV	1806	-0.00627	-0.44145	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	KACP	IATAN 345KV	371	-0.00627	-0.44145	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00978	-0.43794	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.00976	-0.43796	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	MKEC	JURSON LARGE 115KV	95.37072	0.00121	-0.43772	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	KNOXLEE 138KV	252	0.00008	-0.44778	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	MIPU	LAKE ROAD 34KV	92	-0.00538	-0.44234	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	EMDE	LARUSSEL 161KV	100	0.0021	-0.44982	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	WERE	LAWRENCE ENERGY CENTER 230KV	223.9928	-0.00883	-0.43889	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	LEBROCK 345KV	367.1163	0.00008	-0.44777	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	LIEBERMAN 138KV	174	0.0001	-0.44782	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	LONGSTAR POWER PLANT 69KV	27	0.00004	-0.44776	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	MCLAIN 138KV	470	-0.00224	-0.44548	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	KACP	MONTROSE 161KV	307.363	-0.00393	-0.44379	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	MUSKOGEE 161KV	166	0.00264	-0.45036	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	MUSKOGEE 345KV	1548	0.00258	-0.45031	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	MUSTANG 138KV	351	-0.00237	-0.44538	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	MUSTANG 69KV	93	-0.00231	-0.44535	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OPPD	N OMA 1G 13.800 2KV	46.5	-0.00472	-0.443	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OPPD	N OMA 2G 13.800 2KV	80.59999	-0.00471	-0.44301	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OPPD	N OMA 3G 13.800 2KV	80.59999	-0.00471	-0.44301	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OPPD	N OMA 4G 15.000 2KV	1074	-0.00471	-0.44301	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OPPD	N OMA 5G 20.000 4KV	173	-0.00471	-0.44301	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	N PL1G 13.800 115KV	15.107	-0.00363	-0.44208	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	KACP	NEARMAN 161KV	77	-0.00553	-0.44219	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	KACP	NEARMAN 20KV	238	-0.00553	-0.44219	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OPPD	NEBCTY1G 18.000 4KV	466	-0.00493	-0.44279	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OPPD	NEBCTY2G 23.000 345KV	503	-0.00493	-0.44279	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	NORTHEASTERN STATION 138KV	480	0.00372	-0.45144	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	NORTHEASTERN STATION 345KV	623	0.00362	-0.45424	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	OEC 345KV	555.4963	0.00373	-0.45145	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	EMDE	OZARK BEACH 161KV	16	0.00272	-0.45044	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	PIRKEY GENERATION 138KV	288	0.00005	-0.44777	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	PLATTE1G 13.800 115KV	69.44599	-0.00514	-0.44258	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	KACP	QUINDARO 161KV	117.0069	-0.00552	-0.4422	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	KACP	QUINDARO 69KV	123.6535	-0.00551	-0.44221	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	REBOLD 345KV	11.79899	-0.0018	-0.44612	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	EMDE	RIVERTON 161KV	190.2537	0.00294	-0.45066	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	EMDE	RIVERTON 69KV	43.98939	0.00256	-0.45028	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	SEMINOLE 138KV	329.1385	-0.00156	-0.44616	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	SEMINOLE 345KV	1019	-0.00167	-0.44605	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00528	-0.44244	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	SHELDN2G 13.800 115KV	68.40001	-0.00528	-0.44244	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	MIPU	SIBLEY 161KV	228.5058	-0.00471	-0.44301	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	MIPU	SIBLEY 69KV	25.36536	-0.0048	-0.44292	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	SIDNEY 4 230.00 230KV	19.008	-0.00558	-0.44214	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	SMITH COGEN 138KV	106	-0.00233	-0.44539	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	SOONER 138KV	535	-0.00487	-0.44285	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	SOONER 345KV	537	-0.00481	-0.44285	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	SOUTH 4TH ST 69KV	12.71973	-0.00507	-0.44265	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	WERE	SOUTH SENECA 115KV	11.2	-0.00916	-0.43856	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	SOUTHWESTERN STATION 138KV	287	-0.00244	-0.44528	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	SOUTHWESTERN STATION 345KV	712	-0.00244	-0.44528	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	SPGCK1&2 13.200 345KV	78	-0.00298	-0.44474	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	SPGCK3&4 13.200 345KV	12	-0.00298	-0.44474	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	EMDE	STATE LINE 161KV	538	0.00255	-0.45027	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	OKGE	TINKER 5G 138KV	60	-0.00198	-0.44574	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	TONTITOWN 161KV	140	0.00348	-0.45121	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	TULSA POWER STATION 138KV	240.0898	0.0031	-0.45082	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	NPPD	W POINTG 34.500 115KV	74	-0.00448	-0.44323	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	WEATHERFORD 34KV	12	-0.003	-0.44472	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	WELSH 345KV	1044	0	-0.44772	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	WILKES 138KV	410.8668	0.00004	-0.44776	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	AEPW	WILKES 345KV	308	0.00005	-0.44777	19
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	MKEC	A. M. MULLERGEN GENERATOR 115KV	63	-0.0111	-0.43662	20
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	WERE	CITY OF BURLINGTON 69KV	55.4	-0.0109	-0.43682	20
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	WERE	CITY OF MULLVANE 69KV	9.723	-0.02398	-0.42376	20
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	WERE	CITY OF WINFIELD 69KV	91.2	-0.02156	-0.42616	20
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	WERE	CLAY CENTER JUNCTION 115KV	16.5	-0.01102	-0.4367	20
WERE	CITY OF NEODESHA 69KV	6.738	-0.44772	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	-0.0109	-0.436	

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	CHANUTE 69KV		41.1	-0.39914AEPW	COGENTRIX 345KV	865	0.00294	-0.40208	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	EASTMAN 138KV	157.549	-0.00008	-0.39919	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	FITZLUUGH 161KV	125.4	0.00162	-0.40076	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	FLINT CREEK 161KV	428	0.00364	-0.40278	21
WERE	CHANUTE 69KV		41.1	-0.39914OKGE	HORSESHOE LAKE 138KV	796	-0.00182	-0.39732	21
WERE	CHANUTE 69KV		41.1	-0.39914OKGE	HORSESHOE LAKE 69KV	16	-0.00154	-0.3976	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	KNOXLEE 138KV	282	0.00008	-0.3992	21
WERE	CHANUTE 69KV		41.1	-0.39914EMDE	LARUSSEL 161KV	100	0.0021	-0.40124	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	LEBROCK 345KV	367.1163	0.00008	-0.39919	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	LIEBERMAN 138KV	174	0.0001	-0.39924	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	LONESTAR POWER PLANT 69KV	27	0.00004	-0.39918	21
WERE	CHANUTE 69KV		41.1	-0.39914OKGE	MUSKOGEE 161KV	166	0.00264	-0.40178	21
WERE	CHANUTE 69KV		41.1	-0.39914OKGE	MUSKOGEE 345KV	1548	0.00258	-0.40173	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	NORTHEASTERN STATION 138KV	480	0.00372	-0.40286	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	NORTHEASTERN STATION 345KV	625	0.00652	-0.40566	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	OEC 345KV	555.4863	0.00373	-0.40287	21
WERE	CHANUTE 69KV		41.1	-0.39914EMDE	OZARK BEACH 161KV	16	0.00272	-0.40186	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	PIRKEY GENERATION 138KV	288	0.00008	-0.39919	21
WERE	CHANUTE 69KV		41.1	-0.39914OKGE	REDBUD 345KV	11.79899	-0.0016	-0.39754	21
WERE	CHANUTE 69KV		41.1	-0.39914EMDE	RIVERTON 161KV	190.2537	0.00294	-0.40208	21
WERE	CHANUTE 69KV		41.1	-0.39914EMDE	RIVERTON 69KV	43.98939	0.00258	-0.40177	21
WERE	CHANUTE 69KV		41.1	-0.39914OKGE	SEMINOLE 138KV	329.1385	-0.00156	-0.39758	21
WERE	CHANUTE 69KV		41.1	-0.39914OKGE	SEMINOLE 345KV	1019	-0.00167	-0.39747	21
WERE	CHANUTE 69KV		41.1	-0.39914EMDE	STATE LINE 161KV	538	0.00258	-0.40169	21
WERE	CHANUTE 69KV		41.1	-0.39914OKGE	TINKER 5G 138KV	60	-0.00198	-0.39716	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	TONITOWN 161KV	140	0.00348	-0.40263	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	TULSA POWER STATION 138KV	240.0898	0.0031	-0.40224	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	WELSH 345KV	1044	0	-0.39914	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	WILKES 138KV	410.8668	0.00004	-0.39918	21
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	WILKES 345KV	308	0.00008	-0.39919	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914OKGE	AES 161KV	320	0.00168	-0.40082	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	ARSENAL HILL 138KV	455	0.0001	-0.39924	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	ARSENAL HILL 69KV	90	0.0001	-0.39924	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914EMDE	ASBURY 161KV	192	-0.00123	-0.39791	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	COGENTRIX 345KV	865	0.00294	-0.40208	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	EASTMAN 138KV	157.549	0.00008	-0.39919	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	FITZLUUGH 161KV	125.4	0.00162	-0.40076	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	FLINT CREEK 161KV	428	0.00364	-0.40278	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914OKGE	HORSESHOE LAKE 138KV	796	-0.00182	-0.39732	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914OKGE	HORSESHOE LAKE 69KV	16	-0.00154	-0.3976	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	KNOXLEE 138KV	282	0.00008	-0.3992	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914EMDE	LARUSSEL 161KV	100	0.0021	-0.40124	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	LEBROCK 345KV	367.1163	0.00008	-0.39919	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	LIEBERMAN 138KV	174	0.0001	-0.39924	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	LONESTAR POWER PLANT 69KV	27	0.00004	-0.39918	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914OKGE	MUSKOGEE 161KV	166	0.00264	-0.40178	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914OKGE	MUSKOGEE 345KV	1548	0.00258	-0.40173	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	NORTHEASTERN STATION 138KV	480	0.00372	-0.40286	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	NORTHEASTERN STATION 345KV	625	0.00652	-0.40566	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	OEC 345KV	555.4863	0.00373	-0.40287	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914EMDE	OZARK BEACH 161KV	16	0.00272	-0.40186	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	PIRKEY GENERATION 138KV	288	0.00008	-0.39919	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914OKGE	REDBUD 345KV	11.79899	-0.0016	-0.39754	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914EMDE	RIVERTON 161KV	190.2537	0.00294	-0.40208	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914EMDE	RIVERTON 69KV	43.98939	0.00258	-0.40177	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914OKGE	SEMINOLE 138KV	329.1385	-0.00156	-0.39758	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914OKGE	SEMINOLE 345KV	1019	-0.00167	-0.39747	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914EMDE	STATE LINE 161KV	538	0.00258	-0.40169	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914OKGE	TINKER 5G 138KV	60	-0.00198	-0.39716	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	TONITOWN 161KV	140	0.00348	-0.40263	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	TULSA POWER STATION 138KV	240.0898	0.0031	-0.40224	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	WELSH 345KV	1044	0	-0.39914	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	WILKES 138KV	410.8668	0.00004	-0.39918	21
WERE	CITY OF ERIE 69KV		22.53	-0.39914AEPW	WILKES 345KV	308	0.00008	-0.39919	21
WERE	CHANUTE 69KV		41.1	-0.39914MKEC	A. M. MULLERGREIN GENERATOR 115KV	63	-0.0111	-0.38804	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	AINSWING 34.500 115KV	10.205	-0.00487	-0.39427	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	BPS GT1G 13.800 115KV	80	-0.00581	-0.39333	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	BPS GT2G 13.800 115KV	44.32	-0.00581	-0.39333	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	BPS ST3G 13.800 115KV	49.022	-0.00581	-0.39333	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	BROKENBG 69.000 115KV	8.3	-0.00532	-0.39382	22
WERE	CHANUTE 69KV		41.1	-0.39914KACP	BULL CREEK 161KV	518	-0.00588	-0.39331	22
WERE	CHANUTE 69KV		41.1	-0.39914OPPD	CASS G 15.000 345KV	42.51928	0.00481	-0.39433	22
WERE	CHANUTE 69KV		41.1	-0.39914OPPD	CASS ZG 15.000 345KV	52.99999	-0.00481	-0.39433	22
WERE	CHANUTE 69KV		41.1	-0.39914OKGE	CENTENIAL WIND 34KV	44	-0.00328	-0.39586	22
WERE	CHANUTE 69KV		41.1	-0.39914MKEC	CIMARRON RIVER 115KV	33	-0.00866	-0.39048	22
WERE	CHANUTE 69KV		41.1	-0.39914WERE	CITY OF BURLINGTON 69KV	55.4	-0.01109	-0.38824	22
WERE	CHANUTE 69KV		41.1	-0.39914KACP	CITY OF HIRSHINGVILLE 69KV	36	-0.00362	-0.39552	22
WERE	CHANUTE 69KV		41.1	-0.39914WERE	CLAY CENTER JUNCTION 115KV	16	-0.01102	-0.38812	22
WERE	CHANUTE 69KV		41.1	-0.39914WERE	CNTRLPL2 34.500 115KV	99	-0.00778	-0.39135	22
WERE	CHANUTE 69KV		41.1	-0.39914WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	-0.01109	-0.38824	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	COL COG7 115.00 115KV	75	-0.00471	-0.39443	22
WERE	CHANUTE 69KV		41.1	-0.39914MIDW	COLBY 115KV	12.01502	-0.00798	-0.39116	22
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	COMANCHE 138KV	145	-0.0025	-0.39664	22
WERE	CHANUTE 69KV		41.1	-0.39914AEPW	COMANCHE 69KV	60	-0.00245	-0.39668	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	COOPERING 22.000 345KV	535.747	-0.00508	-0.39405	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	CRETE G 34.500 115KV	15.7	-0.00528	-0.39386	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	D.HENRYG 34.500 115KV	18	-0.00521	-0.39393	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	DENVER G 34.500 115KV	33.909	-0.00521	-0.39393	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	EGY CTRG 13.800 115KV	54	-0.00522	-0.39392	22
WERE	CHANUTE 69KV		41.1	-0.39914EMDE	ELK RIVER 345KV	44.988	-0.0074	-0.39174	22
WERE	CHANUTE 69KV		41.1	-0.39914WERE	EMPORIA ENERGY CENTER 345KV	610	-0.01091	-0.38823	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	FAIRBRYG 34.500 115KV	15.3	-0.00603	-0.39311	22
WERE	CHANUTE 69KV		41.1	-0.39914OKGE	FPLWIND2 34KV	16	-0.00355	-0.39559	22
WERE	CHANUTE 69KV		41.1	-0.39914OPPD	FREM 8G 13.800 69KV	90	-0.00468	-0.39449	22
WERE	CHANUTE 69KV		41.1	-0.39914OPPD	FT CALTG 22.000 4KV	378	-0.00468	-0.39448	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	GENTLMG 22.000 230KV	461.318	-0.00567	-0.39347	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	GENTLMZG 24.000 345KV	430.5284	-0.00571	-0.39343	22
WERE	CHANUTE 69KV		41.1	-0.39914MKEC	GRAY COUNTY WIND FARM 115KV	110	-0.00998	-0.38916	22
WERE	CHANUTE 69KV		41.1	-0.39914MIDW	GREAT BEND PLANT 69KV	9.25	-0.01122	-0.38792	22
WERE	CHANUTE 69KV		41.1	-0.39914KACP	GREAT PLAINS ENERGY WIND GENERATION AT SPEARVILLE 230KV	100	-0.00907	-0.39007	22
WERE	CHANUTE 69KV		41.1	-0.39914NPPD	GT2 G 13.800 115KV	40	-0.00513	-0.39401	22
WERE	CHANUTE 69KV		41.1	-0.39914KACP	HAWTHORN 161KV	485.5	-0.00514	-0.394	22
WERE	CHANUTE 69KV		41.1	-0.39914WERE	HOLTON 115KV	12.2	-0.0093	-0.38984	22
WERE	CHANUTE 69KV		41.1	-0.39914WERE	HUTCHINSON ENERGY CENTER 115KV	257.9033	-0.01361	-0.38553	22
WERE	CHANUTE 69KV		41.1	-0.39914WERE	HUTCHINSON ENERGY CENTER 69KV	30	-0.01361	-0.38553	22
WERE	CHANUTE 69KV		41.1	-0.39914KACP	IATAN 345KV	371	-0.00627	-0.39287	22
WERE	CHANUTE 69KV		41.1	-0.39914KACP	IATAN 345KV	1808	-0.00627	-0.39287	22
WERE	CHANUTE 69KV		41.1	-0.39914WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00978	-0.38938	22
WERE	CHANUTE 69KV		41.1	-0.39914WERE	JEFFREY ENERGY CENTER 345KV	874	-0.00978	-0.38938	22
WERE	CHANUTE 69KV		41.1	-0.39914MKEC	JUDSON LARGE 115KV	95.37077	-0.01	-0.38914	22
WERE	CHANUTE 69KV		41.1	-0.39914MIDW	KNOLL 115KV	75.60001	-0.01088	-0.38826	22
WERE	CHANUTE 69KV		41.1	-0.39914MIPU	LAKE ROAD 34KV	92	-0.00538	-0.39376	22
WERE	CHANUTE 69KV		41.1	-0.39914WERE	LAWRENCE ENERGY CENTER 230KV	223.9929	-0.00883	-0.39031	22
WERE	CHANUTE 69KV		41.1	-0.39914OKGE	MCCLAIN 138KV	470	-0.00224	-0.39689	22
WERE	CHANUTE 69KV		41.1	-0.39914KACP	MONROSE 161KV	307.363	-0.00393	-0.39251	22
WERE	CHANUTE 69								

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	CHANUTE 69KV	41.1	-0.39914OPPD	NEBCTY2G 23.000 345KV	503	-0.00493	-0.39421	22
WERE	CHANUTE 69KV	41.1	-0.39914NPPD	PLATTE1G 13.800 115KV	69.44599	-0.00514	-0.394	22
WERE	CHANUTE 69KV	41.1	-0.39914MKEC	PRAIT 3 115.00 115KV	12.276	-0.01378	-0.38635	22
WERE	CHANUTE 69KV	41.1	-0.39914KACY	QUINDARO 161KV	117.00693	-0.00551	-0.39363	22
WERE	CHANUTE 69KV	41.1	-0.39914KACY	QUINDARO 69KV	123.6639	-0.00551	-0.39363	22
WERE	CHANUTE 69KV	41.1	-0.39914NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00528	-0.39386	22
WERE	CHANUTE 69KV	41.1	-0.39914NPPD	SHELDN2G 13.800 115KV	80.56	-0.00528	-0.39386	22
WERE	CHANUTE 69KV	41.1	-0.39914MIPU	SIBLEY 161KV	228.5508	-0.00471	-0.39443	22
WERE	CHANUTE 69KV	41.1	-0.39914MIPU	SIBLEY 69KV	25.36538	-0.0048	-0.39434	22
WERE	CHANUTE 69KV	41.1	-0.39914NPPD	SIDNEY 4 230.00 230KV	19.008	-0.00558	-0.39356	22
WERE	CHANUTE 69KV	41.1	-0.39914OKGE	SMITH COGEN 138KV	106	-0.00233	-0.39681	22
WERE	CHANUTE 69KV	41.1	-0.39914MIDW	SMOKEY HILLS 34KV	50	-0.0118	-0.38734	22
WERE	CHANUTE 69KV	41.1	-0.39914OKGE	SOONER 138KV	538	-0.00487	-0.39427	22
WERE	CHANUTE 69KV	41.1	-0.39914OKGE	SOONER 345KV	537	-0.00482	-0.39432	22
WERE	CHANUTE 69KV	41.1	-0.39914OKGE	SOUTH 4TH ST 69KV	12.71973	-0.00507	-0.39407	22
WERE	CHANUTE 69KV	41.1	-0.39914WERE	SOUTH SENECA 115KV	11.2	-0.00918	-0.38998	22
WERE	CHANUTE 69KV	41.1	-0.39914AEPW	SOUTHWESTERN STATION 138KV	287	-0.00244	-0.39677	22
WERE	CHANUTE 69KV	41.1	-0.39914AEPW	SOUTHWESTERN STATION 138KV	712	-0.00244	-0.39677	22
WERE	CHANUTE 69KV	41.1	-0.39914OKGE	SPGCK1&2 13.200 345KV	78	-0.00298	-0.39616	22
WERE	CHANUTE 69KV	41.1	-0.39914OKGE	SPGCK3&4 13.200 345KV	12	-0.00298	-0.39616	22
WERE	CHANUTE 69KV	41.1	-0.39914WERE	TECUMSEH ENERGY CENTER 115KV	133	-0.01028	-0.38888	22
WERE	CHANUTE 69KV	41.1	-0.39914NPPD	W.POINTG 34.500 115KV	7.4	-0.00449	-0.39465	22
WERE	CHANUTE 69KV	41.1	-0.39914AEPW	WEATHERFORD 34KV	12	-0.003	-0.39614	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914MKEC	A. M. MULLERGEN GENERATOR 115KV	63	-0.0111	-0.38804	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	AINSWN1G 34.500 115KV	10.205	-0.00487	-0.39427	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	BPS GT1G 13.800 115KV	80	-0.00581	-0.39333	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	BPS GT2G 13.800 115KV	44.32	-0.00581	-0.39333	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	BPS STG2 13.800 115KV	49.022	-0.00581	-0.39333	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	BROKENBG 69.000 115KV	8.3	-0.00532	-0.39382	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914KACP	BULL CREEK 161KV	61.6	-0.00583	-0.39331	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OPPD	CASS TG 15.000 345KV	42.51929	-0.00481	-0.39433	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OPPD	CASS ZG 15.000 345KV	52.99999	-0.00481	-0.39433	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OKGE	CENTENIAL WIND 34KV	44	-0.00328	-0.39588	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914MKEC	COMARON RIVER 115KV	33	-0.00865	-0.39048	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914WERE	CITY OF BURLINGTON 69KV	55.4	-0.0109	-0.38824	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914KACP	CITY OF HIGGINSVILLE 69KV	36	-0.00362	-0.39552	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914WERE	CLAY CENTER JUNCTION 115KV	16.8	-0.01102	-0.38812	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914WERE	CNTRLPL2 34.500 115KV	99	-0.00778	-0.39135	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	-0.0109	-0.38824	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	COL COOP 115.00 115KV	75	-0.00477	-0.39443	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914MIDW	COLBY 115KV	12.01502	-0.00798	-0.39116	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914AEPW	COMANCHE 138KV	145	-0.0025	-0.39664	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914AEPW	COMANCHE 69KV	60	-0.00245	-0.39669	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	COOPER1G 22.000 345KV	535.747	-0.00508	-0.39405	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	CRETE G 34.500 115KV	15.7	-0.00528	-0.39386	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	D H WEVER 34.500 115KV	18	-0.00521	-0.39393	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	DENVER G 34.500 115KV	33.909	-0.00521	-0.39393	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	EGY CTRG 13.800 115KV	54	-0.00522	-0.39392	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914EMDE	ELK RIVER 345KV	44.986	-0.0074	-0.39174	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914WERE	EMPORIA ENERGY CENTER 345KV	16.0	-0.01091	-0.38823	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	FAIRBRVG 34.500 115KV	61.5	-0.00603	-0.39311	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OKGE	FPLWIND2 34KV	16	-0.00365	-0.39559	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OPPD	FREM 13.800 69KV	90	-0.00482	-0.39443	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OPPD	FT CALG 22.000 4KV	378	-0.00468	-0.39448	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	GENTLM1G 23.000 230KV	461.318	-0.00567	-0.39347	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	GENTLM2G 24.000 345KV	430.5264	-0.00571	-0.39343	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914MKEC	GRAY COUNTY WIND FARM 115KV	9.15	-0.00998	-0.38916	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914MIDW	GREAT BEND PLANT 69KV	125	-0.01122	-0.38792	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914KACP	GREAT PLAINS ENERGY WIND GENERATION AT SPEARVILLE 230KV	100	-0.00907	-0.39007	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	GT-2 G 13.800 115KV	40	-0.00513	-0.39401	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914KACP	HAWTHORN 161KV	485.2	-0.00514	-0.394	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914WERE	HOLTON 115KV	12.2	-0.0093	-0.38984	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914WERE	HUTCHINSON ENERGY CENTER 115KV	257.9033	-0.01361	-0.38553	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914WERE	HUTCHINSON ENERGY CENTER 69KV	30	-0.01361	-0.38553	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914KACP	IATAN 345KV	371	-0.00627	-0.39287	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914KACP	IATAN 345KV	1806	-0.00627	-0.39287	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00978	-0.38936	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914WERE	JEFFREY ENERGY CENTER 345KV	874	-0.00978	-0.38938	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914MKEC	JUDSON LARGE 115KV	95.37077	-0.01	-0.38914	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914MIDW	KAWC 115KV	75.60001	-0.01088	-0.38926	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914MIPU	LAKE ROAD 34KV	92	-0.00538	-0.39376	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914WERE	LAWRENCE ENERGY CENTER 230KV	223.9929	-0.00883	-0.39031	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OKGE	MCCLAIN 138KV	470	-0.00224	-0.3969	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914KACP	MONTROSE 161KV	307.363	-0.00393	-0.39521	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OKGE	MUSTANG 138KV	351	-0.00237	-0.39677	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OKGE	MUSTANG 69KV	90	-0.00237	-0.39677	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OPPD	N OMA 1G 13.800 2KV	48	-0.00477	-0.39443	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OPPD	N OMA 2G 13.800 2KV	80.59999	-0.00471	-0.39443	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OPPD	N OMA 3G 13.800 2KV	80.59999	-0.00471	-0.39443	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OPPD	N OMA 4G 15.000 2KV	107.4	-0.00471	-0.39443	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OPPD	N OMA 5G 20.000 4KV	173.9	-0.00471	-0.39443	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	N.PLATTG 13.800 115KV	15.107	-0.00563	-0.39351	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914KACY	NEARMAN 161KV	77	-0.00553	-0.39361	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914KACY	NEARMAN 20KV	235	-0.00553	-0.39361	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OPPD	NEBCTY1G 18.000 4KV	466	-0.00493	-0.39421	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OPPD	NEBCTY2G 23.000 345KV	503	-0.00493	-0.39421	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	PLATTE1G 13.800 115KV	69.44599	-0.00514	-0.394	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914MKEC	PRAIT 3 115.00 115KV	12.276	-0.01378	-0.38635	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914KACY	QUINDARO 161KV	117.00693	-0.00551	-0.39363	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914KACY	QUINDARO 69KV	123.6639	-0.00551	-0.39363	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00528	-0.39386	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	SHELDN2G 13.800 115KV	80.56	-0.00528	-0.39386	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914MIPU	SIBLEY 161KV	228.5508	-0.00471	-0.39443	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914MIPU	SIBLEY 69KV	25.36538	-0.0048	-0.39434	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914NPPD	SIDNEY 4 230.00 230KV	19.008	-0.00558	-0.39356	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OKGE	SMITH COGEN 138KV	106	-0.00233	-0.39681	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914MIDW	SMOKEY HILLS 34KV	50	-0.0118	-0.38734	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OKGE	SOONER 138KV	538	-0.00487	-0.39427	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OKGE	SOONER 345KV	537	-0.00482	-0.39432	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OKGE	SOUTH 4TH ST 69KV	12.71973	-0.00507	-0.39407	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914WERE	SOUTH SENECA 115KV	11.2	-0.00918	-0.38998	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914AEPW	SOUTHWESTERN STATION 138KV	287	-0.00244	-0.39677	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914AEPW	SOUTHWESTERN STATION 138KV	712	-0.00244	-0.39677	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OKGE	SPGCK1&2 13.200 345KV	78	-0.00298	-0.39616	22
WERE	CITY OF ERIE 69KV	22.53	-0.39914OKGE					

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	CITY OF IOLA 69KV	27.428	-0.29372	KACP	CITY OF HIGGINSVILLE 69KV	36	-0.00362	-0.2901	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	COGENTRIX 345KV	866	0.00294	-0.29666	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	COMANCHE 138KV	145	-0.0028	-0.29122	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	COMANCHE 69KV	60	-0.00248	-0.29127	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	EASTMAN 138KV	157.549	0.00005	-0.29377	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	FITZHUGH 161KV	125.4	0.00162	-0.29534	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	FLINT CREEK 161KV	428	0.00364	-0.29736	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	FPLWIND2 34KV	16	-0.00355	-0.29017	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	HORSESHOE LAKE 138KV	796	-0.00182	-0.2919	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	HORSESHOE LAKE 69KV	16	-0.00154	-0.29218	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	KNOXLEE 138KV	282	0.00008	-0.29378	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	EMDE	LARUSSEL 161KV	100	0.0021	-0.29582	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	LEBROCK 345KV	367.1163	0.00005	-0.29377	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	LIEBERMAN 138KV	174	0.0001	-0.29382	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	LONESTAR POWER PLANT 69KV	27	0.00004	-0.29378	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	MCCOAIN 138KV	470	-0.00224	-0.29148	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	KACP	MONTROSE 161KV	307.365	-0.00393	-0.28979	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	MUSKOGEE 161KV	166	0.00264	-0.29636	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	MUSKOGEE 345KV	1548	0.00258	-0.29631	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	MUSTANG 138KV	351	-0.00237	-0.29135	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	MUSTANG 69KV	90	-0.00237	-0.29135	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	NORTHEASTERN STATION 138KV	480	0.00372	-0.29744	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	OEC 345KV	555.4863	0.00378	-0.29745	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	EMDE	OZARK BEACH 161KV	16	0.00272	-0.29644	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	PIRKEY GENERATION 138KV	288	0.00005	-0.29377	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	REDBUD 345KV	11.79899	-0.0016	-0.29212	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	EMDE	RIVERTON 161KV	190.2537	0.00294	-0.29666	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	EMDE	RIVERTON 69KV	43.98939	-0.00258	-0.29628	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	SEMINOLE 138KV	323.1385	-0.00158	-0.29216	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	SEMINOLE 345KV	1019	-0.00167	-0.29205	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	SMITH COGEN 138KV	106	-0.00233	-0.29139	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	SOUTHWESTERN STATION 138KV	287	-0.00244	-0.29128	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	SOUTHWESTERN STATION 138KV	712	-0.00244	-0.29128	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	SPGCK1&2 13.200 345KV	78	-0.00298	-0.29074	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	SPGCK3&4 13.200 345KV	12	-0.00298	-0.29074	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	EMDE	STATE LINE 161KV	538	0.00255	-0.29627	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	TINKER 5G 138KV	60	-0.00198	-0.29174	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	TONTITOWN 161KV	140	0.00348	-0.29721	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	TULSA POWER STATION 138KV	240.0898	0.00301	-0.29682	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	WEATHERFORD 34KV	12	-0.003	-0.29072	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	WEIR 345KV	1044	0.00005	-0.29377	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	WILKES 138KV	410.8668	0.00004	-0.29376	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	AEPW	WILKES 345KV	308	0.00005	-0.29377	29
WERE	CITY OF IOLA 69KV	27.428	-0.29372	MKEC	A. M. MULLERGEN GENERATOR 115KV	63	-0.0111	-0.28262	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	AINSWING 34.500 115KV	10.205	-0.00487	-0.28885	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	BPS ST1G 13.800 115KV	80	-0.00581	-0.28791	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	BPS GT2G 13.800 115KV	44.32	-0.00581	-0.28791	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	BPS ST3G 13.800 115KV	49.022	-0.00581	-0.28791	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	KACP	BULL CREEK 161KV	61.6	-0.00583	-0.28789	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OPPD	CASS 1G 15.000 345KV	42.51929	-0.00481	-0.28891	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OPPD	CASS 2G 15.000 345KV	52.99999	-0.00481	-0.28891	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	MKEC	CIMARRON RIVER 115KV	53	-0.00688	-0.28506	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	CITY OF BURLINGTON 69KV	55	-0.0108	-0.2827	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	CLAY CENTER JUNCTION 115KV	16.5	-0.01102	-0.2827	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	CNTRPL2 34.500 115KV	99	-0.00778	-0.28593	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	-0.0108	-0.28282	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	COL COG7 115.00 115KV	79	-0.00471	-0.28901	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	MIDW	COLBY 115KV	12.01502	-0.00798	-0.28574	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	COOPER1G 22.000 345KV	535.747	-0.00529	-0.28863	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	CRETE G 34.500 115KV	15.1	-0.00528	-0.28844	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	D HENRYG 34.500 115KV	18	-0.00521	-0.28851	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	DENVER G 34.500 115KV	33.905	-0.00521	-0.28851	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	EGY CTRG 13.800 115KV	54	-0.00522	-0.2885	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	EMDE	ELK RIVER 345KV	44.986	-0.0074	-0.28632	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	EMORIA ENERGY CENTER 345KV	610	-0.01091	-0.28281	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	FAIRBRYG 34.500 115KV	15.3	-0.00603	-0.28769	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OPPD	FREM 8G 13.800 69KV	90	-0.00465	-0.28907	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OPPD	FT CAL1G 22.000 4KV	376	-0.00468	-0.28906	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	GENTLM1G 23.000 230KV	461.318	-0.00567	-0.28805	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	GENTLM2G 24.000 345KV	430.5264	-0.00571	-0.28801	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	MKEC	GRAY COUNTY WIND FARM 115KV	110	-0.00998	-0.28374	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	KACP	GREAT PLAINS ENERGY WIND GENERATION AT SPEARVILLE 230KV	100	-0.00907	-0.28465	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	GT-2 G 13.800 115KV	40	-0.00513	-0.28859	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	KACP	HAWTHORN 161KV	485.2	-0.00514	-0.28858	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	HOLTON 115KV	12.2	-0.0093	-0.28442	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	HUTCHINSON ENERGY CENTER 115KV	257.9033	-0.01361	-0.28011	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	HUTCHINSON ENERGY CENTER 69KV	30	-0.01361	-0.28011	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	KACP	IATAN 345KV	371	-0.00627	-0.28745	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	KACP	IOWA 345KV	1806	-0.00627	-0.28745	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00978	-0.28394	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.00978	-0.28396	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	MKEC	JUDSON LARGE 115KV	95.37077	0.01	-0.28372	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	MIDW	KNOLL 115KV	75.60001	-0.01088	-0.28284	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	MIPU	LAKE ROAD 34KV	92	-0.00538	-0.28834	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	LAWRENCE ENERGY CENTER 230KV	223.9929	-0.00883	-0.28489	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OPPD	N OMA 1G 13.800 2KV	48.5	-0.00472	-0.289	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OPPD	N OMA 2G 13.800 2KV	80.59999	-0.00471	-0.28901	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OPPD	N OMA 3G 13.800 2KV	80.59999	-0.00471	-0.28901	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OPPD	N OMA 4G 15.000 2KV	107.4	-0.00471	-0.28901	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OPPD	N OMA 5G 20.000 4KV	173.9	-0.00471	-0.28901	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	N PLATTG 13.800 115KV	15.107	-0.00663	-0.28809	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	KACY	NEARMAN 161KV	77	-0.00553	-0.28819	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	KACY	NEARMAN 20KV	235	-0.00553	-0.28819	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OPPD	NEBCTY1G 18.000 4KV	466	-0.00493	-0.28879	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OPPD	NEBCTY2G 23.000 345KV	503	-0.00493	-0.28879	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	PLATTG1G 13.800 115KV	69.44599	-0.00514	-0.28858	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	MKEC	PRATT 3 115.00 115KV	12.276	-0.01378	-0.27993	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	KACY	QUINDARO 161KV	117.0068	-0.00552	-0.2882	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	KACY	QUINDARO 69KV	123.6635	-0.00551	-0.28821	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00528	-0.28844	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	SHELDN2G 13.800 115KV	60.56	-0.00528	-0.28844	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	MIPU	SIBLEY 161KV	228.5508	-0.00471	-0.28901	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	MIPU	SIBLEY 69KV	25.38538	-0.0048	-0.28892	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	NPPD	SIDNEY 4 230.00 230KV	19.008	-0.00558	-0.28814	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	MIDW	SMOKEY HILLS 34KV	50	-0.0118	-0.28192	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	SOONER 138KV	537	-0.00487	-0.28885	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	SOONER 345KV	537	-0.00482	-0.28889	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	OKGE	SOUTH 4TH ST 69KV	12.71973	-0.00507	-0.28865	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	SOUTH SENECA 115KV	11.2	-0.00916	-0.28456	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	TECUMSEH ENERGY CENTER 115KV	133	-0.01026	-0.28346	30
WERE	CITY OF IOLA 69KV	27.428	-0.29372	WERE	CITY OF WINFIELD 69				

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

Season Flowgate Identified		2010 Summer Peak													
Reservation	Relief Amount	Aggregate Relief Amount													
1283682	24.9	37.6													
1286446	12.7	37.6													
Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	COGENTRIX 345KV	865	0.01668	-0.22566	167						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	COGENTRIX 345KV	865	0.01668	-0.22566	167						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WFEC	HUGO 138KV	440	0.00673	-0.21574	174						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	MUSKOGEE 345KV	1548	0.00711	-0.21612	174						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	REDBUD 345KV	233.6274	0.00657	-0.21558	174						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	SEMINOLE 138KV	478.9438	0.00661	-0.21562	174						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WFEC	HUGO 138KV	440	0.00673	-0.21574	174						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	MUSKOGEE 345KV	1548	0.00711	-0.21612	174						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	REDBUD 345KV	233.6274	0.00657	-0.21558	174						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	SEMINOLE 138KV	478.9438	0.00661	-0.21562	174						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WFEC	ANADARKO 138KV	371.055	0.0055	-0.21451	175						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	HORSESHOE LAKE 138KV	796	0.00538	-0.21439	175						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	MCCLEIN 138KV	470	0.00534	-0.21435	175						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	SEMINOLE 345KV	1015	0.00601	-0.21502	175						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	SOUTHWESTERN STATION 138KV	287	0.00541	-0.21442	175						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	SOUTHWESTERN STATION 138KV	712	0.00541	-0.21442	175						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	TINKER 5G 138KV	60	0.00552	-0.21453	175						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WFEC	ANADARKO 138KV	371.055	0.0055	-0.21451	175						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	HORSESHOE LAKE 138KV	796	0.00538	-0.21439	175						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	MCCLEIN 138KV	470	0.00534	-0.21435	175						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	SEMINOLE 345KV	1015	0.00601	-0.21502	175						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	SOUTHWESTERN STATION 138KV	287	0.00541	-0.21442	175						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	SOUTHWESTERN STATION 138KV	712	0.00541	-0.21442	175						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	TINKER 5G 138KV	60	0.00552	-0.21453	175						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	COMANCHE 138KV	145	0.00515	-0.21414	176						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	COMANCHE 69KV	60	0.00527	-0.21428	176						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	MUSKOGEE 161KV	166	0.00438	-0.21337	176						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	MUSTANG 138KV	351	0.00503	-0.21404	176						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	MUSTANG 69KV	90	0.00502	-0.21403	176						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	SMITH COGEN 138KV	106	0.00509	-0.2141	176						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	SPGCK1&2 13.200 345KV	78	0.00447	-0.21348	176						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	WEATHERFORD 34KV	148	0.00458	-0.2136	176						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	COMANCHE 138KV	145	0.00515	-0.21414	176						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	COMANCHE 69KV	60	0.00527	-0.21428	176						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	MUSKOGEE 161KV	166	0.00438	-0.21337	176						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	MUSTANG 138KV	351	0.00503	-0.21404	176						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	MUSTANG 138KV	351	0.00503	-0.21404	176						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	MUSTANG 69KV	90	0.00502	-0.21403	176						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	SMITH COGEN 138KV	106	0.00509	-0.2141	176						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	SPGCK1&2 13.200 345KV	78	0.00447	-0.21348	176						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	WEATHERFORD 34KV	148	0.00458	-0.2136	176						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	AES 161KV	320	0.0034	-0.21241	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	ARSENAL HILL 138KV	458	0.00303	-0.21204	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	ARSENAL HILL 69KV	83.6289	0.00303	-0.21204	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	CUNNINGHAM 115KV	181	0.00298	-0.21199	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	CUNNINGHAM 230KV	307	0.00298	-0.21199	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	GASTMAN 138KV	155	0.00332	-0.21233	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	FPLVND2 34KV	59	0.00368	-0.21267	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	HOBBS_PLT2 118.000 115KV	300	0.00298	-0.21199	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	HOBBS_PLT3 118.000 230KV	210	0.00298	-0.21199	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	JONES 230KV	486	0.00314	-0.21215	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	KNOXLEE 138KV	225	0.003	-0.21231	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	LEBRACK 345KV	164.9999	0.00331	-0.21232	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	LIEBERMAN 138KV	158	0.00309	-0.2121	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	LP-MACK2 69KV	60	0.00315	-0.21216	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	MADDOX 115KV	152.3728	0.00298	-0.21199	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WFEC	MORLND 138KV	315.0128	0.00368	-0.21266	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	MUSTANG 115KV	300	0.00298	-0.212	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	MUSTANG 230KV	465	0.00298	-0.212	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	PIRKEY GENERATION 138KV	288	0.00331	-0.21232	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	SAN JUAN 230KV	120	0.00292	-0.21193	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WFEC	SLEEPING BEAR 138KV	80	0.00367	-0.21268	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	TOLK 230KV	1019.82	0.00291	-0.21192	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	WELSH 345KV	1044	0.00367	-0.21268	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	WILKES 138KV	410.603	0.00348	-0.21246	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	WILKES 345KV	308	0.00338	-0.21239	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	AES 161KV	320	0.0034	-0.21241	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	ARSENAL HILL 138KV	458	0.00303	-0.21204	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	ARSENAL HILL 69KV	83.6289	0.00303	-0.21204	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	CUNNINGHAM 115KV	181	0.00298	-0.21199	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	CUNNINGHAM 230KV	307	0.00298	-0.21199	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	GASTMAN 138KV	155	0.00332	-0.21233	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	FPLVND2 34KV	59	0.00368	-0.21267	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	HOBBS_PLT2 118.000 115KV	300	0.00298	-0.21199	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	HOBBS_PLT3 118.000 230KV	210	0.00298	-0.21199	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	JONES 230KV	486	0.00314	-0.21215	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	KNOXLEE 138KV	225	0.003	-0.21231	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	LEBRACK 345KV	164.9999	0.00331	-0.21232	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	LIEBERMAN 138KV	158	0.00309	-0.2121	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	LP-MACK2 69KV	60	0.00315	-0.21216	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	MADDOX 115KV	152.3728	0.00298	-0.21199	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WFEC	MORLND 138KV	315.0128	0.00368	-0.21266	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	MUSTANG 115KV	300	0.00298	-0.212	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	MUSTANG 230KV	465	0.00298	-0.212	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	PIRKEY GENERATION 138KV	288	0.00331	-0.21232	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	SAN JUAN 230KV	120	0.00292	-0.21193	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WFEC	SLEEPING BEAR 138KV	80	0.00367	-0.21268	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	TOLK 230KV	1019.82	0.00291	-0.21192	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	WELSH 345KV	1044	0.00367	-0.21268	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	WILKES 138KV	410.603	0.00348	-0.21246	177						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEWP	WILKES 345KV	308	0.00338	-0.21239	177						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	BLACKHAWK 115KV	220	0.00231	-0.21132	178						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	CAPROCK 0KV	80	0.00288	-0.21189	178						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	CELE	DOLET HILLS 345KV	370	0.00276	-0.21177	178						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEWP	FITZHUGH 161KV	116.9	0.00224	-0.21125	178						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	HARRINGTON 230KV	1040	0.00243	-0.21144	178						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	NICHOLS 115KV	147	0.00247	-0.21148	178						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	NICHOLS 230KV	147	0.00244	-0.21145	178						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	PLANTX 115KV	205	0.0028	-0.21191	178						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	PLANTX 230KV	189	0.00288	-0.21189	178						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	SOONER 345KV	537	0.00186	-0.21087	178						
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SPS	STER WATER 115KV	80	0.00253	-0.21154	178						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	WILWIND 230KV	163	0.00248	-0.21147	178						
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SPS	BLACKHAWK 115KV										

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

Source	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)				
AEPW	TULSA POWER STATION 69KV	80	-0.20901	CELE	ACADIA 138KV	174	0.00134	-0.21035	179
AEPW	TULSA POWER STATION 69KV	80	-0.20901	LEPA	CITY OF HOUMA SUB 115KV	95	0.00107	-0.21008	179
AEPW	TULSA POWER STATION 69KV	80	-0.20901	CELE	EVANS LINE 230KV	234	0.00148	-0.2105	179
AEPW	TULSA POWER STATION 69KV	80	-0.20901	CELE	GTEVIAN 22.000 138KV	165	0.00147	-0.21048	179
AEPW	TULSA POWER STATION 69KV	80	-0.20901	CELE	RODEMACHER 230KV	991	0.00168	-0.21067	179
AEPW	TULSA POWER STATION 69KV	80	-0.20901	CELE	TECHE 138KV	291.2301	0.00128	-0.21029	179
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SWPA	JONESBORO 161KV	63	-0.00017	-0.20884	180
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEPW	OEC 345KV	450	-0.00048	-0.20855	180
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OKGE	SOONER 138KV	535	-0.00048	-0.20853	180
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SWPA	JONESBORO 161KV	63	-0.00017	-0.20884	180
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEPW	OEC 345KV	450	-0.00048	-0.20855	180
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OKGE	SOONER 138KV	535	-0.00048	-0.20853	180
AEPW	TULSA POWER STATION 138KV	320	-0.20901	SWPA	SIKESTON 161KV	235	-0.00064	-0.20837	181
AEPW	TULSA POWER STATION 69KV	80	-0.20901	SWPA	SIKESTON 161KV	235	-0.00064	-0.20837	181
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WERE	BPJ - CITY OF MCPHERSON 115KV	126.416	-0.00212	-0.20689	182
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WERE	EMPORIA ENERGY CENTER 345KV	610	-0.00253	-0.20648	182
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WERE	EVANS ENERGY CENTER 138KV	560	-0.00233	-0.20669	182
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WERE	GILL ENERGY CENTER 138KV	155	-0.00248	-0.20655	182
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WERE	GILL ENERGY CENTER 69KV	75	-0.00247	-0.20654	182
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WERE	HUTCHINSON ENERGY CENTER 115KV	333	-0.00208	-0.20693	182
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00255	-0.20646	182
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.00254	-0.20647	182
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WERE	LAWRENCE ENERGY CENTER 230KV	224.0591	-0.00271	-0.2063	182
AEPW	TULSA POWER STATION 138KV	320	-0.20901	OMPA	OMPA-PONCA CITY 69KV	152.3933	-0.00187	-0.20714	182
AEPW	TULSA POWER STATION 138KV	320	-0.20901	WERE	TECUMSEH ENERGY CENTER 115KV	133	-0.00264	-0.20637	182
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WERE	BPJ - CITY OF MCPHERSON 115KV	126.416	-0.00212	-0.20689	182
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WERE	EMPORIA ENERGY CENTER 345KV	610	-0.00253	-0.20648	182
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WERE	EVANS ENERGY CENTER 138KV	560	-0.00233	-0.20669	182
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WERE	GILL ENERGY CENTER 138KV	155	-0.00248	-0.20655	182
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WERE	GILL ENERGY CENTER 69KV	75	-0.00247	-0.20654	182
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WERE	HUTCHINSON ENERGY CENTER 115KV	333	-0.00208	-0.20693	182
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00255	-0.20646	182
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.00254	-0.20647	182
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WERE	LAWRENCE ENERGY CENTER 230KV	224.0591	-0.00271	-0.2063	182
AEPW	TULSA POWER STATION 69KV	80	-0.20901	OMPA	OMPA-PONCA CITY 69KV	152.3933	-0.00187	-0.20714	182
AEPW	TULSA POWER STATION 69KV	80	-0.20901	WERE	TECUMSEH ENERGY CENTER 115KV	133	-0.00264	-0.20637	182
AEPW	TULSA POWER STATION 69KV	80	-0.20901	EMDE	ELK RIVER 345KV	149.986	-0.00364	-0.20537	183
AEPW	TULSA POWER STATION 69KV	80	-0.20901	EMDE	ELK RIVER 345KV	149.986	-0.00364	-0.20537	183
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEPW	TONTITOWN 161KV	140	-0.00478	-0.20423	184
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEPW	TONTITOWN 161KV	140	-0.00478	-0.20423	184
AEPW	TULSA POWER STATION 138KV	320	-0.20901	EMDE	ASBURY 161KV	192	-0.00621	-0.20228	185
AEPW	TULSA POWER STATION 138KV	320	-0.20901	EMDE	LARUSSEL 161KV	100	-0.00578	-0.20325	185
AEPW	TULSA POWER STATION 69KV	80	-0.20901	EMDE	ASBURY 161KV	192	-0.00621	-0.20228	185
AEPW	TULSA POWER STATION 69KV	80	-0.20901	EMDE	LARUSSEL 161KV	100	-0.00578	-0.20325	185
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEPW	FLINT CREEK 161KV	428	-0.00637	-0.20264	186
AEPW	TULSA POWER STATION 138KV	320	-0.20901	EMDE	RIVERTON 161KV	94.5914	-0.00708	-0.20192	186
AEPW	TULSA POWER STATION 138KV	320	-0.20901	EMDE	STATE LINE 161KV	520	-0.00681	-0.2022	186
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEPW	FLINT CREEK 161KV	428	-0.00637	-0.20264	186
AEPW	TULSA POWER STATION 69KV	80	-0.20901	EMDE	RIVERTON 161KV	94.5914	-0.00708	-0.20192	186
AEPW	TULSA POWER STATION 69KV	80	-0.20901	EMDE	STATE LINE 161KV	520	-0.00681	-0.2022	186
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEPW	NORTHEASTERN STATION 345KV	625	-0.00866	-0.20035	188
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEPW	NORTHEASTERN STATION 345KV	625	-0.00866	-0.20035	188
AEPW	TULSA POWER STATION 138KV	320	-0.20901	GRDA	GRDA1 161KV	180	-0.01068	-0.19833	190
AEPW	TULSA POWER STATION 138KV	320	-0.20901	GRDA	GRDA1 345KV	194	-0.01068	-0.19833	190
AEPW	TULSA POWER STATION 69KV	80	-0.20901	GRDA	GRDA1 161KV	180	-0.01068	-0.19833	190
AEPW	TULSA POWER STATION 69KV	80	-0.20901	GRDA	GRDA1 345KV	194	-0.01068	-0.19833	190
AEPW	TULSA POWER STATION 138KV	320	-0.20901	AEPW	NORTHEASTERN STATION 138KV	480	-0.01802	-0.19099	197
AEPW	TULSA POWER STATION 69KV	80	-0.20901	AEPW	NORTHEASTERN STATION 138KV	480	-0.01802	-0.19099	197

Maximum Decrement and Maximum Increment were determine from the Source and Sink Operating Points in the study models where limiting facility was identified.

Factor = Source GSF - Sink GSF  
Redispatch Amount = Relief Amount / Factor

Upgrade: ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3  
Limiting Facility: ROSE HILL (ROSEHL3X) 345/138/13.8KV TRANSFORMER CKT 1  
Direction: FROM - TO  
Line Outage: ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 1  
Flowgate: 2007AG2AFS111963210SP  
Date Redispatch Needed: Starting 2010 6/1 - 10/1 Until EOC of Upgrade  
Season Flowgate Identified: 2010 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount
1281706	3.4	11.1
1285893	1.2	11.1
1286201	6.5	11.1

Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	EMDE	ELK RIVER 345KV	44.986	0.92278	-0.29882	37
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	EMDE	ELK RIVER 345KV	44.986	0.92278	-0.29976	37
WERE	WACO 138KV	30	-0.19529	EMDE	ELK RIVER 345KV	44.986	0.92278	-0.28807	39
WERE	GETTY 69KV	35	-0.18272	EMDE	ELK RIVER 345KV	44.986	0.92278	-0.2755	40
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	WERE	CITY OF BURLINGTON 69KV	55.4	0.4789	-0.25393	44
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	0.4789	-0.25393	44
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	WERE	CITY OF BURLINGTON 69KV	55.4	0.4789	-0.25487	44
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	0.4789	-0.25487	44
WERE	WACO 138KV	30	-0.19529	WERE	CITY OF BURLINGTON 69KV	55.4	0.4789	-0.24318	46
WERE	WACO 138KV	30	-0.19529	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	0.4789	-0.24318	46
WERE	GETTY 69KV	35	-0.18272	WERE	CITY OF BURLINGTON 69KV	55.4	0.4789	-0.23061	48
WERE	GETTY 69KV	35	-0.18272	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	0.4789	-0.23061	48
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	EMDE	ASBURY 161KV	192	0.00939	-0.21637	51
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	MIPU	ARIES 161KV	18.33311	0.00658	-0.21262	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	EMDE	ASBURY 161KV	192	0.00939	-0.21543	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	KACP	BULL CREEK 161KV	61.8	0.00841	-0.21445	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	EMDE	LARUSSEL 161KV	100	0.00682	-0.21286	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	EMDE	RIVERTON 161KV	100.0327	0.00771	-0.21375	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	EMDE	RIVERTON 69KV	44.07887	0.00716	-0.21323	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	MIPU	SOUTH HARPER 161KV	67.00598	0.00717	-0.21321	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	EMDE	STATE LINE 161KV	520	0.00733	-0.21337	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	MIPU	ARIES 161KV	18.33311	0.00658	-0.21356	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	KACP	BULL CREEK 161KV	61.8	0.00841	-0.21539	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	KACP	HAWTHORN 161KV	517.7498	0.0053	-0.21228	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	EMDE	LARUSSEL 161KV	100	0.00682	-0.2138	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	KACP	MONTRORSE 161KV	359.7142	0.00608	-0.21306	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	KACY	NEARMAN 161KV	77	0.00544	-0.21242	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	KACY	NEARMAN 20KV	235	0.00544	-0.21242	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	KACY	QUINDARO 161KV	129.4176	0.00547	-0.21245	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	KACY	QUINDARO 69KV	136.3562	0.0055	-0.21248	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	EMDE	RIVERTON 161KV	100.0327	0.00771	-0.21469	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	EMDE	RIVERTON 69KV	44.07887	0.00716	-0.21417	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	MIPU	SIBLEY 161KV	228.9597	0.00535	-0.21233	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	MIPU	SIBLEY 69KV	45.99999	0.00528	-0.21227	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	MIPU	SOUTH HARPER 161KV	67.00598	0.00717	-0.21415	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	EMDE	STATE LINE 161KV	520	0.00733	-0.21431	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	KACP	CITY OF HIGGINSVILLE 69KV	36	0.00522	-0.21126	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	KACP	HAWTHORN 161KV	517.7498	0.0053	-0.21134	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	MIPU	LAKE ROAD 161KV	35	0.00258	-0.20862	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	MIPU	LAKE ROAD 34KV	92	0.00258	-0.20862	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	KACP	MONTRORSE 161KV	359.7142	0.00608	-0.21212	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	KACY	NEARMAN 161KV	77	0.00544	-0.21148	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	KACY	NEARMAN 20KV	235	0.00544	-0.21148	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	KACY	QUINDARO 161KV	129.4176	0.00547	-0.21151	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	KACP	QUINDARO 69KV	136.3562	0.0055	-0.21154	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	MIPU	SIBLEY 161KV	228.9597	0.00535	-0.21139	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	MIPU	SIBLEY 69KV	45.99999	0.00528	-0.21133	53
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	KACP	CITY OF HIGGINSVILLE 69KV	36	0.00522	-0.2122	53
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	KACP	IATAN 345KV	1806	0.00192	-0.2089	53
WERE	GILL ENERGY CENTER 69KV	48	-0.20698						

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	GILL ENERGY CENTER 69KV	48	-0.20698	MIPU	LAKE ROAD 161KV	35	0.00258	-0.20956	53
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	MIPU	LAKE ROAD 34KV	92	0.00258	-0.20956	53
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	NORTHEASTERN STATION 345KV	625	0.00158	-0.20856	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OPPD	CASS 1G 15.000 345KV	42.51929	-0.00098	-0.20505	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OPPD	CASS 2G 15.000 345KV	52.99999	-0.00098	-0.20505	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	COOPER1G 22.000 345KV	551.2802	-0.00034	-0.2057	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	FLINT CREEK 161KV	428	0.0007	-0.20674	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OPPD	FREM 8G 13.800 69KV	90	-0.00146	-0.20458	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OPPD	FT CAL 1G 22.000 4KV	376	-0.00107	-0.20497	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	KACP	IATAN 345KV	371	0.00192	-0.20796	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	KACP	IATAN 345KV	1808	0.00192	-0.20796	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OPPD	N OMA 1G 13.800 2KV	48	-0.00107	-0.20497	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OPPD	N OMA 2G 13.800 2KV	80.59999	-0.00105	-0.20499	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OPPD	N OMA 3G 13.800 2KV	80.59999	-0.00105	-0.20499	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OPPD	N OMA 4G 15.000 2KV	1074	-0.00105	-0.20499	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OPPD	N OMA 5G 20.000 4KV	173.9	-0.00105	-0.20499	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OPPD	NEBCTY1G 18.000 4KV	466	-0.00087	-0.20517	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OPPD	NEBCTY2G 23.000 345KV	503	-0.00087	-0.20517	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	NORTHEASTERN STATION 345KV	625	0.00158	-0.20762	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	TONTITOWN 161KV	140	0.00011	-0.20615	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OPPD	CASS 1G 15.000 345KV	42.51929	-0.00098	-0.20505	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OPPD	CASS 2G 15.000 345KV	52.99999	-0.00098	-0.20505	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	COL_C0G7 115.00 115KV	75	-0.00208	-0.2048	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	COOPER1G 22.000 345KV	551.2802	-0.00034	-0.20664	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	FITZHUGH 161KV	125.4	-0.00238	-0.20462	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	FLINT CREEK 161KV	428	0.0007	-0.20768	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OPPD	FREM 8G 13.800 69KV	90	-0.00146	-0.20552	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OPPD	FT CAL 1G 22.000 4KV	376	-0.00107	-0.20591	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OPPD	N OMA 1G 13.800 2KV	48	-0.00107	-0.20591	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OPPD	N OMA 2G 13.800 2KV	80.59999	-0.00105	-0.20593	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OPPD	N OMA 3G 13.800 2KV	80.59999	-0.00105	-0.20593	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OPPD	N OMA 4G 15.000 2KV	1074	-0.00105	-0.20593	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OPPD	N OMA 5G 20.000 4KV	173.9	-0.00105	-0.20593	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OPPD	NEBCTY1G 18.000 4KV	466	-0.00087	-0.20611	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OPPD	NEBCTY2G 23.000 345KV	503	-0.00087	-0.20611	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00223	-0.20475	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	SHELDN2G 13.800 115KV	81	-0.00223	-0.20475	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	TONTITOWN 161KV	140	0.00011	-0.20709	54
WERE	WACO 138KV	30	-0.19529	EMDE	ASBURY 161KV	192	0.00938	-0.20468	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OPPD	AES 161KV	320	-0.00304	-0.203	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	ARSENAL HILL 138KV	455	-0.00477	-0.20312	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	ARSENAL HILL 69KV	90	-0.00478	-0.20126	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	BPS GT1G 13.800 115KV	80	-0.00324	-0.2028	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	BPS GT2G 13.800 115KV	45.19951	-0.00324	-0.2028	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	BPS ST3G 13.800 115KV	49.99482	-0.00324	-0.2028	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	COGENTRIX 345KV	222.0668	-0.00472	-0.20132	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	COL_C0G7 115.00 115KV	75	-0.00208	-0.20396	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	DENVER G 34.500 115KV	34.32393	-0.00332	-0.20272	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	EGY CTRG 13.800 115KV	54	-0.00328	-0.20275	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	FITZHUGH 161KV	125.4	-0.00238	-0.20368	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	GT-2 G 13.800 115KV	40	-0.00343	-0.20261	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	KNOXLEE 138KV	228	-0.00527	-0.20077	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	WERE	LAWRENCE ENERGY CENTER 230KV	223.9294	-0.00381	-0.20223	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	LIEBERMAN 138KV	174	-0.00481	-0.20177	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	MUSKOGEE 161KV	168	-0.00391	-0.20213	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	MUSKOGEE 345KV	1548	-0.00447	-0.20157	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	NORTHEASTERN STATION 138KV	480	-0.00372	-0.20232	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	OEC 345KV	390.4081	-0.003	-0.20304	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	PIRKEY GENERATION 138KV	288	-0.00528	-0.20076	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	PLATTE1G 13.800 115KV	71.51868	-0.0038	-0.20254	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00223	-0.20381	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	SHELDN2G 13.800 115KV	81	-0.00223	-0.20381	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	TULSA POWER STATION 138KV	129.8887	-0.00453	-0.20151	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	AES 161KV	320	-0.00304	-0.20394	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	ARSENAL HILL 138KV	455	-0.00477	-0.20221	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	ARSENAL HILL 69KV	90	-0.00478	-0.20126	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	BPS GT1G 13.800 115KV	80	-0.00324	-0.2028	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	BPS GT2G 13.800 115KV	45.19951	-0.00324	-0.20374	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	BPS ST3G 13.800 115KV	49.99482	-0.00324	-0.20374	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	COGENTRIX 345KV	222.0668	-0.00472	-0.20226	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	DENVER G 34.500 115KV	34.32393	-0.00332	-0.20366	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	EASTMAN 138KV	356.7947	-0.00531	-0.20167	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	EGY CTRG 13.800 115KV	54	-0.00328	-0.20368	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	GT-2 G 13.800 115KV	40	-0.00343	-0.20355	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	KNOXLEE 138KV	228	-0.00527	-0.20171	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	WERE	LAWRENCE ENERGY CENTER 230KV	223.9294	-0.00381	-0.20317	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	LEBROCK 345KV	517.1024	-0.00505	-0.20168	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	LIEBERMAN 138KV	174	-0.00481	-0.20211	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	MUSKOGEE 161KV	168	-0.00391	-0.20207	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	MUSKOGEE 345KV	1548	-0.00447	-0.20251	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	NORTHEASTERN STATION 138KV	480	-0.00372	-0.20326	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	OEC 345KV	390.4081	-0.003	-0.20398	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	PIRKEY GENERATION 138KV	288	-0.00528	-0.2017	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	PLATTE1G 13.800 115KV	71.51868	-0.0038	-0.20348	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	TULSA POWER STATION 138KV	129.8887	-0.00453	-0.20245	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	WELSH 345KV	1044	-0.00594	-0.20104	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	WILKES 138KV	410.8098	-0.00548	-0.20149	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	WILKES 345KV	308	-0.0054	-0.20158	55
WERE	WACO 138KV	30	-0.19529	KACP	BULL CREEK 161KV	61.8	0.00841	-0.2037	55
WERE	WACO 138KV	30	-0.19529	EMDE	LARUSSEL 161KV	100	0.00682	-0.20211	55
WERE	WACO 138KV	30	-0.19529	KACP	MONTROSE 161KV	359.7142	0.00696	-0.20137	55
WERE	WACO 138KV	30	-0.19529	KACP	QUINDARO 161KV	129.4178	0.00547	-0.20076	55
WERE	WACO 138KV	30	-0.19529	KACP	QUINDARO 69KV	136.3562	0.0055	-0.20079	55
WERE	WACO 138KV	30	-0.19529	EMDE	RIVERTON 161KV	100.0327	0.00771	-0.203	55
WERE	WACO 138KV	30	-0.19529	EMDE	RIVERTON 69KV	44.07887	0.00718	-0.20248	55
WERE	WACO 138KV	30	-0.19529	MIPU	SOUTH HARPER 161KV	67.00598	0.00717	-0.20246	55
WERE	WACO 138KV	30	-0.19529	EMDE	STATE LINE 161KV	520	0.00733	-0.20262	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	EASTMAN 138KV	356.7947	-0.00531	-0.20073	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	GENTLM1G 23.000 230KV	463	-0.00664	-0.1994	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	GENTLM2G 24.000 345KV	443.3608	-0.00684	-0.1992	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00738	-0.19866	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.0073	-0.19874	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	LEBROCK 345KV	517.1024	-0.00505	-0.20074	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	NPPD	SIDNEY 4 230.00 230KV	19.3852	-0.00642	-0.19862	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	WERE	TECUMSEH ENERGY CENTER 115KV	133	-0.00837	-0.19767	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	WELSH 345KV	1044	-0.00594	-0.2001	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	WILKES 138KV	410.8098	-0.00548	-0.20056	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	WILKES 345KV	308	-0.0054	-0.20064	56
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	WERE	EMPORIA ENERGY CENTER 345KV	610	-0.00945	-0.19753	56
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	GENTLM1G 23.000 230KV	463	-0.00664	-0.20034	56
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	NPPD	GENTLM2G 24.000 345KV	443.3608	-0.00684	-0.20014	56

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	EMDE	MIRWYG11 34.500 230KV	100	-0.01008	-0.19596	57
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	WERE	CHANUTE 69KV	54	-0.01164	-0.19534	57
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	WKEC	CLIFTON 115KV	65	-0.00988	-0.19712	57
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	EMDE	MIRWYG11 34.500 230KV	100	-0.01008	-0.19689	57
WERE	WACO 138KV	30	-0.19529	OPPD	CASS 1G 15.000 345KV	42.51929	-0.00099	-0.1943	57
WERE	WACO 138KV	30	-0.19529	OPPD	CASS 2G 15.000 345KV	52.99999	-0.00099	-0.1943	57
WERE	WACO 138KV	30	-0.19529	NPPD	COOPER1G 22.000 345KV	551.2802	-0.00034	-0.19495	57
WERE	WACO 138KV	30	-0.19529	AEPW	FLINT CREEK 161KV	428	0.0007	-0.19599	57
WERE	WACO 138KV	30	-0.19529	OPPD	FREM 8G 13.800 69KV	90	-0.00146	-0.19383	57
WERE	WACO 138KV	30	-0.19529	OPPD	FT CAL1G 22.000 4KV	376	-0.00107	-0.19422	57
WERE	WACO 138KV	30	-0.19529	OPPD	N OMA 1G 13.800 2KV	46.5	-0.00107	-0.19422	57
WERE	WACO 138KV	30	-0.19529	OPPD	N OMA 2G 13.800 2KV	80.59999	-0.00105	-0.19424	57
WERE	WACO 138KV	30	-0.19529	OPPD	N OMA 3G 13.800 2KV	80.59999	-0.00105	-0.19424	57
WERE	WACO 138KV	30	-0.19529	OPPD	N OMA 4G 15.000 2KV	1074	-0.00105	-0.19424	57
WERE	WACO 138KV	30	-0.19529	OPPD	N OMA 5G 20.000 4KV	173.3	-0.00105	-0.19424	57
WERE	WACO 138KV	30	-0.19529	OPPD	NEBCTY1G 18.000 4KV	466	-0.00087	-0.19442	57
WERE	WACO 138KV	30	-0.19529	OPPD	NEBCTY2G 23.000 345KV	503	-0.00087	-0.19442	57
WERE	WACO 138KV	30	-0.19529	AEPW	NORTHEASTERN STATION 345KV	629	0.00158	-0.19687	57
WERE	WACO 138KV	30	-0.19529	AEPW	TONTITOWN 161KV	140	0.00011	-0.1954	57
WERE	GETTY 69KV	35	-0.18272	EMDE	ASBURY 161KV	192	0.00938	-0.19211	58
WERE	GETTY 69KV	35	-0.18272	KACP	BULL CREEK 161KV	61	0.00841	-0.19113	58
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	SEMINOLE 138KV	334.858	-0.01555	-0.19489	58
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	SEMINOLE 138KV	334.858	-0.01555	-0.19143	58
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	SEMINOLE 345KV	1019	-0.01588	-0.19112	58
WERE	WACO 138KV	30	-0.19529	OKGE	AES 161KV	320	-0.00304	-0.19225	58
WERE	WACO 138KV	30	-0.19529	AEPW	ARSENAL HILL 138KV	455	-0.00477	-0.19052	58
WERE	WACO 138KV	30	-0.19529	AEPW	ARSENAL HILL 69KV	90	-0.00478	-0.19051	58
WERE	WACO 138KV	30	-0.19529	NPPD	BPS 1G 13.800 115KV	60	-0.00324	-0.19205	58
WERE	WACO 138KV	30	-0.19529	NPPD	BPS 2G 13.800 115KV	45.19951	-0.00324	-0.19205	58
WERE	WACO 138KV	30	-0.19529	NPPD	BPS 3G 13.800 115KV	49.99482	-0.00324	-0.19205	58
WERE	WACO 138KV	30	-0.19529	AEPW	COGENTRIX 345KV	222.9668	-0.00472	-0.19057	58
WERE	WACO 138KV	30	-0.19529	NPPD	COL COG7 115.00 115KV	75	-0.00208	-0.19321	58
WERE	WACO 138KV	30	-0.19529	NPPD	DENVER G 34.500 115KV	34.32393	-0.00332	-0.19197	58
WERE	WACO 138KV	30	-0.19529	NPPD	EGY CTRG 13.800 115KV	54	-0.00328	-0.192	58
WERE	WACO 138KV	30	-0.19529	AEPW	FITZHIGH 161KV	1254	-0.00238	-0.19238	58
WERE	WACO 138KV	30	-0.19529	NPPD	GT-2 G 13.800 115KV	40	-0.00343	-0.19186	58
WERE	WACO 138KV	30	-0.19529	WERE	LAWRENCE ENERGY CENTER 230KV	223.9294	-0.00381	-0.19148	58
WERE	WACO 138KV	30	-0.19529	OKGE	MUSKOGEE 161KV	166	-0.00391	-0.19138	58
WERE	WACO 138KV	30	-0.19529	OKGE	MUSKOGEE 345KV	1548	-0.00447	-0.19082	58
WERE	WACO 138KV	30	-0.19529	AEPW	NORTHEASTERN STATION 138KV	480	-0.00372	-0.19157	58
WERE	WACO 138KV	30	-0.19529	AEPW	OBC 345KV	390.4087	-0.003	-0.19228	58
WERE	WACO 138KV	30	-0.19529	NPPD	PLATTE1G 13.800 115KV	71.51888	-0.0035	-0.19178	58
WERE	WACO 138KV	30	-0.19529	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00223	-0.19306	58
WERE	WACO 138KV	30	-0.19529	NPPD	SHELDN2G 13.800 115KV	81	-0.00223	-0.19306	58
WERE	WACO 138KV	30	-0.19529	AEPW	TULSA POWER STATION 138KV	129.8887	-0.00453	-0.19076	58
WERE	GETTY 69KV	35	-0.18272	KACP	CITY OF HIGGINSVILLE 69KV	36	0.00522	-0.18794	59
WERE	GETTY 69KV	35	-0.18272	KACP	HAWTHORN 161KV	517.7388	-0.00524	-0.18802	59
WERE	GETTY 69KV	35	-0.18272	EMDE	LARUSSEL 161KV	100	0.00682	-0.18954	59
WERE	GETTY 69KV	35	-0.18272	KACP	MONTROSE 161KV	359.7142	0.00608	-0.1888	59
WERE	GETTY 69KV	35	-0.18272	KACY	NEARMAN 161KV	77	0.00544	-0.18816	59
WERE	GETTY 69KV	35	-0.18272	KACY	NEARMAN 20KV	235	0.00544	-0.18816	59
WERE	GETTY 69KV	35	-0.18272	KACY	QUINDARO 161KV	129.4176	0.00547	-0.18819	59
WERE	GETTY 69KV	35	-0.18272	KACY	QUINDARO 69KV	136.3562	0.00593	-0.18822	59
WERE	GETTY 69KV	35	-0.18272	EMDE	RIVERTON 161KV	100.0323	0.00771	-0.19043	59
WERE	GETTY 69KV	35	-0.18272	EMDE	RIVERTON 69KV	44.07881	0.00718	-0.18991	59
WERE	GETTY 69KV	35	-0.18272	MIPU	SIBLEY 161KV	228.9597	0.00535	-0.18807	59
WERE	GETTY 69KV	35	-0.18272	MIPU	SIBLEY 69KV	45.99999	0.00528	-0.18801	59
WERE	GETTY 69KV	35	-0.18272	MIPU	SOUTH HARPER 161KV	67.00988	0.00717	-0.19089	59
WERE	GETTY 69KV	35	-0.18272	EMDE	STATE LINE 161KV	520	0.00733	-0.19005	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	COMANCHE 138KV	145	-0.01723	-0.18871	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	COMANCHE 69KV	60	-0.01725	-0.18873	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	HORSESHOE LAKE 138KV	796	-0.01699	-0.18905	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	MCCLAIN 138KV	470	-0.01776	-0.18828	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	MUSTANG 138KV	351	-0.01832	-0.18772	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	MUSTANG 69KV	51.72168	-0.01838	-0.18768	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	REDBLD 345KV	43.60268	-0.01854	-0.18915	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	SEMINOLE 345KV	1019	-0.01588	-0.19018	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	SMITH COGEN 138KV	106	-0.01813	-0.18878	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	MIDW	SMOKEY HILLS 34KV	25	-0.01798	-0.18808	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	SOUTHWESTERN STATION 138KV	287	-0.0174	-0.18864	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	AEPW	SOUTHWESTERN STATION 138KV	712	-0.0174	-0.18864	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	WERE	CNTRLPL2 34.500 115KV	99	-0.01898	-0.18802	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	COMANCHE 138KV	145	-0.01733	-0.18965	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	COMANCHE 69KV	60	-0.01725	-0.18973	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	HORSESHOE LAKE 138KV	796	-0.01699	-0.18999	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	MCCLAIN 138KV	470	-0.01776	-0.18922	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	MUSTANG 138KV	351	-0.01832	-0.18866	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	MUSTANG 69KV	51.72168	-0.01838	-0.18862	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	REDBLD 345KV	43.60268	-0.01854	-0.19044	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	SMITH COGEN 138KV	106	-0.01813	-0.18873	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	MIDW	SMOKEY HILLS 34KV	25	-0.01798	-0.18902	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	SOUTHWESTERN STATION 138KV	287	-0.0174	-0.18958	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	AEPW	SOUTHWESTERN STATION 138KV	712	-0.0174	-0.18958	59
WERE	WACO 138KV	30	-0.19529	AEPW	EASTMAN 138KV	356.7947	-0.00531	-0.18998	59
WERE	WACO 138KV	30	-0.19529	NPPD	GENTLTL2 23.000 230KV	463	-0.00664	-0.18865	59
WERE	WACO 138KV	30	-0.19529	NPPD	GENTLMG 24.000 345KV	443.3699	-0.00684	-0.18845	59
WERE	WACO 138KV	30	-0.19529	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00738	-0.18791	59
WERE	WACO 138KV	30	-0.19529	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.0073	-0.18799	59
WERE	WACO 138KV	30	-0.19529	AEPW	KNOXLEE 138KV	228	-0.00527	-0.19002	59
WERE	WACO 138KV	30	-0.19529	AEPW	LEBROCK 345KV	517.1024	-0.0053	-0.18999	59
WERE	WACO 138KV	30	-0.19529	AEPW	LEBERMAN 138KV	174	-0.00481	-0.19042	59
WERE	WACO 138KV	30	-0.19529	AEPW	PIRKEY GENERATION 138KV	288	-0.00528	-0.19001	59
WERE	WACO 138KV	30	-0.19529	AEPW	WELSH 345KV	1044	-0.00594	-0.18935	59
WERE	WACO 138KV	30	-0.19529	AEPW	WILKES 138KV	410.8099	-0.00543	-0.1898	59
WERE	WACO 138KV	30	-0.19529	AEPW	WILKES 345KV	308	-0.0054	-0.18989	59
WERE	GETTY 69KV	35	-0.18272	KACP	IATAN 345KV	1806	0.00192	-0.18464	60
WERE	GETTY 69KV	35	-0.18272	KACP	IATAN 345KV	371	0.00192	-0.18464	60
WERE	GETTY 69KV	35	-0.18272	MIPU	LAKE ROAD 161KV	35	0.00258	-0.1853	60
WERE	GETTY 69KV	35	-0.18272	MIPU	LAKE ROAD 34KV	92	0.00258	-0.1853	60
WERE	GETTY 69KV	35	-0.18272	AEPW	NORTHEASTERN STATION 345KV	629	0.00158	-0.1843	60
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	CENTENIAL WIND 34KV	120	-0.02178	-0.18426	60
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	WERE	CNTRLPL2 34.500 115KV	99	-0.01898	-0.18708	60
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	WERE	HUTCHINSON ENERGY CENTER 115KV	230	-0.02132	-0.18472	60
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	MIDW	KNOLL 115KV	7			

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	GILL ENERGY CENTER 69KV	48	-0.20698	MKEC	A. M. MULLERGREIN GENERATOR 115KV	63	-0.02544	-0.18154	61
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	FPLVND2 34KV	59	-0.02288	-0.16413	61
WERE	WACO 138KV	30	-0.19529	WERE	CHANUTE 69KV	54	0.01164	-0.18365	61
WERE	GETTY 69KV	35	-0.18272	OKGE	AES 161KV	320	-0.00304	-0.17968	62
WERE	GETTY 69KV	35	-0.18272	NPPD	BPS GT1G 13.800 115KV	80	-0.00324	-0.17948	62
WERE	GETTY 69KV	35	-0.18272	NPPD	BPS GT2G 13.800 115KV	45.19951	-0.00324	-0.17948	62
WERE	GETTY 69KV	35	-0.18272	NPPD	BPS ST3G 13.800 115KV	49.99482	-0.00324	-0.17948	62
WERE	GETTY 69KV	35	-0.18272	NPPD	COL.COG7 115.00 115KV	75	-0.00208	-0.18064	62
WERE	GETTY 69KV	35	-0.18272	NPPD	DENVER G 34.500 115KV	34.32393	-0.00332	-0.17944	62
WERE	GETTY 69KV	35	-0.18272	NPPD	EGY CTRG 13.800 115KV	54	-0.00328	-0.17943	62
WERE	GETTY 69KV	35	-0.18272	AEPW	FITZHUGH 161KV	125.4	-0.00238	-0.18036	62
WERE	GETTY 69KV	35	-0.18272	NPPD	GT-2 G 13.800 115KV	40	-0.00343	-0.17929	62
WERE	GETTY 69KV	35	-0.18272	WERE	LAWRENCE ENERGY CENTER 230KV	223.9294	-0.00381	-0.17891	62
WERE	GETTY 69KV	35	-0.18272	OKGE	MUSKOGEE 161KV	166	-0.00391	-0.17881	62
WERE	GETTY 69KV	35	-0.18272	AEPW	NORTHEASTERN STATION 138KV	483	-0.00372	-0.178	62
WERE	GETTY 69KV	35	-0.18272	AEPW	OEC 345KV	390.4087	-0.003	-0.17972	62
WERE	GETTY 69KV	35	-0.18272	NPPD	PLATTE1G 13.800 115KV	71.51868	-0.0036	-0.17922	62
WERE	GETTY 69KV	35	-0.18272	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00223	-0.18049	62
WERE	GETTY 69KV	35	-0.18272	NPPD	SHELDN2G 13.800 115KV	81	-0.00223	-0.18049	62
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	MKEC	A. M. MULLERGREIN GENERATOR 115KV	63	-0.02544	-0.1806	62
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	MKEC	CIMARRON RIVER 115KV	44	-0.02642	-0.17962	62
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	MKEC	CIMARRON RIVER 115KV	44	-0.02642	-0.18056	62
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	SOONER 345KV	537	-0.02855	-0.17843	62
WERE	WACO 138KV	30	-0.19529	OKGE	HORSESHOE LAKE 138KV	796	-0.01699	-0.1783	62
WERE	WACO 138KV	30	-0.19529	OKGE	REDBUD 345KV	43.60958	-0.01654	-0.17875	62
WERE	WACO 138KV	30	-0.19529	OKGE	SEMINOLE 138KV	334.858	-0.01555	-0.17974	62
WERE	WACO 138KV	30	-0.19529	OKGE	SEMINOLE 345KV	1019	-0.01586	-0.17943	62
WERE	GETTY 69KV	35	-0.18272	AEPW	ARSENAL HILL 138KV	455	-0.00477	-0.17795	63
WERE	GETTY 69KV	35	-0.18272	AEPW	ARSENAL HILL 69KV	90	-0.00478	-0.17794	63
WERE	GETTY 69KV	35	-0.18272	AEPW	COGENTRIX 345KV	222.0668	-0.00472	-0.178	63
WERE	GETTY 69KV	35	-0.18272	AEPW	EASTMAN 138KV	356.7947	-0.00531	-0.17741	63
WERE	GETTY 69KV	35	-0.18272	NPPD	GENTLMH3 23.000 230KV	463	-0.00664	-0.17608	63
WERE	GETTY 69KV	35	-0.18272	NPPD	GENTLM2 24.000 345KV	443.3698	-0.00664	-0.17588	63
WERE	GETTY 69KV	35	-0.18272	AEPW	KNOXLEE 138KV	225	-0.00527	-0.17745	63
WERE	GETTY 69KV	35	-0.18272	AEPW	LEBROCK 345KV	517.1024	-0.0053	-0.17742	63
WERE	GETTY 69KV	35	-0.18272	AEPW	LIEBERMAN 138KV	174	-0.00487	-0.17785	63
WERE	GETTY 69KV	35	-0.18272	OKGE	MUSKOGEE 345KV	158	-0.00447	-0.17825	63
WERE	GETTY 69KV	35	-0.18272	AEPW	PIRREV GENERATION 138KV	288	-0.00528	-0.17744	63
WERE	GETTY 69KV	35	-0.18272	AEPW	TULSA POWER STATION 138KV	129.8887	-0.00453	-0.17819	63
WERE	GETTY 69KV	35	-0.18272	AEPW	WELSH 345KV	1044	-0.00594	-0.17678	63
WERE	GETTY 69KV	35	-0.18272	AEPW	WILKES 138KV	410.8099	-0.00543	-0.17723	63
WERE	GETTY 69KV	35	-0.18272	AEPW	WILKES 345KV	308	-0.0054	-0.17732	63
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	SOONER 345KV	537	-0.02855	-0.17749	63
WERE	WACO 138KV	30	-0.19529	WERE	CNTRLPL2 34.500 115KV	99	-0.01898	-0.17633	63
WERE	WACO 138KV	30	-0.19529	AEPW	COMANCHE 138KV	145	-0.01733	-0.17786	63
WERE	WACO 138KV	30	-0.19529	AEPW	COMANCHE 69KV	60	-0.01725	-0.17804	63
WERE	WACO 138KV	30	-0.19529	OKGE	MCLAIN 138KV	470	-0.01776	-0.17753	63
WERE	WACO 138KV	30	-0.19529	OKGE	MUSTANG 138KV	351	-0.01832	-0.17697	63
WERE	WACO 138KV	30	-0.19529	OKGE	MUSTANG 69KV	51.72168	-0.01838	-0.17693	63
WERE	WACO 138KV	30	-0.19529	OKGE	SMITH COGEN 138KV	106	-0.01818	-0.1771	63
WERE	WACO 138KV	30	-0.19529	MIDW	SMOKEY HILLS 34KV	25	-0.01798	-0.17733	63
WERE	WACO 138KV	30	-0.19529	AEPW	SOUTHWESTERN STATION 138KV	287	-0.0174	-0.17789	63
WERE	WACO 138KV	30	-0.19529	AEPW	SOUTHWESTERN STATION 138KV	712	-0.0174	-0.17789	63
WERE	GETTY 69KV	35	-0.18272	MKEC	CLIFTON 115KV	65	-0.00986	-0.17286	64
WERE	GETTY 69KV	35	-0.18272	WERE	EMPORIA ENERGY CENTER 345KV	610	-0.00945	-0.17327	64
WERE	GETTY 69KV	35	-0.18272	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00738	-0.17534	64
WERE	GETTY 69KV	35	-0.18272	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.0073	-0.17542	64
WERE	GETTY 69KV	35	-0.18272	WERE	TEJUMSEH ENERGY CENTER 115KV	133	-0.00837	-0.17435	64
WERE	WACO 138KV	30	-0.19529	OKGE	CENTENIAL WIND 34KV	120	-0.02178	-0.17351	64
WERE	WACO 138KV	30	-0.19529	WERE	HUTCHINSON ENERGY CENTER 115KV	230	-0.02132	-0.17397	64
WERE	WACO 138KV	30	-0.19529	MIDW	KNOLL 115KV	75.60001	-0.02029	-0.175	64
WERE	WACO 138KV	30	-0.19529	OKGE	SPGCK1&2 13.200 345KV	78	-0.02065	-0.17464	64
WERE	GETTY 69KV	35	-0.18272	WERE	CHANUTE 69KV	54.8	-0.01164	-0.17108	65
WERE	GETTY 69KV	35	-0.18272	EMDE	IRVING 34.500 230KV	100	-0.01008	-0.17264	65
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.03598	-0.17102	65
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	MKEC	JUDSON LARGE 115KV	95.93536	-0.03614	-0.17084	65
WERE	WACO 138KV	30	-0.19529	OKGE	FPLVND2 34KV	59	-0.02285	-0.17244	65
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.03598	-0.17008	66
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	MKEC	JUDSON LARGE 115KV	95.93536	-0.03614	-0.1699	66
WERE	GILL ENERGY CENTER 69KV	48	-0.20698	OKGE	SOONER 138KV	535	-0.03874	-0.16824	66
WERE	WACO 138KV	30	-0.19529	MKEC	A. M. MULLERGREIN GENERATOR 115KV	63	-0.02544	-0.16985	66
WERE	WACO 138KV	30	-0.19529	MKEC	CIMARRON RIVER 115KV	44	-0.02642	-0.16887	66
WERE	GETTY 69KV	35	-0.18272	AEPW	COMANCHE 138KV	145	-0.01733	-0.16539	67
WERE	GETTY 69KV	35	-0.18272	AEPW	COMANCHE 69KV	60	-0.01728	-0.16547	67
WERE	GETTY 69KV	35	-0.18272	OKGE	HORSESHOE LAKE 138KV	796	-0.01699	-0.16573	67
WERE	GETTY 69KV	35	-0.18272	OKGE	REDBUD 345KV	43.60958	-0.01654	-0.16573	67
WERE	GETTY 69KV	35	-0.18272	OKGE	SEMINOLE 138KV	334.858	-0.01555	-0.16717	67
WERE	GETTY 69KV	35	-0.18272	OKGE	SEMINOLE 345KV	1019	-0.01586	-0.16686	67
WERE	GETTY 69KV	35	-0.18272	AEPW	SOUTHWESTERN STATION 138KV	287	-0.0174	-0.16532	67
WERE	GETTY 69KV	35	-0.18272	AEPW	SOUTHWESTERN STATION 138KV	712	-0.0174	-0.16532	67
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20604	OKGE	SOONER 138KV	535	-0.03874	-0.1673	67
WERE	WACO 138KV	30	-0.19529	OKGE	SOONER 345KV	537	-0.02855	-0.16874	67
WERE	GETTY 69KV	35	-0.18272	WERE	CNTRLPL2 34.500 115KV	99	-0.01898	-0.16376	68
WERE	GETTY 69KV	35	-0.18272	OKGE	MCLAIN 138KV	470	-0.01776	-0.16496	68
WERE	GETTY 69KV	35	-0.18272	OKGE	MUSTANG 138KV	351	-0.01832	-0.1644	68
WERE	GETTY 69KV	35	-0.18272	OKGE	MUSTANG 69KV	51.72168	-0.01838	-0.16436	68
WERE	GETTY 69KV	35	-0.18272	OKGE	SMITH COGEN 138KV	106	-0.01818	-0.16453	68
WERE	GETTY 69KV	35	-0.18272	MIDW	SMOKEY HILLS 34KV	25	-0.01798	-0.16476	68
WERE	GETTY 69KV	35	-0.18272	OKGE	CENTENIAL WIND 34KV	120	-0.02178	-0.16094	68
WERE	GETTY 69KV	35	-0.18272	WERE	HUTCHINSON ENERGY CENTER 115KV	230	-0.02132	-0.1614	69
WERE	GETTY 69KV	35	-0.18272	MIDW	KNOLL 115KV	75.60001	-0.02029	-0.16243	69
WERE	GETTY 69KV	35	-0.18272	OKGE	SPGCK1&2 13.200 345KV	78	-0.02065	-0.16207	69
WERE	GETTY 69KV	35	-0.18272	OKGE	FPLVND2 34KV	59	-0.02285	-0.15987	70
WERE	WACO 138KV	30	-0.19529	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.03598	-0.15933	70
WERE	WACO 138KV	30	-0.19529	MKEC	JUDSON LARGE 115KV	95.93536	-0.03614	-0.15915	70
WERE	GETTY 69KV	35	-0.18272	MKEC	A. M. MULLERGREIN GENERATOR 115KV	63	-0.02544	-0.15728	71
WERE	GETTY 69KV	35	-0.18272	MKEC	CIMARRON RIVER 115KV	44	-0.02642	-0.1563	71
WERE	WACO 138KV	30	-0.19529	OKGE	SOONER 138KV	535	-0.03874	-0.15655	71
WERE	GETTY 69KV	35	-0.18272	OKGE	SOONER 345KV	537	-0.02855	-0.15477	72
WERE	GETTY 69KV	35	-0.18272	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.03598	-0.14676	76
WERE	GETTY 69KV	35	-0.18272	MKEC	JUDSON LARGE 115KV	95.93536	-0.03614	-0.14658	76
WERE	GETTY 69KV	35	-0.18272	OKGE	SOONER 138KV	535	-0.03874	-0.14398	77
OKGE	SOUTH 4TH ST 69KV	42.7	-0.03238	EMDE	ELK RIVER 345KV	44.986	0.95278	-0.12517	89
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.02132	EMDE	ELK RIVER 345KV	44.986	0.95278	-0.1141	98
OKGE	SFGCK3&4 13.200 345KV	111	-0.02065	EMDE	ELK RIVER 345KV	44.986	0.95278	-0.11343	98
WERE									

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

Source	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)				
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.00814	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.10092	110
WERE	JEFFREY ENERGY CENTER 230KV	54	-0.00738	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.10016	111
WERE	JEFFREY ENERGY CENTER 345KV	108	-0.00738	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.10008	111
NPPD	KINGSLEY 13.800 115KV	47.95929	-0.00677	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09955	112
NPPD	SIDNEY 4 230.00 230KV	230.6148	-0.00642	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.0992	112
AEPW	LONESTAR POWER PLANT 69KV	50	-0.00556	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09834	113
AEPW	WILKES 138KV	52.19009	-0.00549	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09827	113
AEPW	ARSENAL HILL 138KV	337.2	-0.00477	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09755	114
NPPD	CANADY 1G 13.800 115KV	125	-0.00529	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09813	114
AEPW	COCENTRIX 345KV	671.9331	-0.00472	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.0975	114
AEPW	EASTMAN 138KV	128.2153	-0.00531	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09809	114
AEPW	KNOXLEE 138KV	176	-0.00527	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09805	114
AEPW	LEBROCK 345KV	179.8976	-0.0053	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09808	114
AEPW	LIEBERMAN 138KV	45.99999	-0.00487	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09765	114
AEPW	TULSA POWER STATION 138KV	177.1113	-0.00453	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09731	114
AEPW	TULSA POWER STATION 69KV	80	-0.00453	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09731	114
AEPW	FULTON 115KV	153	-0.00431	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09709	115
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.00381	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09659	115
NPPD	AINSWING 34.500 115KV	49.59249	-0.00359	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09637	116
NPPD	BPS 3T3G 13.800 115KV	40.00518	-0.00324	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09602	116
NPPD	BURDIC3G 13.800 115KV	54	-0.00343	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09621	116
NPPD	GT 3 G 13.800 115KV	40	-0.00343	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09621	116
NPPD	HEBRON G 13.800 115KV	52	-0.00346	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09624	116
AEPW	OEC 345KV	1756.622	-0.003	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09578	116
NPPD	SHELDONG 13.800 115KV	52	-0.00223	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09501	117
OPPD	FREM 1G 13.800 69KV	40	-0.00148	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09424	118
OPPD	JONES 1G 13.800 69KV	59.3	-0.00109	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09387	119
OPPD	JONES 2G 13.800 69KV	59.3	-0.00109	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09387	119
AEPW	MID-CONTINENT 138KV	142.11	-0.00119	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09397	119
OPPD	SARPY 1G 13.800 69KV	55.3	-0.00113	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09391	119
OPPD	SARPY 2G 13.800 69KV	55.3	-0.00115	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09393	119
OPPD	SARPY 3G 13.800 4KV	49.17342	-0.00109	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09387	119
OPPD	SARPY 4G 13.800 161KV	48.1	-0.00109	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09387	119
OPPD	SARPY 5G 13.800 161KV	48.1	-0.00109	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09387	119
AEPW	ELKIN GN 1 13.800 69KV	60	0.00206	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09272	120
AEPW	TONTOWNE 161KV	186.12	0.00011	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09267	120
KACP	IATAN 345KV	129	0.00192	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09086	123
MIPU	LAKE ROAD 161KV	91	0.00258	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.09002	124
KACP	MARSHALL 161KV	54.1	0.00248	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08885	126
KACP	HAWTHORN 161KV	245.2502	0.00523	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08748	127
KACP	KAW 69KV	242	0.00552	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08725	128
KACP	NORTHEAST 13KV	223	0.00548	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08733	128
KACP	NORTHEAST 161KV	224	0.00548	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08733	128
KACP	QUINDARO 161KV	107.5824	0.00547	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08731	128
MIPU	ARIES 161KV	576.6669	0.00558	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.0862	129
MIPU	GREENWOOD 161KV	255.8	0.00648	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.0863	129
MIPU	PALPI GREEN 69KV	73.7	0.00552	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08623	129
EMDE	LARUSSEL 161KV	171	0.00659	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08596	130
MIPU	SOUTH HARPER 161KV	247.994	0.00717	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08561	130
EMDE	STATE LINE 161KV	90	0.00733	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08545	130
EMDE	RIVERTON 161KV	182.9673	0.00771	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08507	131
KACP	BULL CREEK 161KV	246.4	0.00841	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08437	132
KACP	PAOLA 5 161.00 161KV	82.3	0.00827	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08451	132
KACP	PAOLA COMBUSTION TURBINES 161KV	76	0.00827	EMDE	ELK RIVER 345KV	44.986	0.09278	-0.08451	132
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.02132	WERE	CITY OF BURLINGTON 69KV	55.4	0.04789	-0.06921	161
OKGE	SPGCK3&4 13.200 345KV	111	-0.02065	WERE	CITY OF BURLINGTON 69KV	55.4	0.04789	-0.06854	163
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.02132	EMDE	ASBURY 161KV	192	0.00938	-0.03071	363

Maximum Decrement and Maximum Increment were determined from the Source and Sink Operating Points in the study models where limiting facility was identified.

Factor = Source GSF - Sink GSF  
Redispatch Amount = Relief Amount / Factor

Upgrade: ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3  
Limiting Facility: ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3  
Direction: FROM TO  
Line Outage: ROSE HILL (ROSEHL3X) 345/138/13.8KV TRANSFORMER CKT 1  
Flowgate: 2007AG2AFS111973210SP  
Date Redispatch Needed: Starting 2010 6/1 - 10/1 Until EOC of Upgrade  
Season Flowgate Identified: 2010 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount
1281706	3.4	11.1
1285893	1.2	11.1
1286201	6.5	11.1

  

Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20596	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.29869	37
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.29963	37
WERE	WACO 138KV	30	-0.1952	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.28794	39
WERE	GETTY 69KV	35	-0.18264	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.27538	40
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20596	WERE	CITY OF BURLINGTON 69KV	55.4	0.04787	-0.25382	44
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20596	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	0.04787	-0.25382	44
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	WERE	CITY OF BURLINGTON 69KV	55.4	0.04787	-0.25476	44
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	0.04787	-0.25476	44
WERE	WACO 138KV	30	-0.1952	WERE	CITY OF BURLINGTON 69KV	55.4	0.04787	-0.24307	46
WERE	WACO 138KV	30	-0.1952	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	0.04787	-0.24307	46
WERE	GETTY 69KV	35	-0.18264	WERE	CITY OF BURLINGTON 69KV	55.4	0.04787	-0.23051	48
WERE	GETTY 69KV	35	-0.18264	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	0.04787	-0.23051	48
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	EMDE	ASBURY 161KV	192	0.00938	-0.21628	51
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20596	MIPU	ARIES 161KV	18.33311	0.00657	-0.21252	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20596	EMDE	ASBURY 161KV	192	0.00938	-0.21534	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20596	KACP	BULL CREEK 161KV	61.8	0.0084	-0.21435	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20596	EMDE	LARUSSEL 161KV	100	0.00682	-0.21277	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20596	EMDE	RIVERTON 161KV	100.0327	0.0077	-0.21365	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20596	EMDE	RIVERTON 69KV	44.07887	0.00718	-0.21313	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20596	MIPU	SOUTH HARPER 161KV	67.00598	0.00717	-0.21312	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20596	EMDE	STATE LINE 161KV	520	0.00732	-0.21327	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MIPU	ARIES 161KV	18.33311	0.00657	-0.21346	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	KACP	BULL CREEK 161KV	61.8	0.0084	-0.21529	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	KACP	HAWTHORN 161KV	517.7498	0.00628	-0.21218	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	EMDE	LARUSSEL 161KV	100	0.00682	-0.21371	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	KACP	MONTROSE 161KV	359.7142	0.00607	-0.21296	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	KACY	NEARMAN 161KV	77	0.00544	-0.21233	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	KACY	NEARMAN 20KV	235	0.00544	-0.21233	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	KACY	QUINDARO 161KV	129.4176	0.00647	-0.21236	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	KACY	QUINDARO 69KV	136.3562	0.00548	-0.21238	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	EMDE	RIVERTON 161KV	100.0327	0.0077	-0.21459	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	EMDE	RIVERTON 69KV	44.07887	0.00718	-0.21407	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MIPU	SIBLEY 161KV	228.9597	0.00534	-0.21223	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MIPU	SIBLEY 69KV	45.99999	0.00528	-0.21218	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MIPU	SOUTH HARPER 161KV	67.00598	0.00717	-0.21406	52
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	EMDE	STATE LINE 161KV	520	0.00732	-0.21421	52
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20596	KACP	CITY OF HIGGINSVILLE 69KV	36	0.00522	-0.21177	53
WERE									

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MIPU	LAKE ROAD 161KV	35	0.00258	-0.20947	53
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MIPU	LAKE ROAD 34KV	92	0.00258	-0.20947	53
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	NORTHEASTERN STATION 345KV	625	0.00158	-0.20847	53
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	CASS 1G 15.000 345KV	42.51929	-0.00099	-0.20496	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	CASS 2G 15.000 345KV	52.99999	-0.00099	-0.20496	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	COOPER1G 22.000 345KV	551.2802	-0.00034	-0.20561	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	FLINT CREEK 161KV	428	0.0007	-0.20665	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	FREM 8G 13.800 69KV	90	-0.00146	-0.20449	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	FT CAL1G 22.000 4KV	376	-0.00107	-0.20488	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	KACP	IATAN 345KV	1806	0.00192	-0.20787	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	KACP	IATAN 345KV	371	0.00192	-0.20787	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	N OMA 1G 13.800 2KV	48	-0.00107	-0.20488	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	N OMA 2G 13.800 2KV	80.59999	-0.00105	-0.2049	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	N OMA 3G 13.800 2KV	80.59999	-0.00105	-0.2049	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	N OMA 4G 15.000 2KV	1074	-0.00105	-0.2049	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	N OMA 5G 20.000 4KV	173.9	-0.00105	-0.2049	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	NEBCTY1G 18.000 4KV	466	-0.00087	-0.20508	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	NEBCTY2G 18.000 4KV	466	-0.00087	-0.20508	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	NEBCTY2G 23.000 345KV	603	-0.00087	-0.20508	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	NORTHEASTERN STATION 345KV	529	0.00158	-0.20753	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	TONTITOWN 161KV	140	0.00011	-0.20606	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OPPD	CASS 1G 15.000 345KV	42.51929	-0.00099	-0.20509	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OPPD	CASS 2G 15.000 345KV	52.99999	-0.00099	-0.20509	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	NPPD	COL COOP17 115.00 115KV	75	-0.00206	-0.20431	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	NPPD	COOPER1G 22.000 345KV	551.2802	-0.00034	-0.20655	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	FITZHUGH 161KV	125.4	-0.00238	-0.20453	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	FLINT CREEK 161KV	428	0.0007	-0.20759	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OPPD	FREM 8G 13.800 69KV	90	-0.00146	-0.20543	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OPPD	FT CAL1G 22.000 4KV	376	-0.00107	-0.20582	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OPPD	N OMA 1G 13.800 2KV	48	-0.00107	-0.20582	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OPPD	N OMA 2G 13.800 2KV	80.59999	-0.00105	-0.20584	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OPPD	N OMA 3G 13.800 2KV	80.59999	-0.00105	-0.20584	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OPPD	N OMA 4G 15.000 2KV	1074	-0.00105	-0.20584	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OPPD	N OMA 5G 20.000 4KV	173.9	-0.00105	-0.20584	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OPPD	NEBCTY1G 18.000 4KV	466	-0.00087	-0.20602	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OPPD	NEBCTY2G 23.000 345KV	503	-0.00087	-0.20602	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00223	-0.20466	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	NPPD	SHELDN2G 13.800 115KV	81	-0.00223	-0.20466	54
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	TONTITOWN 161KV	140	0.00011	-0.207	54
WERE	WACO 138KV	30	-0.1952	EMDE	ASBURY 161KV	192	0.00938	-0.20459	54
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OPPD	AES 161KV	320	-0.00304	-0.20291	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	ARSENAL HILL 138KV	455	-0.0047	-0.20118	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	ARSENAL HILL 69KV	90	-0.00478	-0.20117	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	BPS GT1G 13.800 115KV	80	-0.00324	-0.20271	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	BPS GT2G 13.800 115KV	45.19951	-0.00324	-0.20271	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	BPS ST3G 13.800 115KV	49.99482	-0.00324	-0.20271	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	COGENTRIX 345KV	222.0669	-0.00472	-0.20123	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	COL COG17 115.00 115KV	75	-0.00206	-0.20387	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	DENVER G 34.500 115KV	34.32393	-0.00333	-0.20263	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	EGY CTRG 13.800 115KV	54	-0.00323	-0.20266	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	FITZHUGH 161KV	125.4	-0.00238	-0.20359	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	GT-2 G 13.800 115KV	40	-0.00343	-0.20252	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	KNOXLEE 138KV	225	-0.00526	-0.20069	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	WERE	LAWRENCE ENERGY CENTER 230KV	223.9294	-0.00381	-0.20214	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	LEBRACK 345KV	517.1024	-0.00526	-0.20068	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	LIEBERMAN 138KV	174	-0.00487	-0.20108	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OKGE	MUSKOGEE 161KV	166	-0.0038	-0.20205	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OKGE	MUSKOGEE 345KV	1548	-0.00447	-0.20148	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	NORTHEASTERN STATION 138KV	480	-0.00372	-0.20223	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	OEC 345KV	390.4081	-0.00299	-0.20296	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	PIRKEY GENERATION 138KV	288	-0.00528	-0.20067	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	PLATTE1G 13.800 115KV	71.51885	-0.0038	-0.20245	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00223	-0.20372	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	SHELDN2G 13.800 115KV	81	-0.00223	-0.20372	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	TULSA POWER STATION 138KV	129.8887	-0.00453	-0.20142	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	AES 161KV	320	-0.00304	-0.20385	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	ARSENAL HILL 138KV	455	-0.0047	-0.20123	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	ARSENAL HILL 69KV	90	-0.00478	-0.20121	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	NPPD	BPS GT1G 13.800 115KV	80	-0.00324	-0.20365	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	NPPD	BPS GT2G 13.800 115KV	45.19951	-0.00324	-0.20365	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	NPPD	BPS ST3G 13.800 115KV	49.99482	-0.00324	-0.20365	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	COGENTRIX 345KV	222.0669	-0.00472	-0.20217	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	NPPD	DENVER G 34.500 115KV	34.32393	-0.00333	-0.20387	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	EASTMAN 138KV	356.794	-0.00523	-0.20158	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	NPPD	EGY CTRG 13.800 115KV	54	-0.00323	-0.2036	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	NPPD	GT-2 G 13.800 115KV	40	-0.00343	-0.20346	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	KNOXLEE 138KV	225	-0.00526	-0.20163	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	WERE	LAWRENCE ENERGY CENTER 230KV	223.9294	-0.00381	-0.20308	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	LEBRACK 345KV	517.1024	-0.00526	-0.20108	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	LIEBERMAN 138KV	174	-0.00487	-0.20108	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	MUSKOGEE 161KV	166	-0.0038	-0.20299	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	MUSKOGEE 345KV	1548	-0.00447	-0.20242	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	NORTHEASTERN STATION 138KV	480	-0.00372	-0.20317	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	OEC 345KV	390.4081	-0.00299	-0.2039	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	PIRKEY GENERATION 138KV	288	-0.00528	-0.20161	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	NPPD	PLATTE1G 13.800 115KV	71.51885	-0.0038	-0.20338	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	TULSA POWER STATION 138KV	129.8887	-0.00453	-0.20236	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	WELSH 345KV	1044	-0.00593	-0.20096	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	WILKES 138KV	410.8098	-0.00549	-0.2014	55
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	WILKES 345KV	308	-0.0054	-0.20149	55
WERE	WACO 138KV	30	-0.1952	KACP	BULL CREEK 161KV	61.6	0.0084	-0.20236	55
WERE	WACO 138KV	30	-0.1952	EMDE	LARUSSEL 161KV	100	0.00868	-0.20202	55
WERE	WACO 138KV	30	-0.1952	KACP	MONTROSE 161KV	359.7142	0.00607	-0.20127	55
WERE	WACO 138KV	30	-0.1952	KACP	QUINDARO 161KV	129.4176	0.00547	-0.20067	55
WERE	WACO 138KV	30	-0.1952	KACY	QUINDARO 69KV	136.3562	0.00548	-0.20069	55
WERE	WACO 138KV	30	-0.1952	EMDE	RIVERTON 161KV	100.0327	0.0077	-0.2029	55
WERE	WACO 138KV	30	-0.1952	EMDE	RIVERTON 69KV	44.0787	0.00718	-0.20238	55
WERE	WACO 138KV	30	-0.1952	MIPU	SOUTH HARRIER 161KV	67.00598	0.00717	-0.20237	55
WERE	WACO 138KV	30	-0.1952	EMDE	STATE LINE 161KV	520	0.00733	-0.20252	55
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	EASTMAN 138KV	356.794	-0.00531	-0.20064	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	GENTLM1G 23.000 230KV	463	-0.00664	-0.19931	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	GENTLM2G 24.000 345KV	443.3608	-0.00684	-0.19911	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00738	-0.19857	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.0073	-0.19865	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	NPPD	SIDNEY 4 230.00 230KV	19.3852	-0.00842	-0.19853	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	WERE	TECUMSEH ENERGY CENTER 115KV	133	-0.00837	-0.19758	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	WELSH 345KV	1044	-0.00593	-0.20002	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	WILKES 138KV	410.8098	-0.00549	-0.20046	56
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	AEPW	WILKES 345KV	308	-0.0054	-0.20055	56
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	WERE	EMPORIA ENERGY CENTER 345KV	610	-0.00945	-0.19744	56
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	NPPD	GENTLM1G 23.000 230KV	463	-0.00664	-0.20025	56
WERE	GILL								

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	EMDE	MIRWYG11 34.500 230KV	100	-0.01007	-0.19588	57
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	WERE	CHANUTE 69KV	54.8	-0.01164	-0.19525	57
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MKEC	CLIFTON 115KV	65	-0.00985	-0.19704	57
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	EMDE	MRWYG11 34.500 230KV	100	-0.01007	-0.19682	57
WERE	WACO 138KV	30	-0.1952	OPPD	CASS 1G 15.000 345KV	42.51929	-0.00099	-0.19421	57
WERE	WACO 138KV	30	-0.1952	OPPD	CASS 2G 15.000 345KV	52.99999	-0.00099	-0.19421	57
WERE	WACO 138KV	30	-0.1952	NPPD	COOPER1G 22.000 345KV	551.2802	-0.00034	-0.19486	57
WERE	WACO 138KV	30	-0.1952	AEPW	FLINT CREEK 161KV	428	0.0007	-0.1959	57
WERE	WACO 138KV	30	-0.1952	OPPD	FREM 8G 13.800 69KV	90	-0.00146	-0.19374	57
WERE	WACO 138KV	30	-0.1952	OPPD	FT CAL1G 22.000 4KV	376	-0.00107	-0.19433	57
WERE	WACO 138KV	30	-0.1952	OPPD	N OMA 1G 13.800 2KV	46.5	-0.00107	-0.19413	57
WERE	WACO 138KV	30	-0.1952	OPPD	N OMA 2G 13.800 2KV	80.59999	-0.00105	-0.19415	57
WERE	WACO 138KV	30	-0.1952	OPPD	N OMA 3G 13.800 2KV	80.59999	-0.00105	-0.19415	57
WERE	WACO 138KV	30	-0.1952	OPPD	N OMA 4G 15.000 2KV	107.4	-0.00105	-0.19415	57
WERE	WACO 138KV	30	-0.1952	OPPD	N OMA 5G 20.000 4KV	173.3	-0.00105	-0.19415	57
WERE	WACO 138KV	30	-0.1952	OPPD	NEBCTY1G 18.000 4KV	466	-0.00087	-0.19433	57
WERE	WACO 138KV	30	-0.1952	OPPD	NEBCTY2G 23.000 345KV	503	-0.00087	-0.19433	57
WERE	WACO 138KV	30	-0.1952	AEPW	NORTHEASTERN STATION 345KV	629	0.00158	-0.19678	57
WERE	WACO 138KV	30	-0.1952	AEPW	TONTTOWN 161KV	140	0.00011	-0.19531	57
WERE	GETTY 69KV	35	-0.18264	EMDE	ASBURY 161KV	192	0.00938	-0.19203	58
WERE	GETTY 69KV	35	-0.18264	KACP	BULL CREEK 161KV	61	0.0084	-0.19104	58
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	OKGE	SEMINOLE 138KV	334.858	-0.01554	-0.19041	58
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	SEMINOLE 138KV	334.858	-0.01554	-0.19135	58
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	SEMINOLE 345KV	1019	-0.01585	-0.19104	58
WERE	WACO 138KV	30	-0.1952	OKGE	AES 161KV	320	-0.00304	-0.19216	58
WERE	WACO 138KV	30	-0.1952	AEPW	ARSENAL HILL 138KV	455	-0.00477	-0.19043	58
WERE	WACO 138KV	30	-0.1952	AEPW	ARSENAL HILL 69KV	90	-0.00478	-0.19042	58
WERE	WACO 138KV	30	-0.1952	NPPD	BPS 1G 13.800 115KV	60	-0.00324	-0.19196	58
WERE	WACO 138KV	30	-0.1952	NPPD	BPS 2G 13.800 115KV	45.19951	-0.00324	-0.19196	58
WERE	WACO 138KV	30	-0.1952	NPPD	BPS 3G 13.800 115KV	49.94842	-0.00324	-0.19196	58
WERE	WACO 138KV	30	-0.1952	AEPW	COGENTRIX 345KV	222.0669	-0.00472	-0.19048	58
WERE	WACO 138KV	30	-0.1952	NPPD	COL COG7 115.00 115KV	75	-0.00208	-0.19312	58
WERE	WACO 138KV	30	-0.1952	NPPD	DENVER G 34.500 115KV	34.32393	-0.00332	-0.19188	58
WERE	WACO 138KV	30	-0.1952	NPPD	EGY CTRG 13.800 115KV	54	-0.00328	-0.19191	58
WERE	WACO 138KV	30	-0.1952	AEPW	FITZLUIGH 161KV	125.4	-0.00234	-0.19284	58
WERE	WACO 138KV	30	-0.1952	NPPD	GT-2 G 13.800 115KV	40	-0.00343	-0.19177	58
WERE	WACO 138KV	30	-0.1952	WERE	LAWRENCE ENERGY CENTER 230KV	223.9294	-0.00381	-0.19139	58
WERE	WACO 138KV	30	-0.1952	OKGE	MUSKOGEE 161KV	166	-0.0039	-0.1913	58
WERE	WACO 138KV	30	-0.1952	OKGE	MUSKOGEE 345KV	1548	-0.00447	-0.19073	58
WERE	WACO 138KV	30	-0.1952	AEPW	NORTHEASTERN STATION 138KV	480	-0.00372	-0.19148	58
WERE	WACO 138KV	30	-0.1952	AEPW	OEO 345KV	390.4081	-0.00298	-0.19221	58
WERE	WACO 138KV	30	-0.1952	NPPD	PLATTE1G 13.800 115KV	71.51888	-0.0035	-0.1917	58
WERE	WACO 138KV	30	-0.1952	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00223	-0.19297	58
WERE	WACO 138KV	30	-0.1952	NPPD	SHELDN2G 13.800 115KV	81	-0.00223	-0.19297	58
WERE	WACO 138KV	30	-0.1952	AEPW	TULSA POWER STATION 138KV	129.8887	-0.00453	-0.19067	58
WERE	GETTY 69KV	35	-0.18264	KACP	CITY OF HIGGINSVILLE 69KV	36	0.00522	-0.18786	59
WERE	GETTY 69KV	35	-0.18264	KACP	HAWTHORN 161KV	517.7498	0.00528	-0.18793	59
WERE	GETTY 69KV	35	-0.18264	EMDE	LARUSSEL 161KV	100	0.00685	-0.18946	59
WERE	GETTY 69KV	35	-0.18264	KACP	MONTROSE 161KV	359.7142	0.00607	-0.18871	59
WERE	GETTY 69KV	35	-0.18264	KACY	NEARMAN 161KV	77	0.00544	-0.18808	59
WERE	GETTY 69KV	35	-0.18264	KACY	NEARMAN 20KV	235	0.00544	-0.18808	59
WERE	GETTY 69KV	35	-0.18264	KACY	QUINDARO 161KV	129.4176	0.00547	-0.18811	59
WERE	GETTY 69KV	35	-0.18264	KACY	QUINDARO 69KV	136.2562	0.00549	-0.18813	59
WERE	GETTY 69KV	35	-0.18264	EMDE	RIVERTON 161KV	100.0321	-0.00397	-0.19034	59
WERE	GETTY 69KV	35	-0.18264	EMDE	RIVERTON 69KV	44.07887	0.00718	-0.18982	59
WERE	GETTY 69KV	35	-0.18264	MIPU	SIBLEY 161KV	228.9597	0.00534	-0.18798	59
WERE	GETTY 69KV	35	-0.18264	MIPU	SIBLEY 69KV	45.99999	0.00528	-0.18793	59
WERE	GETTY 69KV	35	-0.18264	MIPU	SOUTH HARPER 161KV	67.00098	0.00717	-0.18981	59
WERE	GETTY 69KV	35	-0.18264	EMDE	STATE LINE 161KV	520	0.00732	-0.18996	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	OKGE	COMANCHE 138KV	145	-0.01724	-0.18863	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	AEPW	COMANCHE 69KV	60	-0.01724	-0.18871	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	HORSESHOE LAKE 138KV	796	-0.01698	-0.18897	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	OKGE	MCCLAINE 138KV	470	-0.01776	-0.18819	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	OKGE	MUSTANG 138KV	351	-0.01831	-0.18764	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	OKGE	MUSTANG 69KV	51.72168	-0.01835	-0.1876	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	OKGE	REDBLD 345KV	43.60058	-0.01851	-0.18942	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	OKGE	SEMINOLE 345KV	1019	-0.01585	-0.1901	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	OKGE	SMITH COGEN 138KV	106	-0.01818	-0.18777	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	MIDW	SMOKEY HILLS 34KV	25	-0.01795	-0.188	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	AEPW	SOUTHWESTERN STATION 138KV	712	-0.01738	-0.18856	59
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	AEPW	SOUTHWESTERN STATION 138KV	287	-0.01738	-0.18856	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	WERE	CNTRL P2 34.500 115KV	99	-0.01898	-0.18793	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	COMANCHE 138KV	145	-0.01724	-0.18957	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	COMANCHE 69KV	60	-0.01724	-0.18965	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	HORSESHOE LAKE 138KV	796	-0.01698	-0.18991	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	MCCLAINE 138KV	470	-0.01776	-0.18913	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	MUSTANG 138KV	351	-0.01831	-0.18868	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	MUSTANG 69KV	51.72168	-0.01835	-0.18854	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	REDBLD 345KV	43.60058	-0.01851	-0.18942	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	SMITH COGEN 138KV	106	-0.01818	-0.18871	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MIDW	SMOKEY HILLS 34KV	25	-0.01795	-0.18894	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	SOUTHWESTERN STATION 138KV	287	-0.01738	-0.1895	59
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	AEPW	SOUTHWESTERN STATION 138KV	712	-0.01738	-0.1895	59
WERE	WACO 138KV	30	-0.1952	AEPW	EASTMAN 138KV	356.7947	-0.00531	-0.19899	59
WERE	WACO 138KV	30	-0.1952	NPPD	GENTL1G 23.000 230KV	463	-0.00664	-0.1885	59
WERE	WACO 138KV	30	-0.1952	NPPD	GENTL2G 24.000 345KV	443.3696	-0.00684	-0.18836	59
WERE	WACO 138KV	30	-0.1952	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00738	-0.18782	59
WERE	WACO 138KV	30	-0.1952	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.00703	-0.1879	59
WERE	WACO 138KV	30	-0.1952	AEPW	KNOXLEE 138KV	228	-0.00528	-0.18994	59
WERE	WACO 138KV	30	-0.1952	AEPW	LEBROCK 345KV	517.1024	-0.00528	-0.18991	59
WERE	WACO 138KV	30	-0.1952	AEPW	LEBERMAN 138KV	174	-0.00461	-0.19033	59
WERE	WACO 138KV	30	-0.1952	AEPW	PIRKEY GENERATION 138KV	288	-0.00528	-0.18992	59
WERE	WACO 138KV	30	-0.1952	AEPW	WELSH 345KV	1044	-0.00693	-0.18927	59
WERE	WACO 138KV	30	-0.1952	AEPW	WILKES 138KV	410.8098	-0.00543	-0.18971	59
WERE	WACO 138KV	30	-0.1952	AEPW	WILKES 345KV	308	-0.0054	-0.1898	59
WERE	GETTY 69KV	35	-0.18264	KACP	IATAN 345KV	1806	0.00192	-0.18456	60
WERE	GETTY 69KV	35	-0.18264	KACP	IATAN 345KV	371	0.00192	-0.18456	60
WERE	GETTY 69KV	35	-0.18264	MIPU	LAKE ROAD 161KV	35	0.00258	-0.18522	60
WERE	GETTY 69KV	35	-0.18264	MIPU	LAKE ROAD 34KV	92	0.00258	-0.18522	60
WERE	GETTY 69KV	35	-0.18264	AEPW	NORTHEASTERN STATION 345KV	629	0.00158	-0.18422	60
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	OKGE	CENTENIAL WIND 34KV	120	-0.02177	-0.18418	60
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	WERE	CNTRL P2 34.500 115KV	99	-0.01898	-0.18699	60
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	WERE	HUTCHINSON ENERGY CENTER 115KV	230	-0.02132	-0.18463	60
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20598	MIDW	KNOLL 115KV	75.60001	-0.02028	-0.18567	60
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	SPGCK1&2 13.200 345KV	79	-0.02064	-0.18531	60
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	CENTENIAL WIND 34KV	120	-0.02177	-0.18512	60
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	WERE	HUTCHINSON ENERGY CENTER 115KV	230	-0.02132	-0.18557	60
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MIDW	KNOLL 115KV	75.60001	-0.02028	-0.18661	60
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	SPGCK1&2 13.200 345KV	79	-0.02064	-0.18625	60
WERE	WACO 138KV	30	-0.1952	MKEC	CLIFTON 115KV	65	-0.00985	-0.18535	61
WERE	WACO 138KV	30	-0.1952	WERE	EMPORIA ENERGY CENTER 345KV	610	-0.00943	-0.18575	61
WERE	WACO 138KV	30	-0.1952	EMDE	MRWYG11 34.500 230KV	100	-0.01007	-0.18513	61
WERE	WACO 138KV	30	-0.1952	WERE	TECUMSEH ENERGY CENTER 115KV	133	-0.00837	-0.18683	61
WERE	GETTY 69KV	35	-0.18264	OPPD	CASS 1G 15.000 345KV	42.51929	-0.00099	-0.18165	61
WERE	GETTY 69KV	35	-0.18264	OPPD	CASS 2G 15.000 345KV	52.99999	-0.00099	-0.18165	61
WERE	GETTY 69KV	35	-0.18264	NPPD	COOPER1G 22.000 34				

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MKEC	A. M. MULLERGREN GENERATOR 115KV	63	-0.02543	-0.18146	61
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	FPLWIND2 34KV	59	-0.02284	-0.18405	61
WERE	WACO 138KV	30	-0.1952	WERE	CHANUTE 69KV	54	-0.01164	-0.13356	61
WERE	GETTY 69KV	35	-0.18264	OKGE	AES 161KV	320	-0.00304	-0.1796	62
WERE	GETTY 69KV	35	-0.18264	NPPD	BPS GT1G 13.800 115KV	80	-0.00324	-0.1794	62
WERE	GETTY 69KV	35	-0.18264	NPPD	BPS GT2G 13.800 115KV	45.19951	-0.00324	-0.1794	62
WERE	GETTY 69KV	35	-0.18264	NPPD	BPS ST3G 13.800 115KV	49.99482	-0.00324	-0.1794	62
WERE	GETTY 69KV	35	-0.18264	NPPD	COL_COG7 115.00 115KV	75	-0.00208	-0.18056	62
WERE	GETTY 69KV	35	-0.18264	NPPD	DENVER G 34.500 115KV	34.32393	-0.00332	-0.17932	62
WERE	GETTY 69KV	35	-0.18264	NPPD	EGY CTRG 13.800 115KV	54	-0.00328	-0.17935	62
WERE	GETTY 69KV	35	-0.18264	AEPW	FITZHUGH 161KV	125.4	-0.00238	-0.18028	62
WERE	GETTY 69KV	35	-0.18264	NPPD	GT-2 G 13.800 115KV	40	-0.00343	-0.17921	62
WERE	GETTY 69KV	35	-0.18264	WERE	LAWRENCE ENERGY CENTER 230KV	223.9294	-0.00381	-0.17883	62
WERE	GETTY 69KV	35	-0.18264	OKGE	MUSKOGEE 161KV	166	-0.0038	-0.17874	62
WERE	GETTY 69KV	35	-0.18264	AEPW	NORTHEASTERN STATION 138KV	483	-0.00372	-0.17892	62
WERE	GETTY 69KV	35	-0.18264	AEPW	OCEN 345KV	390.4401	-0.0029	-0.17965	62
WERE	GETTY 69KV	35	-0.18264	NPPD	PLATTE1G 13.800 115KV	71.61868	-0.0036	-0.17914	62
WERE	GETTY 69KV	35	-0.18264	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00223	-0.18041	62
WERE	GETTY 69KV	35	-0.18264	NPPD	SHELDN2G 13.800 115KV	81	-0.00223	-0.18041	62
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	MKEC	A. M. MULLERGREN GENERATOR 115KV	63	-0.02543	-0.18052	62
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	MKEC	CIMARRON RIVER 115KV	44	-0.0264	-0.17955	62
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MKEC	CIMARRON RIVER 115KV	44	-0.0264	-0.18049	62
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	SOONER 345KV	537	-0.02854	-0.17835	62
WERE	WACO 138KV	30	-0.1952	OKGE	HORSESHOE LAKE 138KV	796	-0.01698	-0.17822	62
WERE	WACO 138KV	30	-0.1952	OKGE	REDBUD 345KV	43.60958	-0.01653	-0.17867	62
WERE	WACO 138KV	30	-0.1952	OKGE	SEMINOLE 138KV	334.858	-0.01554	-0.17966	62
WERE	WACO 138KV	30	-0.1952	OKGE	SEMINOLE 345KV	1019	-0.01585	-0.17935	62
WERE	GETTY 69KV	35	-0.18264	AEPW	ARSENAL HILL 138KV	455	-0.00477	-0.17787	63
WERE	GETTY 69KV	35	-0.18264	AEPW	ARSENAL HILL 69KV	90	-0.00478	-0.17786	63
WERE	GETTY 69KV	35	-0.18264	AEPW	COGENTRIX 345KV	222.0668	-0.00472	-0.17792	63
WERE	GETTY 69KV	35	-0.18264	AEPW	EASTMAN 138KV	356.7947	-0.00531	-0.17733	63
WERE	GETTY 69KV	35	-0.18264	NPPD	GENTLM1G 23.000 230KV	463	-0.00664	-0.176	63
WERE	GETTY 69KV	35	-0.18264	NPPD	GENTLM2G 24.000 345KV	443.3698	-0.00684	-0.1758	63
WERE	GETTY 69KV	35	-0.18264	AEPW	KNOXLEE 138KV	225	-0.00528	-0.17738	63
WERE	GETTY 69KV	35	-0.18264	AEPW	LEBROCK 345KV	517.1024	-0.00528	-0.17735	63
WERE	GETTY 69KV	35	-0.18264	AEPW	LIEBERMAN 138KV	174	-0.00487	-0.17777	63
WERE	GETTY 69KV	35	-0.18264	OKGE	MUSKOGEE 345KV	158	-0.00447	-0.17817	63
WERE	GETTY 69KV	35	-0.18264	AEPW	PIRRE GENERATION 138KV	2248	-0.00528	-0.17738	63
WERE	GETTY 69KV	35	-0.18264	AEPW	TULSA POWER STATION 138KV	129.8887	-0.00453	-0.17811	63
WERE	GETTY 69KV	35	-0.18264	AEPW	WELSH 345KV	1044	-0.00593	-0.17671	63
WERE	GETTY 69KV	35	-0.18264	AEPW	WILKES 138KV	410.8099	-0.00548	-0.17715	63
WERE	GETTY 69KV	35	-0.18264	AEPW	WILKES 345KV	308	-0.0054	-0.17724	63
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OKGE	SOONER 345KV	537	-0.02854	-0.17741	63
WERE	WACO 138KV	30	-0.1952	WERE	CNTRLPL2 34.500 115KV	99	-0.01898	-0.17624	63
WERE	WACO 138KV	30	-0.1952	OKGE	COMANCHE 138KV	145	-0.01732	-0.17768	63
WERE	WACO 138KV	30	-0.1952	OKGE	COMANCHE 69KV	60	-0.01724	-0.17786	63
WERE	WACO 138KV	30	-0.1952	OKGE	MCLAIN 138KV	470	-0.01776	-0.17744	63
WERE	WACO 138KV	30	-0.1952	OKGE	MUSTANG 138KV	351	-0.01831	-0.17689	63
WERE	WACO 138KV	30	-0.1952	OKGE	MUSTANG 69KV	51.72168	-0.01835	-0.17685	63
WERE	WACO 138KV	30	-0.1952	OKGE	SMITH COGEN 138KV	106	-0.01818	-0.17702	63
WERE	WACO 138KV	30	-0.1952	MIDW	SMOKEY HILLS 34KV	25	-0.01798	-0.17725	63
WERE	WACO 138KV	30	-0.1952	OKGE	SOUTHWESTERN STATION 138KV	712	-0.01738	-0.17781	63
WERE	WACO 138KV	30	-0.1952	AEPW	SOUTHWESTERN STATION 138KV	287	-0.01738	-0.17781	63
WERE	GETTY 69KV	35	-0.18264	MKEC	CLIFTON 115KV	65	-0.00988	-0.17279	64
WERE	GETTY 69KV	35	-0.18264	WERE	EMPORIA ENERGY CENTER 345KV	610	-0.00945	-0.17319	64
WERE	GETTY 69KV	35	-0.18264	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00738	-0.17526	64
WERE	GETTY 69KV	35	-0.18264	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.0073	-0.17534	64
WERE	GETTY 69KV	35	-0.18264	WERE	TEJUNSEH ENERGY CENTER 115KV	133	-0.00837	-0.17427	64
WERE	WACO 138KV	30	-0.1952	OKGE	CENTENIAL WIND 34KV	120	-0.02177	-0.17343	64
WERE	WACO 138KV	30	-0.1952	WERE	HUTCHINSON ENERGY CENTER 115KV	230	-0.02132	-0.17388	64
WERE	WACO 138KV	30	-0.1952	MIDW	KNOLL 115KV	75.60001	-0.02028	-0.17492	64
WERE	WACO 138KV	30	-0.1952	OKGE	SPGCK1&2 13.200 345KV	78	-0.02064	-0.17456	64
WERE	GETTY 69KV	35	-0.18264	WERE	CHANUTE 69KV	54.8	-0.01164	-0.1371	65
WERE	GETTY 69KV	35	-0.18264	EMDE	IRVING 34.500 230KV	100	-0.01001	-0.17257	65
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.03594	-0.17095	65
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	MKEC	JUDSON LARGE 115KV	95.93536	-0.03612	-0.17077	65
WERE	WACO 138KV	30	-0.1952	OKGE	FPLWIND2 34KV	59	-0.02284	-0.17326	65
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.03594	-0.17001	66
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	MKEC	JUDSON LARGE 115KV	95.93536	-0.03612	-0.16983	66
WERE	GILL ENERGY CENTER 69KV	48	-0.20689	OKGE	SOONER 138KV	535	-0.03872	-0.16817	66
WERE	WACO 138KV	30	-0.1952	MKEC	A. M. MULLERGREN GENERATOR 115KV	63	-0.02543	-0.16977	66
WERE	WACO 138KV	30	-0.1952	MKEC	CIMARRON RIVER 115KV	44	-0.0264	-0.1688	66
WERE	GETTY 69KV	35	-0.18264	AEPW	COMANCHE 138KV	145	-0.01732	-0.16532	67
WERE	GETTY 69KV	35	-0.18264	AEPW	COMANCHE 69KV	60	-0.01724	-0.1654	67
WERE	GETTY 69KV	35	-0.18264	OKGE	HORSESHOE LAKE 138KV	796	-0.01698	-0.16566	67
WERE	GETTY 69KV	35	-0.18264	OKGE	REDBUD 345KV	43.60958	-0.01653	-0.16611	67
WERE	GETTY 69KV	35	-0.18264	OKGE	SEMINOLE 138KV	334.858	-0.01554	-0.1671	67
WERE	GETTY 69KV	35	-0.18264	OKGE	SEMINOLE 345KV	1019	-0.01585	-0.16679	67
WERE	GETTY 69KV	35	-0.18264	AEPW	SOUTHWESTERN STATION 138KV	287	-0.01738	-0.16525	67
WERE	GETTY 69KV	35	-0.18264	AEPW	SOUTHWESTERN STATION 138KV	712	-0.01738	-0.16525	67
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.20595	OKGE	SOONER 138KV	535	-0.03872	-0.16723	67
WERE	WACO 138KV	30	-0.1952	OKGE	SOONER 345KV	537	-0.02854	-0.16668	67
WERE	GETTY 69KV	35	-0.18264	WERE	CNTRLPL2 34.500 115KV	99	-0.01898	-0.16336	68
WERE	GETTY 69KV	35	-0.18264	OKGE	MCLAIN 138KV	470	-0.01776	-0.16488	68
WERE	GETTY 69KV	35	-0.18264	OKGE	MUSTANG 138KV	351	-0.01831	-0.16433	68
WERE	GETTY 69KV	35	-0.18264	OKGE	MUSTANG 69KV	51.72168	-0.01835	-0.16429	68
WERE	GETTY 69KV	35	-0.18264	OKGE	SMITH COGEN 138KV	106	-0.01818	-0.16446	68
WERE	GETTY 69KV	35	-0.18264	MIDW	SMOKEY HILLS 34KV	25	-0.01798	-0.16469	68
WERE	GETTY 69KV	35	-0.18264	OKGE	CENTENIAL WIND 34KV	120	-0.02177	-0.16087	68
WERE	GETTY 69KV	35	-0.18264	WERE	HUTCHINSON ENERGY CENTER 115KV	230	-0.02132	-0.16132	69
WERE	GETTY 69KV	35	-0.18264	MIDW	KNOLL 115KV	75.60001	-0.02028	-0.16236	69
WERE	GETTY 69KV	35	-0.18264	OKGE	SPGCK1&2 13.200 345KV	78	-0.02064	-0.162	69
WERE	GETTY 69KV	35	-0.18264	OKGE	FPLWIND2 34KV	59	-0.02284	-0.1598	70
WERE	WACO 138KV	30	-0.1952	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.03594	-0.15926	70
WERE	WACO 138KV	30	-0.1952	MKEC	JUDSON LARGE 115KV	95.93536	-0.03612	-0.15908	70
WERE	GETTY 69KV	35	-0.18264	MKEC	A. M. MULLERGREN GENERATOR 115KV	63	-0.02543	-0.15721	71
WERE	GETTY 69KV	35	-0.18264	MKEC	CIMARRON RIVER 115KV	44	-0.0264	-0.15624	71
WERE	WACO 138KV	30	-0.1952	OKGE	SOONER 138KV	535	-0.03872	-0.15648	71
WERE	GETTY 69KV	35	-0.18264	OKGE	SOONER 345KV	537	-0.02854	-0.1541	72
WERE	GETTY 69KV	35	-0.18264	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.03594	-0.1467	76
WERE	GETTY 69KV	35	-0.18264	MKEC	JUDSON LARGE 115KV	95.93536	-0.03612	-0.14652	76
WERE	GETTY 69KV	35	-0.18264	OKGE	SOONER 138KV	535	-0.03872	-0.14392	77
OKGE	SOUTH 4TH ST 69KV	42.7	-0.03237	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.12511	89
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.02132	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.11406	98
OKGE	SFGCK3&4 13.200 345KV	111	-0.02064	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.11338	98
WERE	BRAVO CITY OF MCPHERSON 115KV	232	-0.01826	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.11174	101
OKGE	MUSTANG 69KV	54.27831	-0.01833	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.11109	100
OKGE	HORSESHOE LAKE 138KV	64	-0.01698	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.10972	101
OKGE	MCLAIN 138KV	50	-0.01776	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.1105	101
MIDW	SMOKEY HILLS 34KV	75	-0.01798	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.11069	101
AEPW	SOUTHWESTERN STATION 138KV	152	-0.01738	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.11013	101
AEPW	SOUTHWESTERN STATION 138KV	359	-0.01738	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.11013	101
OKGE	TINKER SG 138KV	62	-0.01708	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.10982	101
MIDW	COLBY 115KV	36.41598	-0.01648	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.10922	102
OKGE	REDBUD 345KV	1156.39	-0.01653	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.10927	102
OKGE	SEMINOLE 138KV	200.142	-0.01554	EMDE	ELK RIVER 345KV	44.986	0.9274	-0.10828	103
WERE	ABLENE ENERGY CENTER 115KV	66	-0.01324	EMDE	ELK RIVER 345KV	44.986	0.9274	-	

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

Source	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)				
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.00814	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.10088	110
WERE	JEFFREY ENERGY CENTER 230KV	54	-0.00738	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.10012	111
WERE	JEFFREY ENERGY CENTER 345KV	108	-0.00738	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.10004	111
NPPD	KINGSLEY 13.800 115KV	47.95929	-0.00677	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09951	112
NPPD	SIDNEY 4 230.00 230KV	230.6148	-0.00642	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09916	112
AEPW	LONESTAR POWER PLANT 69KV	50	-0.00558	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09829	113
AEPW	WILKES 138KV	52.19009	-0.00549	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09823	113
AEPW	ARSENAL HILL 138KV	337.2	-0.00477	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09751	114
NPPD	CANADY 1G 13.800 115KV	125	-0.00534	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09808	114
AEPW	COGENTRIX 345KV	671.9331	-0.00472	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09746	114
AEPW	EASTMAN 138KV	128.2153	-0.00531	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09605	114
AEPW	KNOXLEE 138KV	176	-0.00526	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.096	114
AEPW	LEBROCK 345KV	179.8976	-0.00529	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09603	114
AEPW	LIEBERMAN 138KV	45.99999	-0.00487	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09761	114
AEPW	TULSA POWER STATION 138KV	177.1113	-0.00453	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09727	114
AEPW	TULSA POWER STATION 69KV	80	-0.00453	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09727	114
AEPW	FULTON 115KV	153	-0.00431	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09705	115
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.00381	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09655	115
NPPD	AINSWING 34.500 115KV	49.59249	-0.00358	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09632	116
NPPD	BPS ST3G 13.800 115KV	40.00518	-0.00324	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09598	116
NPPD	BURDICK 13.800 115KV	54	-0.00343	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09617	116
NPPD	GT 3 G 13.800 115KV	40	-0.00343	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09617	116
NPPD	HEBRON G 13.800 115KV	52	-0.00346	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.0962	116
AEPW	OEC 345KV	1756.622	-0.00298	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09573	116
NPPD	SHELDONG 13.800 115KV	52	-0.00223	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09497	117
OPPD	FREM 1G 13.800 69KV	40	-0.00148	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09419	118
OPPD	JONES 1G 13.800 69KV	59.3	-0.00109	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09383	119
OPPD	JONES 2G 13.800 69KV	59.3	-0.00109	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09383	119
AEPW	MID-CONTINENT 138KV	142.11	-0.00118	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09393	119
OPPD	SARPY 1G 13.800 69KV	55.3	-0.00113	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09387	119
OPPD	SARPY 2G 13.800 69KV	55.3	-0.00115	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09389	119
OPPD	SARPY 3G 13.800 4KV	49.17342	-0.00109	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09383	119
OPPD	SARPY 4G 13.800 161KV	48.1	-0.00109	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09383	119
OPPD	SARPY 5G 13.800 161KV	48.1	-0.00109	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09383	119
AEPW	ELKIN GN 1 13.800 69KV	60	0.00006	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09268	120
AEPW	TONTITOWN 161KV	186.12	0.00011	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09263	120
KACP	IATAN 345KV	129	0.00192	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09082	123
MIPU	LAKE ROAD 161KV	91	0.00258	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.09016	124
KACP	MARSHALL 161KV	54.1	0.00248	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08846	126
KACP	HAWTHORN 161KV	245.2502	0.00258	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08745	127
KACP	KAW 69KV	242	0.00252	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08722	128
KACP	NORTHEAST 13KV	223	0.00544	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.0873	128
KACP	NORTHEAST 161KV	224	0.00544	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.0873	128
KACP	QUINDARO 161KV	107.5824	0.00547	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08727	128
MIPU	ARIES 161KV	576.6669	0.00557	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08617	129
MIPU	GREENWOOD 161KV	255.8	0.00648	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08626	129
MIPU	RALPH GREEN 69KV	73.7	0.00652	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08619	129
EMDE	LARUSSEL 161KV	171	0.00652	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08592	130
MIPU	SOUTH HARPER 161KV	247.994	0.00717	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08557	130
EMDE	STATE LINE 161KV	90	0.00732	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08542	130
EMDE	RIVERTON 161KV	182.9673	0.0077	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08504	131
KACP	BULL CREEK 161KV	246.4	0.0084	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08434	132
KACP	PAOLA 5 161.00 161KV	82.3	0.00827	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08447	132
KACP	PAOLA COMBUSTION TURBINES 161KV	76	0.00827	EMDE	ELK RIVER 345KV	44.986	0.09274	-0.08447	132
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.02132	WERE	CITY OF BURLINGTON 69KV	55.4	0.04787	-0.06919	161
OKGE	SPGCK3&4 13.200 345KV	111	-0.02064	WERE	CITY OF BURLINGTON 69KV	55.4	0.04787	-0.06851	163
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.02132	EMDE	ASBURY 161KV	192	0.00938	-0.03071	363

Maximum Decrement and Maximum Increment were determined from the Source and Sink Operating Points in the study models where limiting facility was identified.

Factor = Source GSF - Sink GSF  
Redispatch Amount = Relief Amount / Factor

Upgrade: SEVENTEENTH ( ) 138/69/11.295KV TRANSFORMER CKT 2  
Limiting Facility: SEVENTEENTH (17TH 4X) 138/69/11.295KV TRANSFORMER CKT 1  
Direction: FROM -> TO  
Line Outage: EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1  
Flowgate: 2007AG2AFS81T321210SP  
Date Redispatch Needed: Starting 2010 6/1 - 10/1 Until EOC of Upgrade  
Season Flowgate Identified: 2010 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount
1281706	1.9	5.2
1286201	3.2	5.2

  

Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	WERE	CITY OF BURLINGTON 69KV	55.4	0.06174	-0.10957	47
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	WERE	CORFHEY COUNTY NO. 2 SHARPE 69KV	19.98	0.01714	-0.10957	47
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	EMDE	ELK RIVER 345KV	44.986	0.0132	-0.10915	47
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	WERE	EMPORIA ENERGY CENTER 345KV	610	0.01118	-0.10901	47
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	WERE	EVANS ENERGY CENTER 138KV	560	0.00325	-0.11108	47
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	AES 161KV	320	-0.0002	-0.10763	47
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	MIPU	ARIES 161KV	17.69665	0.00068	-0.10849	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	ARSENAL HILL 138KV	455	-0.00023	-0.1076	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	ARSENAL HILL 69KV	90	-0.00023	-0.1076	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	EMDE	ASBURY 161KV	192	0.00028	-0.10811	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	BPS GT1G 13.800 115KV	80	-0.00003	-0.1078	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	BPS GT2G 13.800 115KV	45.19951	-0.00003	-0.1078	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	BPS ST3G 13.800 115KV	48.99482	-0.00003	-0.1078	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	KACP	BULL CREEK 161KV	51.6	0.00073	-0.10856	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OPPD	CASS 1G 15.000 345KV	42.51929	0.00003	-0.10786	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OPPD	CASS 2G 15.000 345KV	52.99999	0.00003	-0.10786	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	CENTENIAL WIND 34KV	120	-0.00098	-0.10687	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	WERE	CHANUTE 69KV	54.8	0.00054	-0.10837	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	KACP	CITY OF HIGGINSVILLE 69KV	36	0.0008	-0.10833	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	WERE	CLAY CENTER JUNCTION 115KV	16.8	0.00056	-0.10839	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	MKCC	CLIFTON 115KV	65	0.00017	-0.10766	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	COGENTRIX 345KV	221.3008	-0.00032	-0.10751	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	COL.COG7 115.00 115KV	75	-0.00018	-0.10765	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	COMANCHE 138KV	145	-0.00088	-0.10695	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	COMANCHE 69KV	60	-0.00087	-0.10696	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	COOPER 1G 22.000 345KV	551.2802	0.00014	-0.10797	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	D HENRY 34.500 115KV	18	-0.00035	-0.10748	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	DENVER G 34.500 115KV	34.32393	-0.00038	-0.10747	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	EASTMAN 138KV	356.7324	-0.00026	-0.10757	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	EGY CTRG 13.800 115KV	54	-0.00035	-0.10748	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	FITZHUGH 161KV	125.4	-0.00017	-0.10766	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	FLINT CREEK 161KV	428	-0.0001	-0.10773	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	FPL WIND 34KV	59	-0.00109	-0.10678	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OPPD	FREM 8G 13.800 69KV	90	-0.00007	-0.10776	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OPPD	FT CALTJ 22.000 4KV	376	0	-0.10783	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	GENTLM1G 23.000 230KV	463	-0.00101	-0.10682	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	GENTLM2G 24.000 345KV	443.0568	-0.00104	-0.10679	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	GT-2 G 13.800 115KV	40	-0.0004		

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	GILL ENERGY CENTER 69KV	48	-0.10783	WERE	LAWRENCE ENERGY CENTER 230KV	223.9286	0.00083	-0.10866	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	LIEBROCK 345KV	517.0293	-0.00028	-0.10757	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	LIEBERMAN 138KV	174	-0.00024	-0.10759	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	WCOLLAIN 138KV	470	-0.00074	-0.10709	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	KACP	MONTROSE 161KV	359.7056	0.00057	-0.1084	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	EMDE	MRWYG11 34.500 230KV	100	0.00005	-0.10788	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	MUSKOGEE 161KV	166	-0.00028	-0.10755	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	MUSKOGEE 345KV	1548	-0.0003	-0.10753	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	MUSTANG 138KV	351	-0.00078	-0.10708	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	MUSTANG 69KV	52.52197	-0.00078	-0.10707	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OPPD	N OMA 1G 13.800 2KV	48.5	0.00002	-0.10785	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OPPD	N OMA 2G 13.800 2KV	80.59999	0.00002	-0.10785	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OPPD	N OMA 3G 13.800 2KV	80.59999	0.00002	-0.10785	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OPPD	N OMA 4G 15.000 2KV	107.4	0.00002	-0.10785	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OPPD	N OMA 5G 20.000 4KV	173.9	0.00002	-0.10785	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	KACY	NEARMAN 161KV	77	0.00065	-0.10848	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	KACY	NEARMAN 20KV	235	0.00065	-0.10848	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OPPD	NEBCTY1G 18.000 4KV	466	0.00005	-0.10788	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OPPD	NEBCTY2G 23.000 345KV	503	0.00005	-0.10788	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	NORTHEASTERN STATION 138KV	480	-0.00028	-0.10754	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	NORTHEASTERN STATION 345KV	625	-0.00012	-0.10771	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	OEC 345KV	293.1376	-0.00028	-0.10757	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	EMDE	OZARK BEACH 161KV	16	0.00013	-0.10795	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	PIRKEY GENERATION 138KV	288	-0.00028	-0.10757	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	PLATTE1G 13.800 115KV	71.51868	-0.00042	-0.10741	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	KACY	QUINDARO 161KV	129.4143	0.00065	-0.10848	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	KACY	QUINDARO 69KV	136.3627	0.00065	-0.10848	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	REBBLD 345KV	42.0956	-0.0007	-0.10713	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	EMDE	RIVERTON 161KV	93.9171	0.00017	-0.108	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	EMDE	RIVERTON 69KV	44.07541	0.00017	-0.108	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	SEMINOLE 138KV	334.8975	-0.00067	-0.10716	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	SEMINOLE 345KV	1019	-0.00067	-0.10716	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00006	-0.10777	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	SHELDN2G 13.800 115KV	81	-0.00008	-0.10777	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	MIPU	SIBLEY 161KV	228.9514	0.00058	-0.10841	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	MIPU	SIBLEY 69KV	45.99999	0.00058	-0.10841	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	NPPD	SIDNEY 4 230.00 230KV	19.3852	-0.00097	-0.10686	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	SMITH COGEN 138KV	106	-0.00075	-0.10708	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	MIDW	SMOKEY HILLS 34KV	25	-0.00064	-0.10719	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	MIPU	SOUTH HARPER 161KV	67.06152	0.00077	-0.10854	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	SOUTHWESTERN STATION 138KV	712	0.00088	-0.10695	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	SOUTHWESTERN STATION 138KV	287	-0.00088	-0.10695	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	SPGCK1&2 13.200 345KV	78	-0.00083	-0.107	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	EMDE	STATE LINE 161KV	520	0.00017	-0.108	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	WERE	TECUMSEH ENERGY CENTER 115KV	133	0.00084	-0.10867	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	TONTI TOWN 161KV	140	-0.00012	-0.10771	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	TULSA POWER STATION 138KV	147	-0.00032	-0.10751	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	WELSH 345KV	1044	0.00028	-0.10755	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	WILKES 138KV	410.4523	-0.00028	-0.10757	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	AEPW	WILKES 345KV	308	-0.00028	-0.10757	48
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	WERE	CITY OF AUGUSTA 69KV	20	-0.0012	-0.10663	49
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	MIDW	KNOLL 115KV	75.60001	-0.00224	-0.10559	49
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	SOONER 138KV	535	-0.00221	-0.10562	49
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	OKGE	SOONER 345KV	537	-0.00116	-0.10667	49
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	MKEC	A. M. MULLERGRN GENERATOR 115KV	63	-0.00424	-0.10359	50
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	MKEC	CIMARRON RIVER 115KV	44	-0.00607	-0.10176	51
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.00972	-0.09811	53
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	MIPU	JUDSON LARGE 115KV	95.97768	-0.0098	-0.09803	53
WERE	GILL ENERGY CENTER 69KV	48	-0.10783	WERE	CITY OF WINFIELD 69KV	31	-0.01728	-0.09527	57
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	WERE	EVANS ENERGY CENTER 138KV	560	0.00325	-0.08518	81
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	WERE	CITY OF BURLINGTON 69KV	55.4	0.00174	-0.08367	81
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	EMDE	ELK RIVER 345KV	44.986	0.00132	-0.08325	82
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	WERE	EMPORIA ENERGY CENTER 345KV	610	0.00118	-0.08311	82
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	AES 161KV	320	-0.0002	-0.08173	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	ARSENAL HILL 138KV	455	-0.00022	-0.08177	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	ARSENAL HILL 69KV	90	-0.00023	-0.0817	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	EMDE	ASBURY 161KV	192	0.00028	-0.08221	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	NPPD	BPS GT1G 13.800 115KV	80	-0.00003	-0.0819	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	NPPD	BPS GT2G 13.800 115KV	49.99942	-0.00003	-0.0819	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	NPPD	BPS ST3G 13.800 115KV	49.99942	-0.00003	-0.0819	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	KACP	BULL CREEK 161KV	516	0.00073	-0.08266	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OPPD	CASS 1G 15.000 345KV	42.51923	0.00003	-0.08196	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OPPD	CASS 2G 15.000 345KV	52.99999	0.00003	-0.08196	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	WERE	CHANUTE 69KV	54.8	0.00054	-0.08247	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	KACP	CITY OF HIGGINSVILLE 69KV	36	0.00005	-0.08243	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	MKEC	CLIFTON 115KV	65	-0.00017	-0.08176	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	COCKENTR 345KV	221.30008	-0.00032	-0.08161	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	NPPD	COL COG1 115.00 115KV	75	0.00016	-0.08167	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	NPPD	COOPERTG 22.000 345KV	551.28002	0.00014	-0.08207	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	NPPD	DENVER G 34.500 115KV	34.32993	-0.00036	-0.08157	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	EASTMAN 138KV	356.7324	-0.00028	-0.08167	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	NPPD	EGY CTRG 13.800 115KV	54	-0.00035	-0.08158	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	FITZHUGH 161KV	125.4	-0.00017	-0.08176	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	FUNT CREEK 161KV	428	-0.0001	-0.08183	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OPPD	FREM RG 13.800 69KV	90	-0.00007	-0.08186	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OPPD	FT CALT 22.000 4KV	376	0	-0.08193	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	NPPD	GT-2 G 13.800 115KV	40	-0.00004	-0.08153	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	KACP	HAWTHORN 161KV	517.7923	0.0006	-0.08253	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	WERE	HUTCHINSON ENERGY CENTER 115KV	275.4319	-0.00001	-0.08192	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	WERE	HUTCHINSON ENERGY CENTER 69KV	30	-0.00006	-0.08167	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	KACP	JATAN 345KV	1806	0.00058	-0.08252	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	KACP	JATAN 345KV	371	0.00058	-0.08252	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	WERE	JEFFREY ENERGY CENTER 230KV	440	0.00075	-0.08268	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	WERE	JEFFREY ENERGY CENTER 345KV	874	0.00078	-0.08271	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	KNOXLEE 138KV	282	-0.00028	-0.08168	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	MIPU	LAKE ROAD 161KV	35	0.00046	-0.08239	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	MIPU	LAKE ROAD 34KV	92	0.00048	-0.08239	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	EMDE	LARUSSEL 161KV	100	0.00018	-0.08211	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	WERE	LAWRENCE ENERGY CENTER 230KV	223.9286	0.00083	-0.08276	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	LIEBROCK 345KV	517.0293	-0.00028	-0.08167	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	LIEBERMAN 138KV	174	-0.00024	-0.08169	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	KACP	MONTROSE 161KV	359.7056	0.00057	-0.0825	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	EMDE	MRWYG11 34.500 230KV	100	0.00005	-0.08196	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	MUSKOGEE 161KV	166	-0.00028	-0.08165	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	MUSKOGEE 345KV	1548	-0.0003	-0.08163	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OPPD	N OMA 1G 13.800 2KV	48.5	0.00002	-0.08195	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OPPD	N OMA 2G 13.800 2KV	80.59999	0.00002	-0.08195	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OPPD	N OMA 3G 13.800 2KV	80.59999	0.00002	-0.08195	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OPPD	N OMA 4G 15.000 2KV	107.4	0.00002	-0.08195	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OPPD	N OMA 5G 20.000 4KV	173.9	0.00002	-0.08195	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	KACY	NEARMAN 161KV	77	0.00065	-0.08258	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	KACY	NEARMAN 20KV	235	0.00065	-0.08258	83
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OPPD	NEBCTY1G 18.0				

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	MIPU	SOUTH HARPER 161KV	67.06152	0.00071	-0.08264	63
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	EMDE	STATE LINE 161KV	520	0.00017	-0.0821	63
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	WERE	TECUMSEH ENERGY CENTER 115KV	133	0.00088	-0.08277	63
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	TONITTOWN 161KV	140	-0.00015	-0.08191	63
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	TULSA POWER STATION 138KV	147	-0.00032	-0.08161	63
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	WELSH 345KV	1044	-0.00028	-0.08165	63
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	WILKES 138KV	410.45259	-0.00028	-0.08167	63
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	WILKES 345KV	308	-0.00028	-0.08167	63
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	CENTENIAL WIND 34KV	120	-0.00098	-0.08097	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	COMANCHE 138KV	145	-0.00088	-0.08105	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	COMANCHE 69KV	60	-0.00087	-0.08105	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	FPLWIND2 34KV	59	-0.00105	-0.08088	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	NPPD	GENTLM1G 23.000 230KV	463	-0.00101	-0.08092	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	NPPD	GENTLM2G 24.000 345KV	443.05689	-0.00104	-0.08089	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	HORSESHOE LAKE 138KV	796	-0.00072	-0.08121	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	MCCOLAIN 138KV	470	0.00074	-0.08119	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	MUSTANG 138KV	351	-0.00075	-0.08118	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	MUSTANG 69KV	52.52197	-0.00076	-0.08117	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	REDBUD 345KV	42.0956	-0.0007	-0.08123	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	SEMINOLE 138KV	334.8975	-0.00067	-0.08126	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	SEMINOLE 345KV	1019	-0.00067	-0.08126	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	SMITH COGEN 138KV	106	-0.00073	-0.08118	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	MIDW	SMOKEY HILLS 34KV	25	-0.00065	-0.08129	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	SOONER 345KV	537	-0.00116	-0.08077	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	SOUTHWESTERN STATION 138KV	712	-0.00088	-0.08105	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	AEPW	SOUTHWESTERN STATION 138KV	287	-0.00088	-0.08105	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	SPGCK1&2 13.200 345KV	79	-0.00083	-0.0811	64
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	MIDW	KNOLL 115KV	75.60001	-0.00224	-0.07969	65
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	OKGE	SOONER 138KV	535	-0.00221	-0.07972	65
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	MKEC	A. M. MULLERGEN GENERATOR 115KV	63	-0.00424	-0.07769	67
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	MKEC	CIMARRON RIVER 115KV	44	-0.00607	-0.07586	68
WERE	WACO 138KV	30	-0.07327	WERE	EVANS ENERGY CENTER 138KV	560	0.00325	-0.07652	68
WERE	WACO 138KV	30	-0.07327	WERE	CITY OF BURLINGTON 69KV	55	0.00174	-0.07501	69
WERE	WACO 138KV	30	-0.07327	EMDE	ELK RIVER 345KV	44.988	0.00132	-0.07459	69
WERE	WACO 138KV	30	-0.07327	EMDE	ASBURY 161KV	192	-0.00028	-0.07355	69
WERE	WACO 138KV	30	-0.07327	KACP	BULL CREEK 161KV	61.6	0.00073	-0.074	70
WERE	WACO 138KV	30	-0.07327	WERE	CHANUTE 69KV	54.8	0.00054	-0.07381	70
WERE	WACO 138KV	30	-0.07327	KACP	CITY OF HIGGINSVILLE 69KV	36	0.0005	-0.07377	70
WERE	WACO 138KV	30	-0.07327	NPPD	COOPER1G 22.000 345KV	551.2802	0.00014	-0.07341	70
WERE	WACO 138KV	30	-0.07327	WERE	EMORIA ENERGY CENTER 345KV	610	0.00118	-0.07445	70
WERE	WACO 138KV	30	-0.07327	KACP	HAITHORN 161KV	517.7923	0.0006	-0.07387	70
WERE	WACO 138KV	30	-0.07327	KACP	IATAN 345KV	371	0.00058	-0.07386	70
WERE	WACO 138KV	30	-0.07327	KACP	IATAN 345KV	1806	0.00058	-0.07386	70
WERE	WACO 138KV	30	-0.07327	WERE	JEFFREY ENERGY CENTER 230KV	440	0.00075	-0.07402	70
WERE	WACO 138KV	30	-0.07327	WERE	JEFFREY ENERGY CENTER 345KV	874	0.00078	-0.07405	70
WERE	WACO 138KV	30	-0.07327	MIPU	LAKE ROAD 161KV	35	0.00046	-0.07373	70
WERE	WACO 138KV	30	-0.07327	MIPU	LAKE ROAD 34KV	92	0.00046	-0.07373	70
WERE	WACO 138KV	30	-0.07327	EMDE	LARUSSEL 161KV	100	0.00018	-0.07345	70
WERE	WACO 138KV	30	-0.07327	WERE	LAWRENCE ENERGY CENTER 230KV	223.9286	0.00083	-0.0741	70
WERE	WACO 138KV	30	-0.07327	KACP	MONTROSE 161KV	359.7056	0.00057	-0.07384	70
WERE	WACO 138KV	30	-0.07327	KACY	NEARMAN 161KV	77	0.00068	-0.07392	70
WERE	WACO 138KV	30	-0.07327	KACY	NEARMAN 20KV	235	0.00068	-0.07392	70
WERE	WACO 138KV	30	-0.07327	KACY	QUINDARO 161KV	129.4143	0.00065	-0.07392	70
WERE	WACO 138KV	30	-0.07327	KACY	QUINDARO 69KV	136.3627	0.00065	-0.07392	70
WERE	WACO 138KV	30	-0.07327	EMDE	RIVERTON 161KV	99.9177	0.00017	-0.07344	70
WERE	WACO 138KV	30	-0.07327	EMDE	RIVERTON 69KV	44.07541	0.00017	-0.07344	70
WERE	WACO 138KV	30	-0.07327	MIPU	SIBLEY 161KV	228.9514	0.00058	-0.07385	70
WERE	WACO 138KV	30	-0.07327	MIPU	SIBLEY 69KV	45.99999	0.00058	-0.07385	70
WERE	WACO 138KV	30	-0.07327	MIPU	SOUTH HARPER 161KV	67.06152	0.0007	-0.07385	70
WERE	WACO 138KV	30	-0.07327	EMDE	STATE LINE 161KV	520	0.00017	-0.07344	70
WERE	WACO 138KV	30	-0.07327	WERE	TECUMSEH ENERGY CENTER 115KV	133	0.00084	-0.07411	70
WERE	WACO 138KV	30	-0.07327	OKGE	AES 161KV	320	-0.0002	-0.07307	71
WERE	WACO 138KV	30	-0.07327	AEPW	ARSENAL HILL 138KV	455	-0.00023	-0.07304	71
WERE	WACO 138KV	30	-0.07327	AEPW	ARSENAL HILL 69KV	90	-0.00023	-0.07304	71
WERE	WACO 138KV	30	-0.07327	NPPD	BPS GT1G 13.800 115KV	85	-0.00003	-0.07324	71
WERE	WACO 138KV	30	-0.07327	NPPD	BPS GT2G 13.800 115KV	45.19951	-0.00003	-0.07324	71
WERE	WACO 138KV	30	-0.07327	NPPD	BPS ST3G 13.800 115KV	49.9482	-0.00003	-0.07324	71
WERE	WACO 138KV	30	-0.07327	OPPD	CASS 1G 15.000 345KV	42.51929	0.00003	-0.0733	71
WERE	WACO 138KV	30	-0.07327	OPPD	CASS 2G 15.000 345KV	52.99999	0.00003	-0.0733	71
WERE	WACO 138KV	30	-0.07327	MKEC	CLIFTON 115KV	65	-0.00017	-0.0731	71
WERE	WACO 138KV	30	-0.07327	AEPW	COGEN1RX 345KV	221.18298	-0.00032	-0.07285	71
WERE	WACO 138KV	30	-0.07327	NPPD	COL COG7 115.00 115KV	75	-0.00016	-0.07309	71
WERE	WACO 138KV	30	-0.07327	AEPW	COMANCHE 138KV	145	-0.00088	-0.07239	71
WERE	WACO 138KV	30	-0.07327	AEPW	COMANCHE 69KV	60	-0.00087	-0.0724	71
WERE	WACO 138KV	30	-0.07327	NPPD	DENVER G 34.500 115KV	34.32933	-0.00036	-0.07291	71
WERE	WACO 138KV	30	-0.07327	AEPW	EASTMAN 138KV	356.7324	-0.00028	-0.07301	71
WERE	WACO 138KV	30	-0.07327	NPPD	EST GT1G 13.800 115KV	54	-0.00033	-0.07292	71
WERE	WACO 138KV	30	-0.07327	AEPW	FITZHUGH 161KV	125	-0.00011	-0.07311	71
WERE	WACO 138KV	30	-0.07327	AEPW	FLINT CREEK 161KV	428	-0.0001	-0.07317	71
WERE	WACO 138KV	30	-0.07327	OPPD	FREM 8G 13.800 69KV	90	-0.00007	-0.0732	71
WERE	WACO 138KV	30	-0.07327	OPPD	FT CAL1G 22.000 4KV	376	0	-0.07327	71
WERE	WACO 138KV	30	-0.07327	NPPD	GT-2 G 13.800 115KV	40	-0.0004	-0.07287	71
WERE	WACO 138KV	30	-0.07327	OKGE	HORSESHOE LAKE 138KV	796	-0.00072	-0.07255	71
WERE	WACO 138KV	30	-0.07327	WERE	HUTCHINSON ENERGY CENTER 115KV	275.44315	-0.00041	-0.07328	71
WERE	WACO 138KV	30	-0.07327	WERE	HUTCHINSON ENERGY CENTER 69KV	30	-0.00006	-0.07321	71
WERE	WACO 138KV	30	-0.07327	AEPW	KNOXLEE 138KV	282	-0.00025	-0.07302	71
WERE	WACO 138KV	30	-0.07327	AEPW	LIEBROCK 345KV	517.0293	-0.00026	-0.07301	71
WERE	WACO 138KV	30	-0.07327	AEPW	LIEBROCK 138KV	174	-0.00024	-0.07303	71
WERE	WACO 138KV	30	-0.07327	OKGE	MCCOLAIN 138KV	470	-0.00074	-0.07253	71
WERE	WACO 138KV	30	-0.07327	EMDE	MIRWY11 34.500 230KV	105	0.00008	-0.07332	71
WERE	WACO 138KV	30	-0.07327	OKGE	MUSKOGEE 161KV	166	-0.00028	-0.07299	71
WERE	WACO 138KV	30	-0.07327	OKGE	MUSKOGEE 345KV	1548	-0.0003	-0.07297	71
WERE	WACO 138KV	30	-0.07327	OKGE	MUSTANG 138KV	351	-0.00075	-0.07252	71
WERE	WACO 138KV	30	-0.07327	OKGE	MUSTANG 69KV	52.52197	-0.00076	-0.07251	71
WERE	WACO 138KV	30	-0.07327	OPPD	N OMA 1G 13.800 2KV	48	0.00002	-0.07329	71
WERE	WACO 138KV	30	-0.07327	OPPD	N OMA 2G 13.800 2KV	80.59999	0.00002	-0.07329	71
WERE	WACO 138KV	30	-0.07327	OPPD	N OMA 3G 13.800 2KV	80.59999	0.00002	-0.07329	71
WERE	WACO 138KV	30	-0.07327	OPPD	N OMA 4G 15.000 2KV	107	0.00002	-0.07329	71
WERE	WACO 138KV	30	-0.07327	OPPD	N OMA 5G 20.000 4KV	173	0.00002	-0.07329	71
WERE	WACO 138KV	30	-0.07327	OPPD	NEBCTY1G 18.000 4KV	466	0.00005	-0.07332	71
WERE	WACO 138KV	30	-0.07327	OPPD	NEBCTY2G 23.000 345KV	503	0.00008	-0.07332	71
WERE	WACO 138KV	30	-0.07327	AEPW	NORTHEASTERN STATION 138KV	460	-0.00023	-0.07298	71
WERE	WACO 138KV	30	-0.07327	AEPW	NORTHEASTERN STATION 345KV	625	-0.00012	-0.07315	71
WERE	WACO 138KV	30	-0.07327	AEPW	OEC 345KV	293.1378	-0.00028	-0.07301	71
WERE	WACO 138KV	30	-0.07327	AEPW	PIRKEY GENERATION 138KV	288	-0.00026	-0.07301	71
WERE	WACO 138KV	30	-0.07327	NPPD	PLATTE1G 13.800 115KV	71.51868	-0.00042	-0.07285	71
WERE	WACO 138KV	30	-0.07327	OKGE	REDBUD 345KV	42.0956	-0.0007	-0.07257	71
WERE	WACO 138KV	30	-0.07327	OKGE	SEMINOLE 138KV	334.8975	-0.00067	-0.0726	71
WERE	WACO 138KV	30	-0.07327	OKGE	SEMINOLE 345KV	1019	-0.00067	-0.0726	71
WERE	WACO 138KV	30	-0.07327	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00006	-0.07321	71
WERE	WACO 138KV	30	-0.07327	NPPD	SHELDN2G 13.800 115KV	81	-0.00006	-0.07321	71
WERE	WACO 138KV	30	-0.07327	OKGE	SMITH COGEN 138KV	106	-0.00075	-0.07252	71
WERE	WACO 138KV	30	-0.07327	MIDW	SMOKEY HILLS 34KV	25	-0.00064	-0.07263	71
WERE	WACO 138KV	30	-0.07327	AEPW	SOUTHWESTERN STATION 138KV	712	-0.00088	-0.07239	71
WERE	WACO 138KV	30	-0.07327	AEPW	SOUTHWESTERN STATION 345KV	287			

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	WACO 138KV		30	-0.07327	OKGE	SOONER 345KV		537	-0.00118	-0.07211	72
WERE	WACO 138KV		30	-0.07327	MIDW	KNOLL 115KV		75.60011	-0.00224	-0.07103	73
WERE	WACO 138KV		30	-0.07327	OKGE	SOONER 138KV		535	-0.00221	-0.07106	73
WERE	WACO 138KV		30	-0.07327	MKEC	A. M. MULLERGREEN GENERATOR 115KV		63	-0.00424	-0.06903	75
WERE	WACO 138KV		30	-0.07327	MKEC	CIMARRON RIVER 115KV		44	-0.00607	-0.0672	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.08193	WERE		CITY OF WINFIELD 69KV		31.2	-0.01728	-0.06467	80
WERE	WACO 138KV		30	-0.07327	MKEC	GRAY COUNTY WIND FARM 115KV		36	-0.00972	-0.06355	81
WERE	WACO 138KV		30	-0.07327	MKEC	JUDSON LARGE 115KV		95.97768	-0.0098	-0.06347	82

Maximum Decrement and Maximum Increment were determined from the Source and Sink Operating Points in the study models where limiting facility was identified.

Factor = Source GSF - Sink GSF

Redispatch Amount = Relief Amount / Factor

Upgrade: SEVENTEENTH (J) 138/69/11.295KV TRANSFORMER CKT 2  
 Limiting Facility: SEVENTEENTH (17TH 4X) 138/69/11.295KV TRANSFORMER CKT 1  
 Direction: FROM->TO  
 Line Outage: CHISHOLM (CHSLM1X) 138/69/13.2KV TRANSFORMER CKT 1  
 Flowgate: 2007AG2AFS8112552210SP  
 Date Redispatch Needed: Starting 2010 6/1 - 10/1 Until EOC of Upgrade  
 Season Flowgate Identified: 2010 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount
1281706	1.7	4.8
1296201	3.1	4.8

Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	CITY OF AUGUSTA 69KV	20	0.00415	-0.09994	48
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	CHANUTE 69KV	54.8	0.00158	-0.09738	49
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	CITY OF BURLINGTON 69KV	55.4	0.00276	-0.09855	49
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	0.00276	-0.09855	49
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	EMDE	ELK RIVER 345KV	44.986	0.00318	-0.09894	49
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	AES 161KV	320	-0.00014	-0.09565	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MIPU	ARIES 161KV	17.99695	0.00048	-0.09628	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	ARSENAL HILL 138KV	455	-0.00027	-0.09552	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	ARSENAL HILL 69KV	90	-0.00027	-0.09552	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	EMDE	ASBURY 161KV	192	0.00065	-0.09644	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	BPS GT1G 13.800 115KV	80	-0.00028	-0.09554	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	BPS GT2G 13.800 115KV	45.19951	-0.00028	-0.09554	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	BPS ST3G 13.800 115KV	49.99482	-0.00028	-0.09554	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	KACP	BULL CREEK 161KV	61.6	0.0006	-0.09639	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OPPD	CASS 1G 15.000 345KV	42.51929	-0.00013	-0.09564	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OPPD	CASS 2G 15.000 345KV	52.99999	-0.00013	-0.09564	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	KACP	CITY OF HIGGINSVILLE 69KV	36	0.00038	-0.09617	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	COSENTRIX 345KV	221.3008	-0.00021	-0.09558	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	COL COST 115.00 115KV	75	-0.00034	-0.09545	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	COOPERON G 22.000 345KV	551.2802	0.00008	-0.09573	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	EASTMAN 138KV	356.7324	-0.0003	-0.09549	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	EMPORIA ENERGY CENTER 345KV	610	-0.00028	-0.09554	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	FITZHUGH 161KV	125.4	-0.0001	-0.09569	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	FLINT CREEK 161KV	428	0.00001	-0.09569	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OPPD	FRIM 9S 13.800 69KV	93	-0.00022	-0.09556	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OPPD	FT CAL 1G 22.000 4KV	376	-0.00017	-0.09562	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	KACP	HAYTHORN 161KV	517.7923	0.0004	-0.09619	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	KACP	IATAN 345KV	371	0.00023	-0.09602	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	KACP	IATAN 345KV	1806	0.00023	-0.09602	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00028	-0.09554	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.00028	-0.09554	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	KNOXLEE 138KV	282	-0.0003	-0.09549	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MIPU	LAKE ROAD 161KV	35	0.00022	-0.096	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MIPU	LAKE ROAD 34KV	92	0.00021	-0.096	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	EMDE	LARUSSEL 161KV	100	0.00045	-0.09624	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	LAWRENCE ENERGY CENTER 230KV	223.9286	0.00014	-0.09593	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	LEBRONCK 345KV	517.0293	-0.0003	-0.09549	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	LEBRONCK 138KV	174	-0.00022	-0.09552	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	KACP	MONROSE 161KV	359.7056	0.00044	-0.09623	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	MUSKOGEE 161KV	166	-0.00018	-0.09563	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	MUSKOGEE 345KV	1548	-0.0002	-0.09559	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OPPD	N OMA 1G 13.800 2KV	48.5	-0.00018	-0.09563	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OPPD	N OMA 2G 13.800 2KV	80.59999	-0.00018	-0.09563	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OPPD	N OMA 3G 13.800 2KV	80.59999	-0.00018	-0.09563	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OPPD	N OMA 4G 15.000 2KV	107.4	-0.00016	-0.09563	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OPPD	N OMA 5G 20.000 4KV	173.8	-0.00016	-0.09563	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	KACY	NEARMAN 161KV	77	0.00043	-0.09622	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	KACY	NEARMAN 20KV	235	0.00033	-0.09622	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OPPD	NEBOTY1G 18.000 4KV	466	-0.00014	-0.09566	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OPPD	NERCT1G 23.000 345KV	503	-0.00014	-0.09566	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	NORTHEASTERN STATION 138KV	482	0.00003	-0.09562	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	NORTHEASTERN STATION 345KV	623	0.00018	-0.09595	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	OEC 345KV	293.1376	-0.0001	-0.09569	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	PIRKEY GENERATION 138KV	288	-0.0003	-0.09549	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	KACY	QUINDARO 161KV	129.4143	0.00043	-0.09622	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	KACY	QUINDARO 69KV	136.3627	0.00043	-0.09622	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	EMDE	RIVERTON 161KV	93.9173	0.0008	-0.09629	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	EMDE	RIVERTON 69KV	44.07514	0.00048	-0.09627	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00026	-0.09553	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	SHELDN2G 13.800 115KV	81	-0.00026	-0.09553	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MIPU	SIBLEY 161KV	228.9514	0.0004	-0.09619	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MIPU	SIBLEY 69KV	45.99999	0.0004	-0.09619	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MIPU	SOUTH HARPER 161KV	67.06152	0.00055	-0.09632	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	EMDE	STATE LINE 161KV	520	0.00048	-0.09627	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	TECUMSEH ENERGY CENTER 115KV	133	0.00018	-0.09597	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	TONTTOWN 161KV	140	0.00007	-0.09586	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	TULSA POWER STATION 138KV	147	-0.00018	-0.0956	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	WELSH 345KV	1044	-0.00033	-0.09546	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	WILKES 138KV	410.4529	-0.00031	-0.09548	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	WILKES 345KV	308	-0.0003	-0.09549	50
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	CENTENIAL WIND 34KV	120	-0.00126	-0.09453	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MKEC	CLIFTON 115KV	65	-0.00077	-0.09502	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	COMANCHE 138KV	145	-0.00113	-0.09466	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	COMANCHE 69KV	60	-0.00112	-0.09467	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	D HENRYG 34.500 115KV	18	-0.00052	-0.09527	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	DENVER G 34.500 115KV	34.32393	-0.00052	-0.09527	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	EGY CTRG 13.800 115KV	54	-0.00052	-0.09527	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	FPLWIND2 34KV	59	-0.00134	-0.09445	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	GENTLM1G 23.000 230KV	463	-0.00114	-0.09465	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	GENTLM2G 24.000 345KV	443.0568	-0.00117	-0.09462	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	GT-2 G 13.800 115KV	40	-0.00058	-0.09523	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	HORSE SHOES LAKE 138KV	798	-0.00098	-0.09448	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	HUTCHINSON ENERGY CENTER 115KV	275.4319	-0.00191	-0.09388	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	HUTCHINSON ENERGY CENTER 69KV	30	-0.00195	-0.09384	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	MCCLAIN 138KV	470	-0.0001	-0.09479	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	EMDE	MRWYG11 34.500 230KV	100	-0.00078	-0.095	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	MUSTANG 138KV	351	-0.00103	-0.09476	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	MUSTANG 69KV	52.52197	-0.00103	-0.09476	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	PLATTE1G 13.800 115KV	71.51868	-0.00058	-0.09521	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	REDBUD 345KV	42.0956	-0.00091	-0.09488	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	SEMINOLE 138KV	334.8975	-0.00088	-0.09491	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	SEMINOLE 345KV	1019	-0.00088	-0.09491	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	NPPD	SIDNEY 4 230.0 230KV	19.3852	-0.0011	-0.09469	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	SMITH COGEN 138KV	106	-0.00102	-0.09477	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MIDW	SMOKEY HILLS 34KV	25	-0.00193	-0.09386	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	SOONER 138KV	538	-0.00213	-0.09366	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	SOONER 345KV	537	-0.00154	-0.09425	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	SOUTHWESTERN STATION 138KV	712	-0.00112	-0.09467	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	AEPW	SOUTHWESTERN STATION 138KV	287	-0.00112	-0.09467	51
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	OKGE	SPGCK1&2 13.200 345KV	78	-0.00114	-0.09465	51

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MIDW	KNOLL 115KV	75.60001	-0.00298	-0.09281	52
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MKEC	A. M. MULLERGEN GENERATOR 115KV	63	-0.00453	-0.09126	53
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MKEC	CIMARRON RIVER 115KV	44	-0.00552	-0.09027	53
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MKEC	GRAY COUNTY WIND FARM 115KV	38	-0.00843	-0.08736	55
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	MKEC	JUDSON LARGE 115KV	95.97768	-0.00848	-0.0873	55
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	EVANS ENERGY CENTER 138KV	560	-0.00905	-0.08674	56
WERE	GILL ENERGY CENTER 69KV	48	-0.09579	WERE	CITY OF WINFIELD 69KV	31.2	-0.01206	-0.08373	57
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	EMDE	CITY OF BURLINGTON 69KV	55.4	-0.00278	-0.0665	72
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	EMDE	ELK RIVER 345KV	44.988	0.00315	-0.06689	72
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	WERE	CHANUTE 69KV	54.8	-0.00158	-0.06533	74
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	EMDE	ASBURY 161KV	192.00063	-0.006439	-0.06439	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	KACP	BULL CREEK 161KV	61.8	0.0008	-0.06434	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	KACP	CITY OF HIGGINSVILLE 69KV	36	-0.00308	-0.06412	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	FLINT CREEK 161KV	428	0.0001	-0.06384	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	KACP	HAWTHORN 161KV	517.7923	0.0004	-0.06414	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	KACP	IATAN 345KV	1806	0.00023	-0.06397	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	KACP	IATAN 345KV	371	0.00023	-0.06397	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	MIPU	LAKE ROAD 161KV	35	0.00021	-0.06395	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	MIPU	LAKE ROAD 34KV	92	0.00021	-0.06395	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	EMDE	LARUSSELL 161KV	100	-0.00048	-0.06419	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	WERE	LAWRENCE ENERGY CENTER 230KV	223.8286	0.00014	-0.06388	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	KACP	MONTROSE 161KV	359.7056	0.00044	-0.06418	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	KACY	NEARMAN 161KV	77	0.00043	-0.06417	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	KACY	NEARMAN 20KV	238	0.00043	-0.06417	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	NORTHEASTERN STATION 345KV	625	0.00016	-0.0639	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	KACY	QUINDARO 161KV	129.4143	0.00043	-0.06417	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	KACY	QUINDARO 69KV	136.3627	0.00043	-0.06417	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	EMDE	RIVERTON 161KV	93.9177	0.0005	-0.06424	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	EMDE	RIVERTON 69KV	44.07541	0.00048	-0.06422	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	MIPU	SIBLEY 161KV	228.9514	0.0004	-0.06414	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	MIPU	SIBLEY 69KV	45.99999	0.0004	-0.06414	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	MIPU	SOUTH HARPER 161KV	67.06152	0.00053	-0.06427	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	EMDE	STATE LINE 161KV	520	0.00048	-0.06422	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	WERE	TECUMSEH ENERGY CENTER 115KV	133	0.00013	-0.06392	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	TONITOWN 161KV	140	0.00077	-0.06381	75
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	AES 161KV	320	-0.00014	-0.0636	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	ARSENAL HILL 138KV	458	-0.00027	-0.06347	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	ARSENAL HILL 69KV	90	-0.00027	-0.06347	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	BPS GT1G 13.800 115KV	80	-0.00028	-0.06349	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	BPS GT2G 13.800 115KV	45.19851	-0.00028	-0.06349	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	BPS ST3G 13.800 115KV	49.99482	-0.00028	-0.06349	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OPPD	CASS 1G 15.000 345KV	42.51929	-0.00015	-0.06359	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OPPD	CASS 2G 15.000 345KV	52.99999	-0.00015	-0.06359	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	MKEC	CLIFTON 115KV	65	-0.00077	-0.06297	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	COGENTRIX 345KV	221.3008	-0.00021	-0.06353	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	COJ COG3 115.00 115KV	75	-0.00038	-0.0637	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	COOPER1G 22.000 345KV	551.2802	0.00006	-0.06368	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	DENVER G 34.500 115KV	34.32933	-0.00052	-0.06322	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	EASTMAN 138KV	356.7324	-0.0003	-0.06344	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	EGY CTRG 13.800 115KV	54	-0.00052	-0.06322	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	WERE	EMPORIA ENERGY CENTER 345KV	610	-0.00028	-0.06349	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	FITZHUGH 161KV	125.4	-0.0001	-0.06364	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OPPD	FREM 9G 13.800 69KV	92	-0.00023	-0.06351	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OPPD	FT CALG 22.000 4KV	378	-0.00017	-0.06357	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	GT-2 G 13.800 115KV	40	-0.00056	-0.06318	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00025	-0.06349	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.00025	-0.06349	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	KNOXLEE 138KV	282	-0.0003	-0.06344	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	LEBOCK CCK 345KV	517.0293	-0.0003	-0.06344	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	LIEBERMAN 138KV	174	-0.00027	-0.06347	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	EMDE	MRWYG11 34.500 230KV	100	-0.00078	-0.06295	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	MUSKOGEE 161KV	166	-0.00016	-0.06358	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	MUSKOGEE 345KV	1548	-0.0002	-0.06354	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OPPD	N OMA 1G 13.800 2KV	48	-0.00016	-0.06358	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OPPD	N OMA 2G 13.800 2KV	80.59999	-0.00016	-0.06358	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OPPD	N OMA 3G 13.800 2KV	80.59999	-0.00016	-0.06358	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OPPD	N OMA 4G 15.000 2KV	107.4	-0.00016	-0.06358	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OPPD	N OMA 5G 20.000 4KV	173.9	-0.00016	-0.06358	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OPPD	NEBCTY1G 18.000 4KV	466	-0.00014	-0.0636	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OPPD	NEBCTY2G 23.000 345KV	503	-0.00014	-0.0636	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	NORTHWESTERN STATION 138KV	463	-0.0003	-0.06371	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	OC 345KV	293.1378	-0.0001	-0.06364	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	PIRKEY GENERATION 138KV	288	-0.0003	-0.06344	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	PLATTE1G 13.800 115KV	71.51868	-0.00058	-0.06316	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00028	-0.06348	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	SHELDN2G 13.800 115KV	81	-0.00028	-0.06348	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	TULSA POWER STATION 138KV	147	-0.00018	-0.06355	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	WILSH 345KV	1044	-0.00033	-0.06341	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	WILKES 138KV	410.4523	-0.00031	-0.06343	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	WILKES 345KV	308	-0.0003	-0.06344	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	CENTANIAL WIND 34KV	120	-0.00126	-0.06248	76
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	COMANCHE 138KV	145	-0.00113	-0.06261	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	COMANCHE 69KV	60	-0.00112	-0.06262	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	FRYLAND 34KV	59	-0.00134	-0.06244	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	GENTLM1G 23.000 230KV	463	-0.00114	-0.0626	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	NPPD	GENTLM2G 24.000 345KV	443.0668	-0.00117	-0.06257	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	HORSESHOE LAKE 138KV	796	-0.00095	-0.06279	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	MCCLAINE 138KV	470	-0.001	-0.06274	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	MUSTANG 138KV	351	-0.00103	-0.06271	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	MUSTANG 69KV	52.52197	-0.00103	-0.06271	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	REDBUD 345KV	42.0956	-0.00091	-0.06283	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	SEMINOLE 138KV	334.8975	-0.00088	-0.06286	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	SEMINOLE 345KV	1019	-0.00083	-0.06285	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	SMITH COGEN 138KV	106	-0.00102	-0.06272	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	SOONER 345KV	537	-0.00154	-0.0622	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	SOUTHWESTERN STATION 138KV	712	-0.00112	-0.06262	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	AEPW	SOUTHWESTERN STATION 138KV	287	-0.00112	-0.06262	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	OKGE	SPGCK1&2 13.200 345KV	78	-0.00114	-0.0626	77
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	WERE	HUTCHINSON ENERGY CENTER 115KV	275.4319	-0.00191	-0.06183	

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	WACO 138KV	84.99999	-0.06374	MKEC	CIMARRON RIVER 115KV	44	-0.00652	-0.05822	83
WERE	WACO 138KV	30	-0.05817	ORGE	AES 161KV	320	-0.00014	-0.05803	83
WERE	WACO 138KV	30	-0.05817	AEPW	ARSENAL HILL 138KV	455	-0.00027	-0.05799	83
WERE	WACO 138KV	30	-0.05817	AEPW	ARSENAL HILL 69KV	90	-0.00027	-0.05799	83
WERE	WACO 138KV	30	-0.05817	NPPD	BPS GT1G 13.800 115KV	80	-0.00028	-0.05792	83
WERE	WACO 138KV	30	-0.05817	NPPD	BPS GT2G 13.800 115KV	45.19951	-0.00028	-0.05792	83
WERE	WACO 138KV	30	-0.05817	NPPD	BPS ST3G 13.800 115KV	49.99482	-0.00028	-0.05792	83
WERE	WACO 138KV	30	-0.05817	OPPD	CASS 1G 15.000 345KV	42.51929	-0.00018	-0.05802	83
WERE	WACO 138KV	30	-0.05817	OPPD	CASS 2G 15.000 345KV	52.99999	-0.00018	-0.05802	83
WERE	WACO 138KV	30	-0.05817	AEPW	COCENTRIX 345KV	221.3008	-0.00021	-0.05796	83
WERE	WACO 138KV	30	-0.05817	NPPD	COL COG7 115.00 115KV	75	-0.00034	-0.05763	83
WERE	WACO 138KV	30	-0.05817	NPPD	COOPER1G 22.000 345KV	551.2802	-0.00008	-0.05811	83
WERE	WACO 138KV	30	-0.05817	AEPW	EASTMAN 138KV	356.7324	-0.0003	-0.05787	83
WERE	WACO 138KV	30	-0.05817	WERE	EMPORIA ENERGY CENTER 345KV	610	-0.00028	-0.05792	83
WERE	WACO 138KV	30	-0.05817	AEPW	FITZHUGH 161KV	125.4	-0.0001	-0.05807	83
WERE	WACO 138KV	30	-0.05817	AEPW	FLINT CREEK 161KV	428	0.0001	-0.05827	83
WERE	WACO 138KV	30	-0.05817	OPPD	FREM 8G 13.800 69KV	90	-0.00023	-0.05794	83
WERE	WACO 138KV	30	-0.05817	OPPD	FT CAL1G 22.000 4KV	376	-0.00017	-0.058	83
WERE	WACO 138KV	30	-0.05817	WERE	JEFFREY ENERGY CENTER 230KV	440	-0.00025	-0.05792	83
WERE	WACO 138KV	30	-0.05817	WERE	JEFFREY ENERGY CENTER 345KV	874	-0.00025	-0.05792	83
WERE	WACO 138KV	30	-0.05817	AEPW	KNOXLEE 138KV	282	-0.0003	-0.05787	83
WERE	WACO 138KV	30	-0.05817	WERE	LAWRENCE ENERGY CENTER 230KV	223.9286	-0.00014	-0.05831	83
WERE	WACO 138KV	30	-0.05817	AEPW	LIEBROCK 345KV	517.0267	-0.0003	-0.05787	83
WERE	WACO 138KV	30	-0.05817	AEPW	LIEBERMAN 138KV	174	-0.00027	-0.0579	83
WERE	WACO 138KV	30	-0.05817	OKGE	MUSKOGEE 161KV	166	-0.00018	-0.05801	83
WERE	WACO 138KV	30	-0.05817	OKGE	MUSKOGEE 345KV	1548	-0.0002	-0.05797	83
WERE	WACO 138KV	30	-0.05817	OPPD	N OMA 1G 13.800 2KV	48.5	-0.00018	-0.05801	83
WERE	WACO 138KV	30	-0.05817	OPPD	N OMA 2G 13.800 2KV	80.59999	-0.00018	-0.05801	83
WERE	WACO 138KV	30	-0.05817	OPPD	N OMA 3G 13.800 2KV	80.59999	-0.00018	-0.05801	83
WERE	WACO 138KV	30	-0.05817	OPPD	N OMA 4G 15.000 2KV	107.4	-0.00018	-0.05801	83
WERE	WACO 138KV	30	-0.05817	OPPD	N OMA 5G 20.000 4KV	173.9	-0.00018	-0.05801	83
WERE	WACO 138KV	30	-0.05817	OPPD	NEBCTY1G 18.000 4KV	466	-0.00014	-0.05803	83
WERE	WACO 138KV	30	-0.05817	OPPD	NEBCTY2G 23.000 345KV	503	-0.00014	-0.05803	83
WERE	WACO 138KV	30	-0.05817	AEPW	NORTH EASTERN STATION 138KV	480	-0.00003	-0.05814	83
WERE	WACO 138KV	30	-0.05817	AEPW	NORTH EASTERN STATION 345KV	625	0.00016	-0.05833	83
WERE	WACO 138KV	30	-0.05817	AEPW	OEC 345KV	293.378	-0.0001	-0.05807	83
WERE	WACO 138KV	30	-0.05817	AEPW	PIRKEY GENERATION 138KV	288	-0.0003	-0.05787	83
WERE	WACO 138KV	30	-0.05817	NPPD	SHELDN1G 13.800 115KV	68.40001	-0.00026	-0.05791	83
WERE	WACO 138KV	30	-0.05817	NPPD	SHELDN2G 13.800 115KV	81	-0.00026	-0.05791	83
WERE	WACO 138KV	30	-0.05817	WERE	TECUMSEH ENERGY CENTER 115KV	133	0.00018	-0.05835	83
WERE	WACO 138KV	30	-0.05817	AEPW	TON TOWN 161KV	140	0.00007	-0.05824	83
WERE	WACO 138KV	30	-0.05817	AEPW	TULSA POWER STATION 138KV	147	-0.00018	-0.05798	83
WERE	WACO 138KV	30	-0.05817	AEPW	WELSH 345KV	1044	-0.00033	-0.05784	83
WERE	WACO 138KV	30	-0.05817	AEPW	WILKES 138KV	410.4529	-0.00031	-0.05786	83
WERE	WACO 138KV	30	-0.05817	AEPW	WILKES 345KV	308	-0.0003	-0.05787	83
WERE	WACO 138KV	30	-0.05817	MKEC	CLIF TON 115KV	65	-0.00077	-0.0574	84
WERE	WACO 138KV	30	-0.05817	AEPW	COMANCHE 138KV	145	-0.00113	-0.05704	84
WERE	WACO 138KV	30	-0.05817	AEPW	COMANCHE 69KV	60	-0.00113	-0.05705	84
WERE	WACO 138KV	30	-0.05817	NPPD	DENVER G 34.500 115KV	34.32993	-0.00052	-0.05765	84
WERE	WACO 138KV	30	-0.05817	NPPD	EGY CTRG 13.800 115KV	54	-0.00052	-0.05765	84
WERE	WACO 138KV	30	-0.05817	NPPD	GENTLM1G 23.000 230KV	463	-0.00114	-0.05703	84
WERE	WACO 138KV	30	-0.05817	NPPD	GENTLM2G 24.000 345KV	443.0568	-0.00117	-0.057	84
WERE	WACO 138KV	30	-0.05817	NPPD	GT-2 G 13.800 115KV	40	-0.00058	-0.05761	84
WERE	WACO 138KV	30	-0.05817	OKGE	HORSESHOE LAKE 138KV	798	-0.00095	-0.05722	84
WERE	WACO 138KV	30	-0.05817	OKGE	MCLAIN 138KV	470	-0.0001	-0.05717	84
WERE	WACO 138KV	30	-0.05817	EMDE	MRWYG11 34.500 230KV	100	-0.00078	-0.05738	84
WERE	WACO 138KV	30	-0.05817	OKGE	MUSTANG 138KV	351	-0.00103	-0.05714	84
WERE	WACO 138KV	30	-0.05817	OKGE	MUSTANG 69KV	52.52197	-0.00103	-0.05714	84
WERE	WACO 138KV	30	-0.05817	NPPD	PLATTE1G 13.800 115KV	71.51868	-0.00058	-0.05759	84
WERE	WACO 138KV	30	-0.05817	OKGE	RED RD 345KV	42.0256	-0.00091	-0.05726	84
WERE	WACO 138KV	30	-0.05817	OKGE	SEMINOLE 138KV	334.8979	-0.00088	-0.05728	84
WERE	WACO 138KV	30	-0.05817	OKGE	SEMINOLE 345KV	1019	-0.00088	-0.05728	84
WERE	WACO 138KV	30	-0.05817	OKGE	SMITH COGEN 138KV	106	-0.00102	-0.05715	84
WERE	WACO 138KV	30	-0.05817	AEPW	SOUTHWESTERN STATION 138KV	712	-0.00112	-0.05705	84
WERE	WACO 138KV	30	-0.05817	AEPW	SOUTHWESTERN STATION 345KV	287	-0.00112	-0.05705	84
WERE	WACO 138KV	30	-0.05817	OKGE	SPACK1G 13.200 345KV	78	-0.00114	-0.05703	84
WERE	WACO 138KV	30	-0.05817	OKGE	CENTENIAL WIND 34KV	120	-0.00128	-0.05691	85
WERE	WACO 138KV	30	-0.05817	OKGE	FPLWIND2 34KV	59	-0.00134	-0.05683	85
WERE	WACO 138KV	30	-0.05817	OKGE	SOONER 345KV	537	-0.00154	-0.05663	85
WERE	WACO 138KV	30	-0.05817	WERE	HUTCHINSON ENERGY CENTER 115KV	275.4319	-0.00191	-0.05626	86
WERE	WACO 138KV	30	-0.05817	WERE	HUTCHINSON ENERGY CENTER 69KV	30	-0.00198	-0.05622	86
WERE	WACO 138KV	30	-0.05817	OKGE	SOONER 138KV	538	-0.00213	-0.05649	86
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	MKEC	GRAY COUNTY WIND FARM 115KV	36	-0.00843	-0.05531	87
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	MKEC	JUDSON LARGE 115KV	95.97768	-0.00849	-0.05525	87
WERE	WACO 138KV	30	-0.05817	MIDW	KNOLL 115KV	75.00001	-0.00298	-0.05519	87
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	WERE	EVANS ENERGY CENTER 138KV	560	-0.00905	-0.05469	88
WERE	WACO 138KV	30	-0.05817	MKEC	A. M. MULLERGEN GENERATOR 115KV	63	-0.00453	-0.05364	90
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.06374	WERE	CITY OF WINFIELD 69KV	31.2	-0.01208	-0.05166	93

Maximum Decrement and Maximum Increment were determined from the Source and Sink Operating Points in the study models where limiting facility was identified.

Factor = Source GSF - Sink GSF

Redispatch Amount = Relief Amount / Factor

Upgrade: SILOAM CITY - SILOAM SPRINGS 161KV CKT 1  
 Limiting Facility: SILOAM CITY - SILOAM SPRINGS 161KV CKT 1  
 Direction: FROM->TO  
 Line Outage: CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1  
 Flowgate: 2007AG2AFS81T613310SP  
 Date Redispatch Needed: Starting 2010 6/1 - 10/1 Until EOL of Upgrade  
 Season Flowgate Identified: 2010 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount										
1286446	3.4	3.4	Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	GRDA	KERR 161KV	27	0.08778	-0.40713	8			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	GRDA	SALINA 161KV	39.30963	0.08778	-0.40713	8			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	GRDA	GRDA1 161KV	190	0.06685	-0.3862	9			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	GRDA	GRDA1 345KV	203.0309	0.05962	-0.37897	9			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	GRDA	KERR 115KV	27	0.07908	-0.39843	9			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	OKGE	MUSKOGEE 161KV	166	-0.00089	-0.35827	9			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	GRDA	PENSACOLA 161KV	22	0.04408	-0.36349	9			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	GRDA	PENSACOLA 69KV	33	0.04787	-0.36722	9			
AEPW	TONTITOWN 161KV	186.12	-0.28778	GRDA	KERR 115KV	27	0.07908	-0.36686	9			
AEPW	TONTITOWN 161KV	186.12	-0.28778	GRDA	KERR 161KV	27	0.08778	-0.37556	9			
AEPW	TONTITOWN 161KV	186.12	-0.28778	GRDA	SALINA 161KV	39.30963	0.08778	-0.37556	9			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	OKGE	AES 161KV	320	0.01418	-0.33351	10			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	SPS	ANADARKO 138KV	371.0778	0.02193	-0.34134	10			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	AEPW	ARSENAL HILL 138KV	455	0.00936	-0.32871	10			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	AEPW	ARSENAL HILL 69KV	90	0.00937	-0.32872	10			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	LEPA	BAYOU RAMOS 138KV	33.07825	0.00353	-0.32288	10			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	SPS	BLACKHAWK 115KV	220	0.0147	-0.33405	10			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	GRDA	BOOMER 69KV	24	0.02867	-0.34802	10			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	SPS	CAPROCK 9KV	83	0.01614	-0.33549	10			
AEPW	ELKIN GN 1 13.800 69KV	60	-0.31935	OKGE	CENTENIAL WIND 34KV	44	0.02214	-0.34149	1			

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

AEPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	COMANCHE 138KV	148	0.02161	-0.34096	10
AEPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	COMANCHE 69KV	60	0.02168	-0.34103	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	CUNNINGHAM 115KV	181	0.01638	-0.33574	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	CUNNINGHAM 230KV	302	0.01638	-0.33573	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	CZ 69KV	39	0.01551	-0.33486	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	CELE	DOLET HILLS 345KV	370	0.00848	-0.32784	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	EASTMAN 138KV	157.548	0.01033	-0.32968	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	EMDE	ELK RIVER 345KV	44.986	0.00572	-0.32507	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	EMDE	EMPORIA ENERGY CENTER 345KV	610	0.00364	-0.32289	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	CELE	EVANGELINE 230KV	234	0.00445	-0.32328	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WERE	EVANS ENERGY CENTER 138KV	560	0.00738	-0.32674	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	FITZHUGH 161KV	125.4	0.01021	-0.32956	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	FPLWIND2 34KV	16	0.0218	-0.34115	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	CELE	G1COLUMB 13.800 138KV	12.7	0.0037	-0.32305	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	CELE	G1WKRAFT 13.800 230KV	55	0.00648	-0.32583	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	CELE	G7EVAN 22.000 138KV	165	0.00435	-0.32374	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WERE	GILL ENERGY CENTER 138KV	155	0.00748	-0.32683	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WERE	GILL ENERGY CENTER 69KV	52	0.00758	-0.32694	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	HARRINGTON 230KV	1040	0.01502	-0.33437	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	HOBBS PLT2 118.000 115KV	300	0.01638	-0.33574	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	HOBBS PLT3 118.000 230KV	210	0.01638	-0.33574	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	HORSESHOE LAKE 138KV	796	0.02285	-0.34333	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	HORSESHOE LAKE 69KV	16	0.02442	-0.34377	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	HUBRCO2 69KV	11	0.01473	-0.3341	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WFEC	HUGO 138KV	440	0.01855	-0.3379	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WERE	HUTCHINSON ENERGY CENTER 115KV	257.90333	0.00594	-0.32529	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WERE	HUTCHINSON ENERGY CENTER 69KV	30	0.00594	-0.32529	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	LEPA	IRVN SUB 69KV	24	0.00328	-0.32263	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	JONES 230KV	488	0.01671	-0.33614	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	KNOXLEE 138KV	282	0.01028	-0.32961	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	LEBROCK 345KV	367.1163	0.01031	-0.32966	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	LIEBERMAN 138KV	174	0.00954	-0.32889	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	LONESTAR POWER PLANT 69KV	27	0.01081	-0.33016	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	LP-BRND2 69KV	20	0.01681	-0.33616	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	LP-HACK2 69KV	60	0.01681	-0.33616	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	MADOX 115KV	153.1479	0.01683	-0.33574	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	MAJESTC_WND3115.00 115KV	8	0.01497	-0.33432	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	MCCLEIN 138KV	470	0.02308	-0.34243	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WFEC	MORLND 138KV	320.7558	0.02178	-0.34114	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	MUSKOGEE 345KV	1548	0.02885	-0.3482	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	MUSTANG 115KV	300	0.01643	-0.33574	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	MUSTANG 138KV	351	0.02312	-0.34247	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	MUSTANG 230KV	460	0.01641	-0.33576	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	MUSTANG 69KV	90	0.02313	-0.34248	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	NICHOLS 115KV	147	0.01511	-0.33446	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	NICHOLS 230KV	147	0.01505	-0.3344	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	NORTHEASTERN STATION 138KV	483	0.03713	-0.35648	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	NORTHEASTERN STATION 345KV	625	0.02898	-0.34919	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	OEC 345KV	555.4863	0.03177	-0.35112	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OMPA	OMPA-KAW 69KV	26.99778	0.02157	-0.34092	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OMPA	OMPA-KINGFISHER BOWMAN 69KV	8	0.02202	-0.34137	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OMPA	OMPA-LAVERNE 69KV	4	0.02184	-0.34119	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OMPA	OMPA-MANGUM 69KV	6	0.02088	-0.34021	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OMPA	OMPA-PAWHUSKA NORTHEAST 138KV	7	0.02911	-0.34846	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OMPA	OMPA-PONCA CITY 69KV	153	0.02157	-0.34092	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	PIRKEY GENERATION 138KV	288	0.01028	-0.32964	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	PLANTX 115KV	205	0.01618	-0.33553	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	PLANTX 230KV	189	0.01614	-0.33549	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	REDBLD 345KV	11.79895	0.02444	-0.34378	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	CELE	RODEMACHER 230KV	991	0.00498	-0.32433	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	SAN JUAN 230KV	120	0.01624	-0.33559	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	SEMINOLE 138KV	329.1385	0.02322	-0.34257	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	SEMINOLE 345KV	1019	0.02305	-0.3424	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	SIDRCH 69KV	20	0.01475	-0.3341	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	SMITH COGEN 138KV	106	0.02316	-0.3425	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	SOONER 138KV	535	0.02212	-0.34147	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	SOONER 345KV	537	0.02128	-0.34061	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	SOUTH 4TH ST 69KV	12.71973	0.02115	-0.3405	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	SOUTHWESTERN STATION 138KV	287	0.02187	-0.34122	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	SOUTHWESTERN STATION 138KV	712	0.02187	-0.34122	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	SPCKR2 13.200 345KV	78	0.02268	-0.34204	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	SPCKR3&4 13.200 345KV	12	0.02268	-0.34204	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	STER WATER 115KV	80	0.01531	-0.33466	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	CELE	TECHE 138KV	291.0071	0.00378	-0.32313	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	OKGE	TINKER 5G 138KV	60	0.02338	-0.34274	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	TOLK 230KV	1019.998	0.01622	-0.33557	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	TULSA POWER STATION 138KV	240.0888	0.03348	-0.35281	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	WEATHERFORD 34KV	12	0.02128	-0.3406	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	WELSH 345KV	1044	0.01143	-0.33084	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	WILKES 138KV	410.8666	0.01668	-0.33003	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	WILKES 345KV	308	0.01051	-0.32986	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SPS	WILWIND 230KV	160	0.01508	-0.33443	10
AEPPW	TONTITOWN 161KV	186.12	-0.28778	GRDA	GRDA1 161KV	190	0.06685	-0.35463	10
AEPPW	TONTITOWN 161KV	186.12	-0.28778	GRDA	GRDA1 345KV	203.0395	0.05963	-0.34744	10
AEPPW	TONTITOWN 161KV	186.12	-0.28778	OKGE	MUSKOGEE 161KV	168	0.03892	-0.3267	10
AEPPW	TONTITOWN 161KV	186.12	-0.28778	AEPPW	NORTHEASTERN STATION 138KV	480	0.03713	-0.32491	10
AEPPW	TONTITOWN 161KV	186.12	-0.28778	GRDA	PENSACOLA 161KV	22	0.04408	-0.33186	10
AEPPW	TONTITOWN 161KV	186.12	-0.28778	GRDA	PENSACOLA 69KV	33	0.04787	-0.33565	10
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	EMDE	ASBURY 161KV	192	-0.02028	-0.29845	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	LEPA	CITY OF HOUMA SUB 115KV	95	0.00315	-0.32251	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WERE	CITY OF IOLA 69KV	10.2	0.00105	-0.3204	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEPPW	ELLIS 69KV	6	-0.00989	-0.31039	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WERE	HOLTEN 115KV	12.2	0.00202	-0.32137	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WERE	JEFFREY ENERGY CENTER 230KV	440	0.0028	-0.32225	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WERE	JEFFREY ENERGY CENTER 345KV	874	0.00292	-0.32227	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SWPA	JONESBORO 161KV	63	-0.00288	-0.31637	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WERE	LAWRENCE ENERGY CENTER 230KV	223.9923	0.00204	-0.32139	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SWPA	PARAGOULD 69KV	5.5	-0.00283	-0.31652	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	EMDE	RIVERTON 161KV	190.2537	-0.01988	-0.29949	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	EMDE	RIVERTON 69KV	43.98938	-0.02305	-0.2963	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	SWPA	SIKESTON 161KV	238	-0.00258	-0.31679	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WERE	SOUTH SENECA 115KV	11.2	-0.00174	-0.32109	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	WERE	TECUMSEH ENERGY CENTER 115KV	133	0.00236	-0.32173	11
AEPPW	ELKIN_GN 1 13.800 69KV	60	-0.31935	LEPA	WATERLOO SUB 230KV	13	0.00318	-0.32253	11
AEPPW	TONTITOWN 161KV	186.12	-0.28778	OKGE	AES 161KV	320	0.01416	-0.30194	11
AEPPW	TONTITOWN 161KV	186.12	-0.28778	WFEC	ANADARKO 138KV	371.0778	0.02198	-0.30977	11
AEPPW	TONTITOWN 161KV	186.12	-0.28778	AEPPW					

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	FPLWIND2 34KV	16	0.0218	-0.30958	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	GILL ENERGY CENTER 138KV	165	0.00748	-0.29526	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	GILL ENERGY CENTER 69KV	52	0.00759	-0.29537	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	HARRINGTON 230KV	1040	0.01503	-0.3028	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	HOBBS PLT2 118.000 115KV	300	0.01636	-0.30417	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	HOBBS PLT3 118.000 230KV	210	0.01638	-0.30417	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	HORSESHOE LAKE 138KV	796	0.02395	-0.31173	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	HORSESHOE LAKE 69KV	16	0.02442	-0.3122	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	HUBRCO2 69KV	11	0.01478	-0.30253	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	WFEFC	HUGO 138KV	440	0.01855	-0.30633	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	JONES 230KV	486	0.01878	-0.30457	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	KNOXLEE 138KV	282	0.01028	-0.29804	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	LEBROCK 345KV	367.1163	0.01031	-0.29809	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	LIEBERMAN 138KV	174	0.00954	-0.29732	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	LONESTAR POWER PLANT 69KV	27	0.01081	-0.29859	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	LP-BRD2 69KV	20	0.01681	-0.30459	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	LP-MACK2 69KV	60	0.01681	-0.30459	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	MADOX 115KV	153.1479	0.01638	-0.30417	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	MAJESTC WND3115.00 115KV	8	0.01497	-0.30275	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	MCCLAIN 138KV	470	0.02308	-0.31086	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	WFEFC	MORLND 138KV	320.7559	0.02178	-0.30957	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	MUSKOGEE 345KV	1548	0.02285	-0.31863	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	MUSTANG 115KV	300	0.01668	-0.30421	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	MUSTANG 138KV	351	0.02312	-0.3109	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	MUSTANG 230KV	460	0.01641	-0.30419	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	MUSTANG 69KV	90	0.02313	-0.31091	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	NICHOLS 115KV	147	0.01511	-0.30289	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	NICHOLS 230KV	147	0.01508	-0.30283	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	NORTHEASTERN STATION 345KV	628	0.02294	-0.31762	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	OEC 345KV	555.4863	0.03177	-0.31955	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OMPA	OMPA-KAW 69KV	26.99778	0.02157	-0.30935	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OMPA	OMPA-KINGFISHER BOWMAN 69KV	8	0.02202	-0.3098	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OMPA	OMPA-LAVERNE 69KV	4	0.02184	-0.30962	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OMPA	OMPA-MANGUM 69KV	6	0.02086	-0.30864	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OMPA	OMPA-PAWHUSKA NORTHEAST 138KV	7	0.02911	-0.31688	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OMPA	OMPA-PONCA CITY 69KV	153	0.02157	-0.30935	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	PIRKEY GENERATION 138KV	288	0.01028	-0.29807	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	PLANTX 115KV	205	0.01618	-0.30396	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	PLANTX 230KV	189	0.01614	-0.30392	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	REDRID 345KV	11.79895	0.02444	-0.31222	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	SAN JUAN 230KV	120	0.01624	-0.30402	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	SEMINOLE 138KV	329.1985	0.02322	-0.311	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	SEMINOLE 345KV	1019	0.02305	-0.31083	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	SIDRCH 69KV	20	0.01478	-0.30253	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	SMITH COGEN 138KV	106	0.02318	-0.31093	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	SOONER 138KV	535	0.02212	-0.3098	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	SOONER 345KV	573	0.02126	-0.30904	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	SOUTH 4TH ST 69KV	12.71973	0.02115	-0.30893	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	SOUTHWESTERN STATION 138KV	712	0.02187	-0.30965	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	SOUTHWESTERN STATION 138KV	287	0.02187	-0.30965	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	SPOCK1&2 13.200 345KV	78	0.02268	-0.31047	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	SPOCK3&4 13.200 345KV	12	0.02268	-0.31047	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	STERLING WATER 115KV	80	0.01531	-0.30309	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	OKGCE	TINKER 5G 138KV	60	0.02338	-0.31117	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	TOLK 230KV	1019.998	0.01622	-0.304	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	TULSA POWER STATION 138KV	240.0898	0.03346	-0.32124	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	WEATHERFORD 34KV	12	0.02125	-0.30903	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	WELSH 345KV	1044	0.01148	-0.29927	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	WILKS 138KV	410.8686	0.01068	-0.29846	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	WILKS 345KV	308	0.01051	-0.29828	11
AEWP	TONTITOWN 161KV	186.12	-0.28778	SPS	WILWIND 230KV	160	0.01508	-0.30286	11
AEWP	ELKIN_GN 1 13.800 69KV	60	-0.31935	SWPA	CARTHAGE 69KV	20	-0.02847	-0.29088	12
AEWP	ELKIN_GN 1 13.800 69KV	60	-0.31935	EMDE	LARUSSEL 161KV	100	-0.03197	-0.28738	12
AEWP	ELKIN_GN 1 13.800 69KV	60	-0.31935	EMDE	OZARK BEACH 161KV	16	-0.04178	-0.27758	12
AEWP	ELKIN_GN 1 13.800 69KV	60	-0.31935	EMDE	STATE LINE 161KV	538	-0.02798	-0.29131	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	LEPA	BAYOU RAMOS 138KV	33.07825	0.00353	-0.29131	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	CHANUTE 69KV	54.8	0.00448	-0.29224	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	CITY OF BURLINGTON 69KV	55.4	0.00437	-0.29215	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	CITY OF ERIE 69KV	4	0.00448	-0.29224	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	LEPA	CITY OF HOUMA SUB 115KV	95	0.00318	-0.29094	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	CITY OF ORLA 69KV	10	0.00188	-0.28883	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	CLAY CENTER JUNCTION 115KV	16.5	0.00396	-0.29164	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	0.00437	-0.29215	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	EMDE	ELK RIVER 345KV	44.986	0.00572	-0.2935	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	AEWP	ELLIS 69KV	6	-0.00896	-0.27882	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	EMPORIA ENERGY CENTER 345KV	610	0.00364	-0.29142	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	CELE	EVANGELINE 230KV	234	0.00445	-0.29223	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	CELE	G1COLUMB 13.800 138KV	12.7	0.0037	-0.29148	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	CELE	G1WKRAFT 13.800 230KV	55	0.00648	-0.29426	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	CELE	G7EVAN 22.000 138KV	165	0.00438	-0.29217	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	HOLTON 115KV	12.2	0.00202	-0.2898	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	HUTCHINSON ENERGY CENTER 115KV	257.9033	0.00594	-0.29372	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	HUTCHINSON ENERGY CENTER 69KV	30	0.00594	-0.29372	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	LEPA	IRVING SUB 69KV	24	0.00328	-0.29186	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	JEFFREY ENERGY CENTER 230KV	440	0.0028	-0.29068	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	JEFFREY ENERGY CENTER 345KV	874	0.00292	-0.2907	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	SWPA	JONESBORO 161KV	63	-0.00298	-0.2848	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	LAWRENCE ENERGY CENTER 230KV	223.9929	0.00204	-0.28982	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	SWPA	PARAGOULD 69KV	5.5	-0.00283	-0.28495	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	CELE	ROCKMAGHER 230KV	891	0.00498	-0.29276	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	SWPA	SIKESTON 161KV	23.5	-0.00258	-0.28522	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	SOUTH SENECA 115KV	11.2	0.00174	-0.28952	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	CELE	TECHE 138KV	291.0071	0.00378	-0.29156	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	WERE	TUCUMSEH ENERGY CENTER 115KV	133	0.00238	-0.29016	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	LEPA	WATERLOO SUB 230KV	6	0.00318	-0.29096	12
AEWP	TONTITOWN 161KV	186.12	-0.28778	EMDE	ASBURY 161KV	192	-0.0208	-0.26688	13
AEWP	TONTITOWN 161KV	186.12	-0.28778	SWPA	CARTHAGE 69KV	20	-0.02847	-0.25931	13
AEWP	TONTITOWN 161KV	186.12	-0.28778	EMDE	LARUSSEL 161KV	100	-0.03197	-0.25581	13
AEWP	TONTITOWN 161KV	186.12	-0.28778	EMDE	RIVERTON 161KV	190.2537	-0.01988	-0.26792	13
AEWP	TONTITOWN 161KV	186.12	-0.28778	EMDE	RIVERTON 69KV	43.98939	-0.02305	-0.26473	13
AEWP	TONTITOWN 161KV	186.12	-0.28778	EMDE	STATE LINE 161KV	538	-0.02798	-0.25979	13
AEWP	TONTITOWN 161KV	186.12	-0.28778	EMDE	OZARK BEACH 161KV	16	-0.04178	-0.24602	14
EMDE	LARUSSEL 161KV	171	-0.03197	GRDA	KERR 161KV	27	0.08778	-0.11975	28
EMDE	LARUSSEL 161KV	171	-0.03197	GRDA	SALINA 161KV	39.30963	0.08778	-0.11975	28
SWPA	CARTHAGE 69KV	12	-0.02847	GRDA	KERR 161KV	27	0.08778	-0.11625	29
SWPA	CARTHAGE 69KV	12	-0.02847	GRDA	SALINA 161KV	39.30963	0.08778	-0.11625	29
EMDE	STATE LINE 161KV	72	-0.02798	GRDA	KERR 161KV	27	0.08778	-0.11577	29
EMDE	STATE LINE 161KV	72	-0.02798	GRDA	SALINA 161KV	39.30963	0.08778	-0.11577	29
AEWP	ELKIN_GN 1 13.800 69KV	60	-0.31935	AEWP	FLINT CREEK 161KV	428	-0.20738	-0.112	30
EMDE	LARUSSEL 161KV	171	-0.03197	GRDA	KERR 115KV	27	0.07908	-0.11105	30
EMDE	ASBURY 161KV	21	-0.0209	GRDA	KERR 161KV	27	0.08778	-0.10868	31
EMDE	ASBURY 161KV	21	-0.0209	GRDA	SALINA 161KV	39.30963	0.08778	-0.10868	31
SWPA	CARTHAGE 69KV	12	-0.02847	GRDA	KERR 115KV	27	0.07908	-0.10755	31
EMDE	RIVERTON 161KV	92.74631							

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

SWPA	JONESBORO 161KV	52	-0.00298	GRDA	SALINA 161KV	39.30963	0.08778	-0.09076	37
SWPA	KENNETT 69KV	29	-0.00264	GRDA	KERR 161KV	27	0.08778	-0.09042	37
SWPA	KENNETT 69KV	29	-0.00264	GRDA	SALINA 161KV	39.30963	0.08778	-0.09042	37
EMDE	LARUSSEL 161KV	171	-0.03197	GRDA	GRDA1 345KV	203.0309	0.05962	-0.01559	37
SWPA	MALDEN 69KV	17	-0.00258	GRDA	KERR 161KV	27	0.08778	-0.09036	37
SWPA	MALDEN 69KV	17	-0.00258	GRDA	SALINA 161KV	39.30963	0.08778	-0.09036	37
SWPA	POPLAR BLUFF 69KV	32	-0.00407	GRDA	KERR 161KV	27	0.08778	-0.09185	37
SWPA	POPLAR BLUFF 69KV	32	-0.00407	GRDA	SALINA 161KV	39.30963	0.08778	-0.09185	37
AEPW	ELLIS 69KV	20	-0.00896	GRDA	KERR 115KV	27	0.07908	-0.08804	38
EMDE	RIVERTON 69KV	22.01061	0.02305	GRDA	GRDA1 161KV	190	0.06685	-0.0399	38
EMDE	ASBURY 161KV	21	-0.0209	GRDA	GRDA1 161KV	190	0.06685	-0.08775	39
WERE	CITY OF IOLA 69KV	27.428	0.00105	GRDA	KERR 161KV	27	0.08778	-0.08673	39
WERE	CITY OF IOLA 69KV	27.428	0.00105	GRDA	SALINA 161KV	39.30963	0.08778	-0.08673	39
EMDE	RIVERTON 161KV	92.74631	-0.01986	GRDA	GRDA1 161KV	190	0.06685	-0.08671	39
EMDE	STATE LINE 161KV	72	-0.02799	GRDA	GRDA1 345KV	203.0309	0.05962	-0.08761	39
CELE	ACADIA 138KV	1322	0.00396	GRDA	KERR 161KV	27	0.08778	-0.08382	40
CELE	ACADIA 138KV	1322	0.00396	GRDA	SALINA 161KV	39.30963	0.08778	-0.08382	40
LEPA	BAYOU RAMOS 138KV	24.92175	0.00353	GRDA	KERR 161KV	27	0.08778	-0.08425	40
LEPA	BAYOU RAMOS 138KV	24.92175	0.00353	GRDA	SALINA 161KV	39.30963	0.08778	-0.08425	40
WERE	CLAY CENTER JUNCTION 115KV	13.375	0.00386	GRDA	KERR 161KV	27	0.08778	-0.08392	40
WERE	CLAY CENTER JUNCTION 115KV	13.375	0.00386	GRDA	SALINA 161KV	39.30963	0.08778	-0.08392	40
WERE	EMPORIA ENERGY CENTER 345KV	201	0.00364	GRDA	KERR 161KV	27	0.08778	-0.08414	40
WERE	EMPORIA ENERGY CENTER 345KV	201	0.00364	GRDA	SALINA 161KV	39.30963	0.08778	-0.08414	40
LEPA	IRION SUB 69KV	20	0.00328	GRDA	KERR 161KV	27	0.08778	-0.0845	40
LEPA	IRION SUB 69KV	20	0.00328	GRDA	SALINA 161KV	39.30963	0.08778	-0.0845	40
WERE	JEFFREY ENERGY CENTER 230KV	54	0.0029	GRDA	KERR 161KV	27	0.08778	-0.08488	40
WERE	JEFFREY ENERGY CENTER 230KV	54	0.0029	GRDA	SALINA 161KV	39.30963	0.08778	-0.08488	40
WERE	JEFFREY ENERGY CENTER 345KV	108	0.00282	GRDA	KERR 161KV	27	0.08778	-0.08486	40
WERE	JEFFREY ENERGY CENTER 345KV	108	0.00282	GRDA	SALINA 161KV	39.30963	0.08778	-0.08486	40
WERE	LAWRENCE ENERGY CENTER 230KV	45.00714	0.00204	GRDA	KERR 161KV	27	0.08778	-0.08574	40
WERE	LAWRENCE ENERGY CENTER 230KV	45.00714	0.00204	GRDA	SALINA 161KV	39.30963	0.08778	-0.08574	40
CELE	TECHE 138KV	80.99292	0.00378	GRDA	KERR 161KV	27	0.08778	-0.084	40
CELE	TECHE 138KV	80.99292	0.00378	GRDA	SALINA 161KV	39.30963	0.08778	-0.084	40
CELE	TECHE 34KV	23	0.00378	GRDA	KERR 161KV	27	0.08778	-0.084	40
CELE	TECHE 34KV	23	0.00378	GRDA	SALINA 161KV	39.30963	0.08778	-0.084	40
WERE	TECUMSEH ENERGY CENTER 115KV	28	0.00238	GRDA	KERR 161KV	27	0.08778	-0.0854	40
WERE	TECUMSEH ENERGY CENTER 115KV	28	0.00238	GRDA	SALINA 161KV	39.30963	0.08778	-0.0854	40
WERE	TECUMSEH ENERGY CENTER 69KV	41	0.0024	GRDA	KERR 161KV	27	0.08778	-0.08538	40
WERE	TECUMSEH ENERGY CENTER 69KV	41	0.0024	GRDA	SALINA 161KV	39.30963	0.08778	-0.08538	40
WERE	ABILENE ENERGY CENTER 115KV	66	0.0042	GRDA	KERR 161KV	27	0.08778	-0.08358	41
WERE	ABILENE ENERGY CENTER 115KV	66	0.0042	GRDA	SALINA 161KV	39.30963	0.08778	-0.08358	41
WERE	BPU - CITY OF MCPHERSON 115KV	232	0.00548	GRDA	KERR 161KV	27	0.08778	-0.0823	41
WERE	BPU - CITY OF MCPHERSON 115KV	232	0.00548	GRDA	SALINA 161KV	39.30963	0.08778	-0.0823	41
WERE	CHANUTE 69KV	41.1	0.00446	GRDA	KERR 161KV	27	0.08778	-0.08332	41
WERE	CHANUTE 69KV	41.1	0.00446	GRDA	SALINA 161KV	39.30963	0.08778	-0.08332	41
WERE	CITY OF ERIE 69KV	22.53	0.00446	GRDA	KERR 161KV	27	0.08778	-0.08332	41
WERE	CITY OF ERIE 69KV	22.53	0.00446	GRDA	SALINA 161KV	39.30963	0.08778	-0.08332	41
CELE	D.G. HUNTER POWER STATION 138KV	125.1	0.00482	GRDA	KERR 161KV	27	0.08778	-0.08296	41
CELE	D.G. HUNTER POWER STATION 138KV	125.1	0.00482	GRDA	SALINA 161KV	39.30963	0.08778	-0.08296	41
CELE	EVANGELINE 230KV	191	0.00445	GRDA	KERR 161KV	27	0.08778	-0.08333	41
CELE	EVANGELINE 230KV	191	0.00445	GRDA	SALINA 161KV	39.30963	0.08778	-0.08333	41
CELE	GEEVAN 13.800 138KV	114	0.00439	GRDA	KERR 161KV	27	0.08778	-0.08339	41
CELE	GEEVAN 13.800 138KV	114	0.00439	GRDA	SALINA 161KV	39.30963	0.08778	-0.08339	41
CELE	GTEVAN 22.000 138KV	33.00002	0.00439	GRDA	KERR 161KV	27	0.08778	-0.08339	41
CELE	GTEVAN 22.000 138KV	33.00002	0.00439	GRDA	SALINA 161KV	39.30963	0.08778	-0.08339	41
WERE	HUTCHINSON ENERGY CENTER 115KV	146.0967	0.00594	GRDA	KERR 161KV	27	0.08778	-0.08184	41
WERE	HUTCHINSON ENERGY CENTER 115KV	146.0967	0.00594	GRDA	SALINA 161KV	39.30963	0.08778	-0.08184	41
SWPA	JONESBORO 161KV	52	-0.00298	GRDA	KERR 115KV	27	0.07908	-0.08206	41
SWPA	KENNETT 69KV	29	-0.00264	GRDA	KERR 115KV	27	0.07908	-0.08172	41
SWPA	KENNETT 69KV	29	-0.00264	GRDA	SALINA 161KV	39.30963	0.08778	-0.08166	41
CELE	NATCHITOCHES 69KV	43	0.006	GRDA	KERR 161KV	27	0.08778	-0.08178	41
CELE	NATCHITOCHES 69KV	43	0.006	GRDA	SALINA 161KV	39.30963	0.08778	-0.08178	41
SWPA	POPLAR BLUFF 69KV	32	-0.00407	GRDA	KERR 115KV	27	0.07908	-0.08315	41
EMDE	RIVERTON 69KV	22.01061	-0.02305	GRDA	GRDA1 345KV	203.0309	0.05962	-0.08267	41
CELE	RODEMACHER 230KV	196	0.00498	GRDA	KERR 161KV	27	0.08778	-0.0828	41
CELE	RODEMACHER 230KV	196	0.00498	GRDA	SALINA 161KV	39.30963	0.08778	-0.0828	41
EMDE	ASBURY 161KV	21	-0.0209	GRDA	GRDA1 345KV	203.0309	0.05962	-0.08052	42
WERE	GETTY 69KV	35	0.00705	GRDA	KERR 161KV	27	0.08778	-0.08073	42
WERE	GETTY 69KV	35	0.00705	GRDA	SALINA 161KV	39.30963	0.08778	-0.08073	42
WERE	GILL ENERGY CENTER 138KV	84.99999	0.00748	GRDA	KERR 161KV	27	0.08778	-0.0803	42
WERE	GILL ENERGY CENTER 138KV	84.99999	0.00748	GRDA	SALINA 161KV	39.30963	0.08778	-0.0803	42
WERE	GILL ENERGY CENTER 69KV	48	0.00758	GRDA	KERR 161KV	27	0.08778	-0.08019	42
WERE	GILL ENERGY CENTER 69KV	48	0.00758	GRDA	SALINA 161KV	39.30963	0.08778	-0.08019	42
EMDE	LARUSSEL 161KV	171	-0.03197	GRDA	PENSACOLA 69KV	33	0.04787	-0.07984	42
AEPW	TONTITOWN 161KV	186.12	-0.28778	AEPW	FLINT CREEK 161KV	428	-0.20735	-0.08043	42
WERE	WACO 138KV	30	0.00747	GRDA	KERR 161KV	27	0.08778	-0.08031	42
WERE	WACO 138KV	30	0.00747	GRDA	SALINA 161KV	39.30963	0.08778	-0.08031	42
AEPW	ARSENAL HILL 138KV	337.2	0.00592	GRDA	KERR 161KV	27	0.08778	-0.07842	43
AEPW	ARSENAL HILL 138KV	337.2	0.00592	GRDA	SALINA 161KV	39.30963	0.08778	-0.07842	43
WERE	CITY OF IOLA 69KV	27.428	0.00105	GRDA	KERR 115KV	27	0.07908	-0.07603	43
AEPW	FULTON 115KV	153	0.0087	GRDA	KERR 161KV	27	0.08778	-0.07908	43
AEPW	FULTON 115KV	153	0.0087	GRDA	SALINA 161KV	39.30963	0.08778	-0.07908	43
AEPW	LIEBERMAN 138KV	45.99999	0.00954	GRDA	KERR 161KV	27	0.08778	-0.07824	43
AEPW	LIEBERMAN 138KV	45.99999	0.00954	GRDA	SALINA 161KV	39.30963	0.08778	-0.07824	43
EMDE	RIVERTON 161KV	92.74631	-0.01986	GRDA	GRDA1 345KV	203.0309	0.05962	-0.07948	43
AEPW	EASTMAN 138KV	327.461	0.01033	GRDA	KERR 161KV	27	0.08778	-0.07745	44
AEPW	EASTMAN 138KV	327.461	0.01033	GRDA	SALINA 161KV	39.30963	0.08778	-0.07745	44
WERE	JEFFREY ENERGY CENTER 230KV	54	0.0029	GRDA	KERR 115KV	27	0.07908	-0.07618	44
WERE	JEFFREY ENERGY CENTER 345KV	108	0.00292	GRDA	KERR 115KV	27	0.07908	-0.07616	44
AEPW	KNOXLEE 138KV	119	0.01028	GRDA	KERR 161KV	27	0.08778	-0.07752	44
AEPW	KNOXLEE 138KV	119	0.01028	GRDA	SALINA 161KV	39.30963	0.08778	-0.07752	44
WERE	LAWRENCE ENERGY CENTER 230KV	45.00714	0.00204	GRDA	KERR 115KV	27	0.07908	-0.07704	44
AEPW	LEBROCK 345KV	329.8837	0.01031	GRDA	KERR 161KV	27	0.08778	-0.07747	44
AEPW	LEBROCK 345KV	329.8837	0.01031	GRDA	SALINA 161KV	39.30963	0.08778	-0.07747	44
WERE	TECUMSEH ENERGY CENTER 115KV	28	0.00238	GRDA	KERR 115KV	27	0.07908	-0.0767	44
WERE	TECUMSEH ENERGY CENTER 69KV	41	0.0024	GRDA	KERR 115KV	27	0.07908	-0.07668	44
AEPW	WILKES 138KV	53.13342	0.01068	GRDA	KERR 161KV	27	0.08778	-0.0771	44
AEPW	WILKES 138KV	52.13342	0.01068	GRDA	SALINA 161KV	39.30963	0.08778	-0.0771	44
WERE	ABILENE ENERGY CENTER 115KV	66	0.0042	GRDA	KERR 115KV	27	0.07908	-0.07488	45
CELE	ACADIA 138KV	1322	0.00396	GRDA	KERR 115KV	27	0.07908	-0.07512	45
LEPA	BAYOU RAMOS 138KV	24.92175	0.00353	GRDA	KERR 115KV	27	0.07908	-0.07555	45
WERE	CHANUTE 69KV	41.1	0.00446	GRDA	KERR 115KV	27	0.07908	-0.07462	45
WERE	CITY OF ERIE 69KV	22.53	0.00446	GRDA	KERR 115KV	27	0.07908	-0.07462	45
AEPW	ELLIS 69KV	20	-0.00896	GRDA	GRDA1 161KV	190	0.06685	-0.07581	45
WERE	EMPORIA ENERGY CENTER 345KV	201	0.00364	GRDA	KERR 115KV	27	0.07908	-0.07544	45
CELE	EVANGELINE 230KV	191	0.00445	GRDA	KERR 115KV	27	0.07908	-0.07463	45
CELE	GEEVAN 13.800 138KV	114	0.00439	GRDA	KERR 115KV	27	0.07908	-0.07469	45
CELE	GTEVAN 22.000 138KV	33.00002	0.00439	GRDA	KERR 115KV	27	0.07908	-0.07469	45
LEPA	IRION SUB 69KV	20	0.00328	GRDA	KERR 115KV	27	0.07908	-0.0758	45
EMDE	LARUSSEL 161KV	171	-0.03197	GRDA	PENSACOLA 161KV	27	0.04408	-0.07605	45
EMDE	STATE LINE 161KV	72	-0.02799	GRDA	PENSACOLA 69KV	33	0.04787	-0.07586	45
CELE	TECHE 138KV	80.99292	0.00378	GRDA	KERR 115KV	27	0.07908	-0.0753	45
CELE	TECHE 34KV	23	0.00378	GRDA	KERR 115KV	27	0.07908	-0.0753	45
WERE	BPU - CITY OF MCPHERSON 115KV	232	0.00548	GRDA	KERR 115KV	27	0.07908	-0.0736	46
CELE	D.G. HUNTER POWER STATION 138KV	125.1	0.00482	GRDA	KERR 115KV	27	0.07908	-0.07426	46
WERE	HUTCHINSON ENERGY CENTER 115KV	146.0967	0.00594	GRDA	KERR 115KV	27	0.07908	-0.07314	46
SPS	MOORE COUNTY 115KV	48	0.0144						

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	GILL ENERGY CENTER 69KV	48	0.00759	GRDA	KERR 115KV	27	0.07908	-0.07149	47
SPS	MADDOX 115KV	34.85205	0.01639	GRDA	KERR 161KV	27	0.08778	-0.07139	47
SPS	MADDOX 115KV	34.85205	0.01639	GRDA	SALINA 161KV	39.30963	0.08778	-0.07139	47
SPS	MAJESTC_WND03115.00 115KV	72	0.01497	GRDA	KERR 161KV	27	0.08778	-0.07281	47
SPS	MAJESTC_WND03115.00 115KV	72	0.01497	GRDA	SALINA 161KV	39.30963	0.08778	-0.07281	47
SPS	NICHOLS 115KV	66.00001	0.01511	GRDA	KERR 161KV	27	0.08778	-0.07267	47
SPS	NICHOLS 115KV	66.00001	0.01511	GRDA	SALINA 161KV	39.30963	0.08778	-0.07267	47
SPS	NICHOLS 230KV	97	0.01505	GRDA	KERR 161KV	27	0.08778	-0.07273	47
SPS	NICHOLS 230KV	97	0.01505	GRDA	SALINA 161KV	39.30963	0.08778	-0.07273	47
SPS	PLANTX 115KV	48	0.01618	GRDA	KERR 161KV	27	0.08778	-0.07116	47
SPS	PLANTX 115KV	48	0.01618	GRDA	SALINA 161KV	39.30963	0.08778	-0.07116	47
EMDE	STATE LINE 161KV	72	-0.02799	GRDA	PENSACOLA 161KV	22	0.04408	-0.07207	47
SPS	TOLK 230KV	60.00183	0.01622	GRDA	KERR 161KV	27	0.08778	-0.07156	47
SPS	TOLK 230KV	60.00183	0.01622	GRDA	SALINA 161KV	39.30963	0.08778	-0.07156	47
WERE	WACO 138KV	30	0.00747	GRDA	KERR 115KV	27	0.07908	-0.07161	47
AEPW	FULTON 115KV	153	0.0087	GRDA	KERR 115KV	27	0.07908	-0.07038	48
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	MUSKOGEE 161KV	166	0.03892	-0.07089	48
SPS	LP-HOLL2 69KV	154	0.01681	GRDA	KERR 161KV	27	0.08778	-0.07097	48
SPS	LP-HOLL2 69KV	154	0.01681	GRDA	SALINA 161KV	39.30963	0.08778	-0.07097	48
SPS	LP-MACK2 69KV	20	0.01681	GRDA	KERR 161KV	27	0.08778	-0.07097	48
SPS	LP-MACK2 69KV	20	0.01681	GRDA	SALINA 161KV	39.30963	0.08778	-0.07097	48
SWPA	POPULAR BLUFF 69KV	32	0.00407	GRDA	GRDA1 161KV	190	0.06685	-0.07092	48
EMDE	RIVERTON 69KV	22.01061	-0.02305	GRDA	PENSACOLA 69KV	33	0.04787	-0.07052	48
AEPW	ARSENAL HILL 138KV	337.2	0.00936	GRDA	KERR 115KV	27	0.07908	-0.06972	49
EMDE	ASBURY 161KV	21	-0.0209	GRDA	PENSACOLA 69KV	33	0.04787	-0.06877	49
AEPW	EASTMAN 138KV	327.461	0.01033	GRDA	KERR 115KV	27	0.07908	-0.06875	49
AEPW	ELLIS 69KV	20	-0.00896	GRDA	GRDA1 345KV	203.0309	0.05962	-0.06858	49
SWPA	JONESBORO 161KV	52	-0.0289	GRDA	GRDA1 161KV	190	0.06685	-0.06893	49
SWPA	KENNETT 69KV	29	-0.0264	GRDA	GRDA1 161KV	190	0.06685	-0.06949	49
AEPW	KNOXLEE 138KV	119	0.01028	GRDA	KERR 115KV	27	0.07908	-0.06882	49
EMDE	LARUSSEL 161KV	171	-0.03197	AEPW	NORTHEASTERN STATION 138KV	480	0.03713	-0.0691	49
AEPW	LEBROCK 345KV	329.8837	0.01031	GRDA	KERR 115KV	27	0.07908	-0.06877	49
AEPW	LIEBERMAN 138KV	45.99999	0.00954	GRDA	KERR 115KV	27	0.07908	-0.06954	49
SWPA	MALDEN 69KV	17	-0.0258	GRDA	GRDA1 161KV	190	0.06685	-0.06943	49
GRDA	COFFEYVILLE 138KV	58.6	0.01958	GRDA	KERR 161KV	27	0.08778	-0.0682	50
GRDA	COFFEYVILLE 138KV	58.6	0.01958	GRDA	SALINA 161KV	39.30963	0.08778	-0.0682	50
EMDE	RIVERTON 161KV	92.74631	-0.01986	GRDA	PENSACOLA 69KV	33	0.04787	-0.06773	50
EMDE	RIVERTON 69KV	22.01061	-0.02305	GRDA	PENSACOLA 161KV	22	0.04408	-0.06713	50
AEPW	WILKES 138KV	52.13342	0.01068	GRDA	KERR 115KV	27	0.07908	-0.0684	50
WERE	CITY OF IOLA 69KV	27.428	0.00108	GRDA	GRDA1 161KV	190	0.06685	-0.0658	51
OKGE	SOUTH 4TH ST 69KV	29.98027	0.02113	GRDA	KERR 161KV	27	0.08778	-0.06663	51
OKGE	SOUTH 4TH ST 69KV	29.98027	0.02113	GRDA	SALINA 161KV	39.30963	0.08778	-0.06663	51
AEPW	SOUTHWESTERN STATION 138KV	350	0.02187	GRDA	KERR 161KV	27	0.08778	-0.06591	51
AEPW	SOUTHWESTERN STATION 138KV	152	0.02187	GRDA	KERR 161KV	27	0.08778	-0.06591	51
AEPW	SOUTHWESTERN STATION 138KV	152	0.02187	GRDA	SALINA 161KV	39.30963	0.08778	-0.06591	51
AEPW	SOUTHWESTERN STATION 138KV	350	0.02187	GRDA	SALINA 161KV	39.30963	0.08778	-0.06591	51
EMDE	STATE LINE 161KV	72	-0.02799	OKGE	MUSKOGEE 161KV	166	0.03892	-0.06591	51
WFEC	ANADARKO 69KV	70	0.02203	GRDA	KERR 161KV	27	0.08778	-0.06575	52
WFEC	ANADARKO 69KV	70	0.02203	GRDA	SALINA 161KV	39.30963	0.08778	-0.06575	52
EMDE	ASBURY 161KV	21	-0.0209	GRDA	PENSACOLA 161KV	22	0.04408	-0.06498	52
AEPW	KIOWA 345KV	1344.801	0.02216	GRDA	KERR 161KV	27	0.08778	-0.06562	52
AEPW	KIOWA 345KV	1344.801	0.02216	GRDA	SALINA 161KV	39.30963	0.08778	-0.06562	52
EMDE	LARUSSEL 161KV	171	-0.03197	AEPW	TULSA POWER STATION 138KV	240.0898	0.03346	-0.06543	52
WERE	LAWRENCE ENERGY CENTER 230KV	45.00714	0.00294	GRDA	GRDA1 161KV	190	0.06685	-0.06481	52
OKGE	MCCLAIN 138KV	50	0.02308	GRDA	KERR 161KV	27	0.08778	-0.0647	52
OKGE	MCCLAIN 138KV	50	0.02308	GRDA	SALINA 161KV	39.30963	0.08778	-0.0647	52
SPS	MOORE COUNTY 115KV	48	0.01445	GRDA	KERR 115KV	27	0.07908	-0.06463	52
OKGE	MUSTANG 138KV	24.5	0.02312	GRDA	KERR 161KV	27	0.08778	-0.06466	52
OKGE	MUSTANG 138KV	24.5	0.02312	GRDA	SALINA 161KV	39.30963	0.08778	-0.06466	52
OKGE	SEMINOLE 138KV	205.8615	0.02322	GRDA	KERR 161KV	27	0.08778	-0.06458	52
OKGE	SEMINOLE 138KV	205.8615	0.02322	GRDA	SALINA 161KV	39.30963	0.08778	-0.06458	52
SPS	SHERMAN 1 34.500 115KV	20	0.01383	GRDA	KERR 115KV	27	0.07908	-0.06525	52
OKGE	SPGCK3&4 13.200 345KV	111	0.02269	GRDA	KERR 161KV	27	0.08778	-0.06509	52
OKGE	SPGCK3&4 13.200 345KV	111	0.02269	GRDA	SALINA 161KV	39.30963	0.08778	-0.06509	52
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	NORTHEASTERN STATION 138KV	480	0.03713	-0.06512	52
LEPA	BAROU RAMOS 138KV	24.92175	0.00353	GRDA	KERR 161KV	190	0.06685	-0.06332	53
OKGE	HORSESHOE LAKE 138KV	64	0.02395	GRDA	KERR 161KV	27	0.08778	-0.06383	53
OKGE	HORSESHOE LAKE 138KV	64	0.02395	GRDA	SALINA 161KV	39.30963	0.08778	-0.06383	53
LEPA	IRION SUB 69KV	20	0.00328	GRDA	GRDA1 161KV	190	0.06685	-0.06357	53
WERE	JEFFREY ENERGY CENTER 230KV	54	0.0029	GRDA	GRDA1 161KV	190	0.06685	-0.06395	53
WERE	JEFFREY ENERGY CENTER 345KV	108	0.0029	GRDA	GRDA1 161KV	190	0.06685	-0.06393	53
EMDE	LARUSSEL 161KV	171	-0.03197	AEPW	COGENTRIX 345KV	865	0.03203	-0.064	53
EMDE	LARUSSEL 161KV	171	-0.03197	AEPW	OEC 345KV	555.4863	0.03177	-0.06374	53
SPS	MAJESTC_WND03115.00 115KV	72	0.01497	GRDA	KERR 115KV	27	0.07908	-0.06411	53
AEPW	MID-CONTINENT 138KV	142.11	0.02413	GRDA	KERR 161KV	27	0.08778	-0.06365	53
AEPW	MID-CONTINENT 138KV	142.11	0.02413	GRDA	SALINA 161KV	39.30963	0.08778	-0.06365	53
SPS	NICHOLS 115KV	66.00001	0.01511	GRDA	KERR 115KV	27	0.07908	-0.06397	53
SPS	NICHOLS 230KV	97	0.01505	GRDA	KERR 115KV	27	0.07908	-0.06403	53
SWPA	POPULAR BLUFF 69KV	32	0.00407	GRDA	GRDA1 345KV	203.0309	0.05962	-0.06368	53
OKGE	REDBUD 345KV	1188.201	0.02444	GRDA	KERR 161KV	27	0.08778	-0.06334	53
OKGE	REDBUD 345KV	1188.201	0.02444	GRDA	SALINA 161KV	39.30963	0.08778	-0.06334	53
EMDE	RIVERTON 161KV	92.74631	-0.01986	GRDA	PENSACOLA 161KV	22	0.04408	-0.06394	53
SPS	RIVERVIEW 69KV	23	0.01474	GRDA	KERR 115KV	27	0.07908	-0.06434	53
WERE	TECUMSEH ENERGY CENTER 115KV	28	0.00238	GRDA	GRDA1 161KV	190	0.06685	-0.06447	53
WERE	TECUMSEH ENERGY CENTER 69KV	41	0.00238	GRDA	GRDA1 161KV	190	0.06685	-0.06446	53
WERE	ABILENE ENERGY CENTER 115KV	66	0.0042	GRDA	GRDA1 161KV	190	0.06685	-0.06265	54
CELE	ACADIA 138KV	1322	0.00396	GRDA	GRDA1 161KV	190	0.06685	-0.06289	54
WERE	CHANUTE 69KV	41.1	0.00446	GRDA	GRDA1 161KV	190	0.06685	-0.06239	54
WERE	CITY OF ERIE 69KV	22.53	0.00446	GRDA	GRDA1 161KV	190	0.06685	-0.06239	54
WERE	EMPORIA ENERGY CENTER 345KV	201	0.00364	GRDA	GRDA1 161KV	190	0.06685	-0.06321	54
CELE	EVANGELINE 230KV	191	0.00446	GRDA	GRDA1 161KV	190	0.06685	-0.06244	54
CELE	GEEVAN 13.800 138KV	114	0.00439	GRDA	GRDA1 161KV	190	0.06685	-0.06246	54
CELE	GEEVAN 22.000 138KV	33.00002	0.00439	GRDA	GRDA1 161KV	190	0.06685	-0.06246	54
SWPA	JONESBORO 161KV	52	-0.00298	GRDA	GRDA1 345KV	203.0309	0.05962	-0.06226	54
SWPA	KENNETT 69KV	29	-0.00264	GRDA	GRDA1 345KV	203.0309	0.05962	-0.06226	54
SPS	LP-HOLL2 69KV	154	0.01681	GRDA	KERR 115KV	27	0.07908	-0.06227	54
SPS	LP-MACK2 69KV	20	0.01681	GRDA	KERR 115KV	27	0.07908	-0.06227	54
SPS	MADDOX 115KV	34.85205	0.01639	GRDA	KERR 115KV	27	0.07908	-0.06268	54
SPS	PLANTX 115KV	48	0.01618	GRDA	KERR 115KV	27	0.07908	-0.06239	54
CELE	TECHE 138KV	80.99292	0.00378	GRDA	GRDA1 161KV	190	0.06685	-0.06307	54
CELE	TECHE 34KV	23	0.00378	GRDA	GRDA1 161KV	190	0.06685	-0.06307	54
SPS	TOLK 230KV	60.00183	0.01622	GRDA	KERR 115KV	27	0.07908	-0.06286	54
WERE	BFJ - CITY OF MCPHERSON 115KV	232	0.00549	GRDA	GRDA1 161KV	190	0.06685	-0.06137	55
CELE	D.G. HUNTER POWER STATION 138KV	125.11	0.00482	GRDA	GRDA1 161KV	190	0.06685	-0.06209	55
EMDE	LARUSSEL 161KV	171	-0						

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

AEPW	NORTHEASTERN STATION 345KV	19.99977	0.02984	GRDA	KERR 161KV	27	0.08778	-0.05794	58
AEPW	NORTHEASTERN STATION 345KV	19.99977	0.02984	GRDA	SALINA 161KV	39.30963	0.08778	-0.05794	58
EMDE	RIVERTON 161KV	92.74631	-0.01986	OKGE	MUSKOGEE 161KV	166	0.03852	-0.05788	58
OKGE	SOUTH 4TH ST 69KV	29.98027	0.02116	GRDA	KERR 115KV	27	0.07908	-0.05783	58
WFEC	ANADARKO 69KV	70	0.02203	GRDA	KERR 115KV	27	0.07908	-0.05705	59
AEPW	ARSENAL HILL 138KV	337.2	0.00936	GRDA	GRDA1 161KV	190	0.06685	-0.05749	59
WERE	LAWRENCE ENERGY CENTER 230KV	45.00714	0.00204	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05758	59
AEPW	LIEBERMAN 138KV	45.99999	0.00954	GRDA	GRDA1 161KV	190	0.06685	-0.05731	59
EMDE	RIVERTON 161KV	92.74631	-0.01986	AEPW	NORTHEASTERN STATION 138KV	480	0.03713	-0.05699	59
AEPW	SOUTHWESTERN STATION 138KV	350	0.02187	GRDA	KERR 115KV	27	0.07908	-0.05721	59
AEPW	SOUTHWESTERN STATION 138KV	152	0.02187	GRDA	KERR 115KV	27	0.07908	-0.05721	59
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	NORTHEASTERN STATION 345KV	629	0.02984	-0.05763	59
WERE	TECUMSEH ENERGY CENTER 115KV	28	0.00238	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05724	59
WERE	TECUMSEH ENERGY CENTER 69KV	41	0.0024	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05722	59
LEPA	BAYOU RAMOS 138KV	24.92175	0.00353	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05669	60
AEPW	EASTMAN 138KV	327.461	0.01033	GRDA	GRDA1 161KV	190	0.06685	-0.05652	60
AEPW	ELLIS 69KV	20	-0.00896	GRDA	PENSACOLA 69KV	33	0.04787	-0.05683	60
LEPA	IRION SUB 69KV	20	0.00328	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05634	60
WERE	JEFFREY ENERGY CENTER 230KV	54	0.0029	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05672	60
WERE	JEFFREY ENERGY CENTER 345KV	108	0.00292	GRDA	GRDA1 345KV	203.0309	0.05962	-0.0567	60
AEPW	KIOWA 345KV	1344.801	0.02216	GRDA	KERR 115KV	27	0.07908	-0.05692	60
AEPW	KNOXLEE 138KV	119	0.01028	GRDA	GRDA1 161KV	190	0.06685	-0.05659	60
AEPW	LEBROCK 345KV	329.8837	0.01031	GRDA	GRDA1 161KV	190	0.06685	-0.05654	60
OKGE	MCLAIN 138KV	50	0.02308	GRDA	KERR 115KV	27	0.07908	-0.056	60
AEPW	OEC 345KV	1591.544	0.03177	GRDA	KERR 161KV	27	0.08778	-0.05601	60
AEPW	OEC 345KV	1591.544	0.03177	GRDA	SALINA 161KV	39.30963	0.08778	-0.05601	60
EMDE	RIVERTON 69KV	22.01061	-0.02308	AEPW	TULSA POWER STATION 138KV	240.0898	0.03348	-0.05651	60
OKGE	SPGCK&I2 13.200 345KV	111	0.02268	GRDA	KERR 115KV	27	0.07908	-0.05639	60
EMDE	STATE LINE 161KV	72	-0.02799	OKGE	BOOMER 69KV	24	0.02867	-0.05666	60
EMDE	STATE LINE 161KV	72	-0.02799	OKGE	MUSKOGEE 345KV	1548	0.02885	-0.05684	60
AEPW	WILKES 138KV	52.13342	0.01068	GRDA	GRDA1 161KV	190	0.06685	-0.05617	60
WERE	ABILENE ENERGY CENTER 115KV	66	0.0042	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05542	61
CELE	ACADIA 138KV	1322	0.00396	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05566	61
WERE	CHANUTE 69KV	41.1	0.00448	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05516	61
CELE	CITY OF ERIE 69KV	22.53	0.00446	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05516	61
AEPW	COGENTRIX 345KV	29	0.03203	GRDA	KERR 161KV	27	0.08778	-0.05575	61
AEPW	COGENTRIX 345KV	29	0.03203	GRDA	SALINA 161KV	39.30963	0.08778	-0.05575	61
WERE	EMPORIA ENERGY CENTER 345KV	201	0.00364	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05598	61
CELE	EVANGELINE 230KV	191	0.00448	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05517	61
CELE	GHEVAN 13 800 138KV	114	0.00438	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05523	61
CELE	GHEVAN 22 000 138KV	33.00002	0.00438	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05523	61
OKGE	HORSESHOE LAKE 138KV	64	0.02395	GRDA	KERR 115KV	27	0.07908	-0.05513	61
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	HORSESHOE LAKE 138KV	796	0.02395	-0.05592	61
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	MUSTANG 138KV	351	0.02312	-0.05509	61
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	MUSTANG 69KV	90	0.02313	-0.0551	61
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	SEMINOLE 138KV	329.1385	0.02322	-0.05519	61
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	SMITH COGENT 138KV	106	0.02318	-0.05512	61
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	TINKER 50 138KV	60	0.02339	-0.05536	61
OKGE	MUSTANG 138KV	24.5	0.02312	GRDA	KERR 115KV	27	0.07908	-0.05596	61
EMDE	RIVERTON 69KV	22.01061	-0.02308	AEPW	COGENTRIX 345KV	865	0.03203	-0.05508	61
OKGE	SEMINOLE 138KV	205.8615	0.02322	GRDA	KERR 115KV	27	0.07908	-0.05586	61
CELE	TECHE 138KV	80.99292	0.00378	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05584	61
CELE	TECHE 345KV	23	0.00378	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05584	61
EMDE	ASBURY 161KV	21	-0.02346	GRDA	TULSA POWER STATION 138KV	240.0898	0.03348	-0.05546	62
CELE	D.G. HUNTER POWER STATION 138KV	125.1	0.00482	GRDA	GRDA1 345KV	203.0309	0.05962	-0.0548	62
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	MCLAIN 138KV	470	0.02308	-0.05505	62
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	SEMINOLE 345KV	1019	0.02308	-0.05502	62
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	SPGCK&I2 13.200 345KV	78	0.02268	-0.05466	62
AEPW	MID-CONTINENT 138KV	142.11	0.02413	GRDA	KERR 115KV	27	0.07908	-0.05495	62
OKGE	ROBUD 345KV	1188.201	0.02444	GRDA	KERR 115KV	27	0.07908	-0.05464	62
EMDE	RIVERTON 69KV	22.01061	-0.02308	AEPW	OEC 345KV	555.4863	0.03177	-0.05482	62
CELE	RODEMACHER 230KV	196	0.00498	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05464	62
AEPW	TULSA POWER STATION 138KV	53.9102	0.03346	GRDA	KERR 161KV	27	0.08778	-0.05432	62
AEPW	TULSA POWER STATION 138KV	53.9102	0.03346	GRDA	SALINA 161KV	39.30963	0.08778	-0.05432	62
AEPW	TULSA POWER STATION 69KV	80	0.03346	GRDA	KERR 161KV	27	0.08778	-0.05432	62
AEPW	TULSA POWER STATION 69KV	80	0.03346	GRDA	SALINA 161KV	39.30963	0.08778	-0.05432	62
WERE	BPU - CITY OF MCPHERSON 115KV	232	0.00548	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05414	62
WERE	HUTCHINSON ENERGY CENTER 115KV	146.0967	0.00594	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05368	63
EMDE	LARUSSEL 161KV	171	-0.03197	WFEC	ANADARKO 138KV	371.0778	0.02193	-0.05396	63
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	CENTENIAL WIND 34KV	44	0.02214	-0.05411	63
EMDE	LARUSSEL 161KV	171	-0.03197	AEPW	COMANCHE 138KV	145	0.02161	-0.05358	63
EMDE	LARUSSEL 161KV	171	-0.03197	AEPW	COMANCHE 69KV	63	0.02168	-0.05365	63
EMDE	LARUSSEL 161KV	171	-0.03197	WFEC	WORLD 138KV	320.7559	0.02178	-0.05376	63
EMDE	LARUSSEL 161KV	171	-0.03197	OMPA	OMPA-KAW 69KV	26.99778	0.02157	-0.05354	63
EMDE	LARUSSEL 161KV	171	-0.03197	OMPA	OMPA-PONCA CITY 69KV	153	0.02157	-0.05354	63
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	SOONER 138KV	535	0.02212	-0.05409	63
EMDE	LARUSSEL 161KV	171	-0.03197	AEPW	SOUTHWESTERN STATION 138KV	287	0.02187	-0.05384	63
EMDE	LARUSSEL 161KV	171	-0.03197	AEPW	SOUTHWESTERN STATION 138KV	712	0.02187	-0.05384	63
CELE	NATCHITOCHEES 69KV	43	0.006	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05382	63
WERE	GETTY 69KV	35	0.00705	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05257	64
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	SOONER 345KV	537	0.02126	-0.05323	64
EMDE	RIVERTON 161KV	92.74631	-0.01986	AEPW	TULSA POWER STATION 138KV	240.0898	0.03346	-0.05332	64
EMDE	RIVERTON 69KV	22.01061	-0.02308	AEPW	NORTHEASTERN STATION 345KV	625	0.02984	-0.05289	64
WERE	GILL ENERGY CENTER 138KV	84.99999	0.00748	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05214	65
WERE	GILL ENERGY CENTER 69KV	48	0.00758	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05203	65
SPS	MAJESTIC_WIND3115.00 115KV	72	0.01497	GRDA	GRDA1 161KV	190	0.06685	-0.05188	65
SPS	MOORE COUNTY 115KV	48	0.01445	GRDA	GRDA1 161KV	190	0.06685	-0.0524	65
SPS	NICHOLS 115KV	66.00001	0.01511	GRDA	GRDA1 161KV	190	0.06685	-0.05174	65
SPS	NICHOLS 230KV	97	0.01508	GRDA	GRDA1 161KV	190	0.06685	-0.0518	65
SWPA	POPULAR BLUFF 69KV	32	-0.00407	GRDA	PENSACOLA 69KV	33	0.04787	-0.05194	65
EMDE	RIVERTON 161KV	92.74631	-0.01986	AEPW	COGENTRIX 345KV	865	0.03203	-0.05189	65
EMDE	RIVERTON 69KV	22.01061	-0.02308	GRDA	BOOMER 69KV	24	0.02867	-0.05172	65
EMDE	RIVERTON 69KV	22.01061	-0.02308	OKGE	MUSKOGEE 345KV	1548	0.02885	-0.0519	65
SPS	RIVERVIEW 69KV	23	0.01474	GRDA	GRDA1 161KV	190	0.06685	-0.05211	65
EMDE	STATE LINE 161KV	72	-0.02799	OKGE	HORSESHOE LAKE 138KV	796	0.02395	-0.05194	65
WERE	WACO 138KV	30	0.00747	GRDA	GRDA1 345KV	203.0309	0.05962	-0.05215	65
EMDE	RIVERTON 161KV	92.74631	-0.01986	AEPW	OEC 345KV	555.4863	0.03177	-0.05163	66
EMDE	STATE LINE 161KV	72	-0.02799	OKGE	MCLAIN 138KV	470	0.02308	-0.05107	66
EMDE	STATE LINE 161KV	72	-0.02799	OKGE	MUSTANG 138KV	351	0.02312	-0.05111	66
EMDE	STATE LINE 161KV	72	-0.02799	OKGE	MUSTANG 69KV	90	0.02313	-0.05112	66
EMDE	STATE LINE 161KV	72	-0.02799	OKGE	SEMINOLE 138KV	329.1385	0.02322	-0.05121	66
EMDE	STATE LINE 161KV	72	-0.02799	OKGE	SEMINOLE 345KV	1019	0.02308	-0.05104	66
EMDE	STATE LINE 161KV	72	-0.02799	OKGE	SMITH COGENT 138KV	106	0.02318	-0.05114	

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

AEPW	EASTMAN 138KV	327.461	0.01033	GRDA	GRDA1 345KV	203.009	0.05962	-0.04929	69
AEPW	KNOXLEE 138KV	119	0.01026	GRDA	GRDA1 345KV	203.009	0.05962	-0.04936	69
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	JONES 230KV	486	0.01678	-0.04876	69
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	LP-MACK2 69KV	60	0.01681	-0.04878	69
AEPW	LEBROCK 345KV	329.8837	0.01031	GRDA	GRDA1 345KV	203.009	0.05962	-0.04931	69
EMDE	STATE LINE 161KV	72	-0.02799	OKGE	SOONER 345KV	537	0.02126	-0.04925	69
AEPW	WILKES 138KV	52.13342	0.01068	GRDA	GRDA1 345KV	203.009	0.05962	-0.04894	69
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	CAPROCK 0KV	80	0.01614	-0.04811	70
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	CUNNINGHAM 115KV	181	0.01638	-0.04836	70
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	CUNNINGHAM 230KV	302	0.01638	-0.04835	70
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	HOBBES_PLT2 118.000 115KV	300	0.01638	-0.04836	70
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	HOBBES_PLT3 118.000 230KV	210	0.01638	-0.04836	70
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	MADDOX 115KV	153.1478	0.01638	-0.04836	70
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	MUSTANG 115KV	300	0.01643	-0.0484	70
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	MUSTANG 230KV	460	0.01641	-0.04838	70
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	PLANTX 115KV	205	0.01618	-0.04815	70
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	PLANTX 230KV	189	0.01614	-0.04811	70
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	SAN JUAN 230KV	120	0.01624	-0.04821	70
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	TOLK 230KV	1019.988	0.01622	-0.04819	70
EMDE	RIVERTON 161KV	92.74631	-0.01986	GRDA	BOOMER 69KV	24	0.02867	-0.04853	70
EMDE	RIVERTON 161KV	92.74631	-0.01986	OKGE	MUSKOGEE 345KV	1548	0.02888	-0.04871	70
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	CZ 69KV	39	0.01551	-0.04748	71
WERE	CITY OF IOLA 69KV	27.428	0.00106	GRDA	PENSACOLA 69KV	33	0.04787	-0.04682	72
GRDA	COFFEYVILLE 138KV	58.6	0.01958	GRDA	GRDA1 161KV	190	0.06685	-0.04727	72
AEPW	COGENTRIX 345KV	29	0.03203	GRDA	KERR 115KV	27	0.07908	-0.04705	72
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	HARRINGTON 230KV	1040	0.01502	-0.04699	72
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	NICHOLS 115KV	147	0.01511	-0.04708	72
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	NICHOLS 230KV	147	0.01508	-0.04702	72
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	STER WATER 115KV	80	0.01531	-0.04728	72
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	WILWIND 230KV	160	0.01508	-0.04705	72
AEPW	OC 345KV	1591.544	0.03177	GRDA	KERR 115KV	27	0.07908	-0.04731	72
EMDE	LARUSSEL 161KV	171	-0.03197	OKGE	AES 161KV	320	0.01416	-0.04613	73
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	BLACKHAWK 115KV	220	0.0147	-0.04667	73
EMDE	STATE LINE 161KV	72	-0.02799	WFEC	HUGO 138KV	440	0.01855	-0.04654	73
WERE	LAWRENCE ENERGY CENTER 230KV	45.00714	0.00204	GRDA	PENSACOLA 69KV	33	0.04781	-0.04583	74
OKGE	SOUTH 4TH ST 69KV	29.98027	0.02113	GRDA	GRDA1 161KV	190	0.06685	-0.0457	74
WERE	TECUMSEH ENERGY CENTER 115KV	28	0.00238	GRDA	PENSACOLA 69KV	33	0.04787	-0.04549	74
WERE	TECUMSEH ENERGY CENTER 69KV	41	0.0024	GRDA	PENSACOLA 69KV	33	0.04787	-0.04547	74
AEPW	TULSA POWER STATION 138KV	53.9102	0.03346	GRDA	KERR 115KV	27	0.07908	-0.04562	74
AEPW	TULSA POWER STATION 69KV	80	0.03346	GRDA	KERR 115KV	27	0.07908	-0.04562	74
WERE	JEFFREY ENERGY CENTER 230KV	54	0.00262	GRDA	PENSACOLA 69KV	33	0.04781	-0.04497	74
WERE	JEFFREY ENERGY CENTER 345KV	108	0.00292	GRDA	PENSACOLA 69KV	33	0.04787	-0.04495	75
SPS	MOORE COUNTY 115KV	48	0.01449	GRDA	GRDA1 345KV	203.009	0.05962	-0.04517	75
AEPW	SOUTHWESTERN STATION 138KV	152	0.02187	GRDA	GRDA1 161KV	190	0.06685	-0.04498	75
AEPW	SOUTHWESTERN STATION 138KV	350	0.02187	GRDA	GRDA1 161KV	190	0.06685	-0.04498	75
WFEC	ANADARKO 69KV	70	0.02203	GRDA	GRDA1 161KV	190	0.06685	-0.04482	76
AEPW	KIDWA 345KV	1344.801	0.02216	GRDA	GRDA1 161KV	190	0.06685	-0.04468	76
EMDE	LARUSSEL 161KV	171	-0.03197	SPS	CITY OF WINFIELD 69KV	31.2	0.01235	-0.04432	76
SPS	MAJESTC_WIND3115.00 115KV	72	0.01497	GRDA	GRDA1 345KV	203.009	0.05962	-0.04465	76
SPS	NICHOLS 115KV	66.00001	0.01511	GRDA	GRDA1 345KV	203.009	0.05962	-0.04451	76
SPS	NICHOLS 230KV	97	0.01503	GRDA	GRDA1 345KV	203.009	0.05962	-0.04457	76
EMDE	STATE LINE 161KV	72	-0.02799	SPS	CUNNINGHAM 115KV	181	0.01638	-0.04438	76
EMDE	STATE LINE 161KV	72	-0.02799	SPS	CUNNINGHAM 230KV	302	0.01638	-0.04437	76
EMDE	STATE LINE 161KV	72	-0.02799	SPS	HOBBES_PLT2 118.000 115KV	300	0.01638	-0.04438	76
EMDE	STATE LINE 161KV	72	-0.02799	SPS	HOBBES_PLT3 118.000 230KV	210	0.01638	-0.04438	76
EMDE	STATE LINE 161KV	72	-0.02799	SPS	JONES 230KV	486	0.01678	-0.04478	76
EMDE	STATE LINE 161KV	72	-0.02799	SPS	LP-MACK2 69KV	60	0.01681	-0.0448	76
EMDE	STATE LINE 161KV	72	-0.02799	SPS	MADDOX 115KV	153.1478	0.01638	-0.04438	76
EMDE	STATE LINE 161KV	72	-0.02799	SPS	MUSTANG 115KV	300	0.01643	-0.04442	76
EMDE	STATE LINE 161KV	72	-0.02799	SPS	MUSTANG 230KV	460	0.01641	-0.0444	76
CELE	ACADIA 138KV	1322	0.00396	GRDA	PENSACOLA 69KV	33	0.04787	-0.04391	77
WERE	EMPORIA ENERGY CENTER 345KV	201	0.00364	GRDA	PENSACOLA 69KV	33	0.04787	-0.04423	77
OKGE	MCCLAIN 138KV	50	0.02308	GRDA	GRDA1 161KV	190	0.06685	-0.04377	77
EMDE	RIVERTON 161KV	92.74631	-0.01986	OKGE	HORSESHOE LAKE 138KV	796	0.02395	-0.04381	77
OKGE	SPGCK3&4 13.200 345KV	111	0.02268	GRDA	GRDA1 161KV	190	0.06685	-0.04416	77
EMDE	STATE LINE 161KV	72	-0.02799	SPS	CAPROCK 0KV	80	0.01615	-0.04411	77
EMDE	STATE LINE 161KV	72	-0.02799	SPS	PLANTX 115KV	205	0.01618	-0.04417	77
EMDE	STATE LINE 161KV	72	-0.02799	SPS	PLANTX 230KV	189	0.01614	-0.04413	77
EMDE	STATE LINE 161KV	72	-0.02799	SPS	SAN JUAN 230KV	120	0.01624	-0.04423	77
EMDE	STATE LINE 161KV	72	-0.02799	SPS	TOLK 230KV	1019.988	0.01622	-0.04421	77
CELE	TECHE 138KV	80.99292	0.00378	GRDA	PENSACOLA 69KV	33	0.04787	-0.04407	77
WERE	ABILENE ENERGY CENTER 115KV	66	0.0042	GRDA	PENSACOLA 69KV	33	0.04787	-0.04369	77
WERE	CHANUTE 69KV	41.1	0.00446	GRDA	PENSACOLA 69KV	33	0.04787	-0.04341	78
CELE	EVANGELINE 230KV	191	0.00448	GRDA	PENSACOLA 69KV	33	0.04787	-0.04342	78
CELE	GEEVAN 13.800 138KV	114	0.00439	GRDA	PENSACOLA 69KV	33	0.04787	-0.04348	78
CELE	G7VAN 22.000 138KV	33.00002	0.00439	GRDA	PENSACOLA 69KV	33	0.04787	-0.04348	78
EMDE	LARUSSEL 161KV	171	-0.03197	AEPW	WELSH 345KV	1044	0.01148	-0.04346	78
SPS	MADDOX 115KV	34.85203	0.00346	GRDA	GRDA1 345KV	203.009	0.05962	-0.04323	78
SPS	PLANTX 115KV	48	0.01618	GRDA	GRDA1 345KV	203.009	0.05962	-0.04344	78
EMDE	RIVERTON 161KV	92.74631	-0.01986	OKGE	TINKER 5G 138KV	60	0.02338	-0.04325	78
OKGE	SEMINOLE 138KV	205.8615	0.02322	GRDA	GRDA1 161KV	190	0.06685	-0.04363	78
EMDE	STATE LINE 161KV	72	-0.02799	SPS	CZ 69KV	39	0.01551	-0.0435	78
EMDE	STATE LINE 161KV	72	-0.02799	SPS	STER WATER 115KV	80	0.01531	-0.0433	78
SPS	TOLK 230KV	60.00183	0.01622	GRDA	GRDA1 345KV	203.009	0.05962	-0.0434	78
CELE	D C HUNTER POWER STATION 138KV	125.1	0.00488	GRDA	PENSACOLA 69KV	33	0.04781	-0.04305	78
OKGE	HORSESHOE LAKE 138KV	64	0.02395	GRDA	GRDA1 161KV	190	0.06685	-0.0429	79
EMDE	LARUSSEL 161KV	171	-0.03197	AEPW	LONESTAR POWER PLANT 69KV	27	0.01081	-0.04278	79
EMDE	LARUSSEL 161KV	171	-0.03197	AEPW	WILKES 138KV	410.8668	0.01068	-0.04265	79
SPS	LP-HOLL2 69KV	15	0.01681	GRDA	GRDA1 345KV	203.009	0.05962	-0.04281	79
AEPW	MID-CONTINENT 138KV	142.11	0.02413	GRDA	GRDA1 161KV	190	0.06685	-0.04272	79
SWPA	POPLAR BLUFF 69KV	32	0.00407	OKGE	MUSKOGEE 161KV	166	0.03892	-0.04289	79
EMDE	RIVERTON 161KV	92.74631	-0.01986	OKGE	MCCLAIN 138KV	470	0.02308	-0.04294	79
EMDE	RIVERTON 161KV	92.74631	-0.01986	OKGE	MUSTANG 138KV	351	0.02312	-0.04298	79
EMDE	RIVERTON 161KV	92.74631	-0.01986	OKGE	MUSTANG 69KV	90	0.02313	-0.04299	79
EMDE	RIVERTON 161KV	92.74631	-0.01986	OKGE	SEMINOLE 138KV	329.1385	0.02322	-0.04308	79
EMDE	RIVERTON 161KV	92.74631	-0.01986	OKGE	SEMINOLE 345KV	1019	0.02308	-0.04291	79
EMDE	RIVERTON 161KV	92.74631	-0.01986	OKGE	SMITH COGEN 138KV	106	0.02316	-0.04301	79
CELE	RODEMACHER 230KV	196	0.00498	GRDA	PENSACOLA 69KV	33	0.04787	-0.04289	79
EMDE	STATE LINE 161KV	72	-0.02799	SPS	BLACKHAWK 115KV	220	0.0147	-0.04289	79
EMDE	STATE LINE 161KV	72	-0.02799	SPS	HARRINGTON 230KV	1040	0.01502	-0.04301	79
EMDE	STATE LINE 161KV	72	-0.02799	SPS	NICHOLS 115KV	147	0.01511	-0.0431	79
EMDE	STATE LINE 161KV	72	-0.02799	SPS	NICHOLS 230KV	147	0.01508	-0.04304	79
EMDE	STATE LINE 161KV	72	-0.02799	SPS	WILWIND 230KV	160	0.01508	-0.04307	79
WERE	BFJ - CITY OF MCPHERSON 115KV	232	0.00549	GRDA	PENSACOLA 69KV	33	0.04787	-0.04239	80
EMDE	LARUSSEL 161KV	171	-0.03197	AEPW					

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

EMDE	RIVERTON 161KV	92.74631	-0.01986	AEPW	COMANCHE 69KV	60	0.02168	-0.04154	82
EMDE	RIVERTON 161KV	92.74631	-0.01986	OMPA	OMPA-POCA CITY 69KV	153	0.02157	-0.04143	82
EMDE	RIVERTON 161KV	92.74631	-0.01986	OKGE	SCOTT 345KV	537	0.02128	-0.04112	82
WERE	GETTY 69KV	35	0.00708	GRDA	PENSACOLA 69KV	33	0.04787	-0.04082	83
WERE	GILL ENERGY CENTER 138KV	84.99999	0.00748	GRDA	PENSACOLA 69KV	33	0.04787	-0.04038	84
WERE	GILL ENERGY CENTER 69KV	48	0.00759	GRDA	PENSACOLA 69KV	33	0.04787	-0.04028	84
SWPA	JONESBORO 161KV	52	-0.00298	AEPW	NORTHEASTERN STATION 138KV	480	0.03713	-0.04011	84
EMDE	LARUSSEL 161KV	171	-0.03197	CELE	DOLET HILLS 345KV	370	0.00848	-0.04046	84
EMDE	STATE LINE 161KV	72	-0.02799	WERE	CITY OF WINFIELD 69KV	312	0.01233	-0.04034	84
WERE	WACO 138KV	30	0.00747	GRDA	PENSACOLA 69KV	33	0.04787	-0.0404	84
GRDA	COFFEYVILLE 138KV	58.6	0.01958	GRDA	GRDA1 345KV	203.0309	0.05962	-0.04004	85
SWPA	KENNETT 69KV	29	-0.00264	AEPW	NORTHEASTERN STATION 138KV	480	0.03713	-0.03977	85
AEPW	FULTON 115KV	153	0.0087	GRDA	PENSACOLA 69KV	33	0.04787	-0.03917	86
EMDE	LARUSSEL 161KV	171	-0.03197	WERE	EVANS ENERGY CENTER 138KV	560	0.00738	-0.03936	86
EMDE	LARUSSEL 161KV	171	-0.03197	WERE	GILL ENERGY CENTER 138KV	155	0.00748	-0.03945	86
EMDE	LARUSSEL 161KV	171	-0.03197	WERE	GILL ENERGY CENTER 69KV	52	0.00759	-0.03956	86
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	WELSH 345KV	1044	0.01118	-0.03948	86
AEPW	WELETKA 138KV	162	0.02764	GRDA	GRDA1 161KV	190	0.06685	-0.03921	86
EMDE	LARUSSEL 161KV	171	-0.03197	WERE	CNTRLPLZ 34.500 115KV	99	0.00694	-0.03891	87
AEPW	ARSENAL HILL 138KV	337.2	0.00936	GRDA	PENSACOLA 69KV	33	0.04787	-0.03851	88
EMDE	LARUSSEL 161KV	171	-0.03197	CELE	G1WVRAFT 13.800 230KV	55	0.00648	-0.03845	88
AEPW	LIEBERMAN 138KV	45.99988	0.00954	GRDA	PENSACOLA 69KV	33	0.04787	-0.03833	88
EMDE	RIVERTON 161KV	92.74631	-0.01986	WFEC	PLUG 138KV	440	0.01855	-0.03841	88
OKGE	SOUTH 4TH ST 69KV	29.98027	0.02113	GRDA	GRDA1 345KV	203.0309	0.05962	-0.03847	88
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	EASTMAN 138KV	157.549	0.01033	-0.03832	88
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	LEBROCK 345KV	367.1163	0.01031	-0.0383	88
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	PIRKEY GENERATION 138KV	288	0.01028	-0.03828	88
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	WILKS 138KV	410.8666	0.01068	-0.03867	88
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	WILKES 345KV	308	0.01051	-0.0385	88
EMDE	LARUSSEL 161KV	171	-0.03197	WERE	HUTCHINSON ENERGY CENTER 115KV	257.9033	0.00594	-0.03791	89
EMDE	LARUSSEL 161KV	171	-0.03197	WERE	HUTCHINSON ENERGY CENTER 69KV	30	0.00594	-0.03791	89
OKGE	MUSKOGEE 345KV	32	0.02885	GRDA	GRDA1 161KV	190	0.06685	-0.038	89
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	FITZHUGH 161KV	125.4	0.01021	-0.0382	89
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	KNOXLEE 138KV	282	0.01028	-0.03825	89
WFEC	ANADARKO 69KV	70	0.02203	GRDA	GRDA1 345KV	203.0309	0.05962	-0.03758	90
AEPW	EASTMAN 138KV	327.461	0.01033	GRDA	PENSACOLA 69KV	33	0.04787	-0.03754	90
AEPW	KIOWA 345KV	1344.801	0.02216	GRDA	GRDA1 345KV	203.0309	0.05962	-0.03746	90
AEPW	KNOXLEE 138KV	119	0.01026	GRDA	PENSACOLA 69KV	33	0.04787	-0.03761	90
EMDE	LARUSSEL 161KV	171	-0.03197	EMDE	ELK RIVER 345KV	44.986	0.00572	-0.03769	90
AEPW	LEBROCK 345KV	329.8837	0.01033	GRDA	PENSACOLA 69KV	33	0.04787	-0.03756	90
SWPA	POPLAR BLUFF 69KV	30	0.00407	AEPW	TULSA POWER STATION 138KV	240.0898	0.03348	-0.0375	90
AEPW	SOUTHWESTERN STATION 138KV	152	0.02187	GRDA	GRDA1 345KV	203.0309	0.05962	-0.03775	90
AEPW	SOUTHWESTERN STATION 138KV	350	0.02187	GRDA	GRDA1 345KV	203.0309	0.05962	-0.03775	90
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	LIEBERMAN 138KV	174	0.00954	-0.03753	90
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	ARSENAL HILL 138KV	455	0.00936	-0.03735	91
EMDE	STATE LINE 161KV	72	-0.02799	AEPW	ARSENAL HILL 69KV	90	0.00937	-0.03736	91
AEPW	WILKES 138KV	52.13344	0.01068	GRDA	PENSACOLA 69KV	33	0.04787	-0.03719	91
EMDE	LARUSSEL 161KV	171	-0.03197	CELE	RODEMACHER 230KV	991	0.00498	-0.03695	92
WERE	LAWRENCE ENERGY CENTER 230KV	45.00714	0.00204	OKGE	MUSKOGEE 161KV	166	0.03892	-0.03688	92
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	JONES 230KV	486	0.01678	-0.03665	92
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	LP-MACK2 69KV	60	0.01681	-0.03667	92
OKGE	SPGCK&4 13.200 345KV	111	0.02269	GRDA	GRDA1 345KV	203.0309	0.05962	-0.03693	92
SWPA	JONESBORO 161KV	52	-0.00298	AEPW	TULSA POWER STATION 138KV	240.0898	0.03348	-0.03644	92
EMDE	LARUSSEL 161KV	171	-0.03197	WERE	CHANUTE 69KV	54.3	0.00446	-0.0364	93
EMDE	LARUSSEL 161KV	171	-0.03197	WERE	CITY OF BURLINGTON 69KV	55.4	0.00437	-0.03634	93
EMDE	LARUSSEL 161KV	171	-0.03197	CELE	EVANGELINE 230KV	234	0.00445	-0.03642	93
EMDE	LARUSSEL 161KV	171	-0.03197	CELE	G7EVAN 22.000 138KV	166	0.00438	-0.03636	93
OKGE	MCCLAIN 138KV	50	0.02308	GRDA	GRDA1 345KV	203.0309	0.05962	-0.03654	93
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	CUNNINGHAM 115KV	181	0.01638	-0.03625	93
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	CUNNINGHAM 230KV	302.4	0.01638	-0.03624	93
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	HOBBS PLT2 118.000 115KV	300	0.01638	-0.03625	93
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	HOBBS PLT3 118.000 230KV	210	0.01638	-0.03625	93
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	MADDOX 115KV	153.1478	0.01638	-0.03625	93
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	MUSTANG 115KV	300	0.01643	-0.03629	93
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	MUSTANG 230KV	460	0.01641	-0.03627	93
OKGE	SEMINOLE 138KV	205.8613	0.02322	GRDA	GRDA1 345KV	203.0309	0.05962	-0.0364	93
EMDE	STATE LINE 161KV	72	-0.02799	CELE	DOLET HILLS 345KV	370	0.00848	-0.03648	93
WERE	TECUMSEH ENERGY CENTER 69KV	41	0.0024	OKGE	MUSKOGEE 161KV	166	0.03892	-0.03652	93
WERE	JEFFREY ENERGY CENTER 230KV	54	0.0029	OKGE	MUSKOGEE 161KV	166	0.03892	-0.03602	94
WERE	JEFFREY ENERGY CENTER 345KV	108	0.00292	AEPW	MUSKOGEE 161KV	166	0.03892	-0.036	94
SWPA	POPLAR BLUFF 69KV	32	-0.00407	AEPW	COGENTRIX 345KV	865	0.03203	-0.0361	94
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	CAPRISOCK 0KV	80	0.01616	-0.036	94
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	PLANTX 115KV	205	0.01618	-0.03604	94
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	PLANTX 230KV	189	0.01614	-0.036	94
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	SAN JUAN 230KV	120	0.01624	-0.0361	94
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	TOLK 230KV	1019.998	0.01622	-0.03608	94
OKGE	HORSESHOE LAKE 138KV	64	0.02398	GRDA	GRDA1 345KV	203.0309	0.05962	-0.03667	95
EMDE	LARUSSEL 161KV	171	-0.03197	LEPA	BAVOU RAMOS 138KV	33.07825	0.03353	-0.0355	95
EMDE	LARUSSEL 161KV	171	-0.03197	WERE	EMPIRIA ENERGY CENTER 345KV	610	0.00388	-0.03561	95
EMDE	LARUSSEL 161KV	171	-0.03197	CELE	TECHE 138KV	291.0071	0.00378	-0.03575	95
AEPW	MID-CONTINENT 138KV	142.11	0.02413	GRDA	GRDA1 345KV	203.0309	0.05962	-0.03549	95
SWPA	POPLAR BLUFF 69KV	32	-0.00407	AEPW	OEC 345KV	555.4863	0.03177	-0.03584	95
EMDE	STATE LINE 161KV	72	-0.02799	WERE	GILL ENERGY CENTER 138KV	155	0.00748	-0.03547	95
EMDE	STATE LINE 161KV	72	-0.02799	WERE	GILL ENERGY CENTER 69KV	52	0.00759	-0.03558	95
WERE	EMPIRIA ENERGY CENTER 345KV	201	0.00388	OKGE	MUSKOGEE 161KV	166	0.03892	-0.03522	96
EMDE	LARUSSEL 161KV	171	-0.03197	LEPA	CITY OF HOUMA SUB 115KV	95	0.00318	-0.03513	96
OKGE	REDBUD 345KV	1188.201	0.02444	GRDA	GRDA1 345KV	203.0309	0.05962	-0.03518	96
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	CZ 69KV	39	0.01551	-0.03537	96
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	STEER WATER 115KV	80	0.01531	-0.03517	96
EMDE	STATE LINE 161KV	72	-0.02799	WERE	EVANS ENERGY CENTER 138KV	560	0.00738	-0.03538	96
CELE	TECHE 138KV	80.99292	0.00378	OKGE	MUSKOGEE 161KV	166	0.03892	-0.03514	96
CELE	ACADIA 138KV	1322	0.00398	OKGE	MUSKOGEE 161KV	166	0.03892	-0.03496	96
SWPA	JONESBORO 161KV	52	-0.00298	AEPW	COGENTRIX 345KV	865	0.03203	-0.03501	97
SWPA	JONESBORO 161KV	52	-0.00298	AEPW	OEC 345KV	555.4863	0.03177	-0.03475	97
EMDE	LARUSSEL 161KV	171	-0.03197	WERE	JEFFREY ENERGY CENTER 230KV	440	0.0029	-0.03487	97
EMDE	LARUSSEL 161KV	171	-0.03197	WERE	JEFFREY ENERGY CENTER 345KV	874	0.00292	-0.03489	97
WERE	LAWRENCE ENERGY CENTER 230KV	45.00714	0.00204	AEPW	NORTHEASTERN STATION 138KV	480	0.03713	-0.03509	97
AEPW	OEC 345KV	1591.544	0.03177	GRDA	GRDA1 161KV	190	0.06685	-0.03508	97
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	HARRINGTON 230KV	1040	0.01502	-0.03488	97
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	NICHOLS 115KV	147	0.01511	-0.03497	97
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	NICHOLS 230KV	147	0.01505	-0.03491	97
EMDE	RIVERTON 161KV	92.74631	-0.01986	SPS	WILWIND 230KV	160	0.01508	-0.03494	97
EMDE	STATE LINE 161KV	72	-0.02799	WERE	CNTRLPLZ 34.500 115KV	99	0.00694	-0.03493	97
WERE	ABILE								

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

Source	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE HUTCHINSON ENERGY CENTER 115KV	MUSKOGEE 161KV	146.0967	0.00594	OKGE	166 -0.03892 -0.03298
SWPA JONESBORO 161KV	NORTHEASTERN STATION 345KV	52	-0.00298	AEPW	625 0.02984 -0.03282
CELE NATCHITOCHEES 69KV	MUSKOGEE 161KV	43	0.0080	OKGE	166 -0.03892 -0.03298
WERE STATE LINE 161KV	RODMACHER 230KV	72	-0.02799	CELE	991 0.00498 -0.03297
EMDE CHANUTE 69KV	NORTHEASTERN STATION 138KV	41.1	0.00448	AEPW	480 0.03713 -0.03267
CELE EVANGELINE 230KV	NORTHEASTERN STATION 138KV	191	0.00445	AEPW	480 0.03713 -0.03268
EMDE STATE LINE 161KV	CHANUTE 69KV	72	-0.02799	WERE	54.8 0.00448 -0.03245
EMDE STATE LINE 161KV	EVANGELINE 230KV	72	-0.02799	CELE	234 0.00445 -0.03244
CELE D.G. HUNTER POWER STATION 138KV	NORTHEASTERN STATION 138KV	125.1	0.00482	AEPW	480 0.03713 -0.03231
CELE RODMACHER 230KV	NORTHEASTERN STATION 138KV	198	0.00498	AEPW	480 0.03713 -0.03215
EMDE STATE LINE 161KV	CITY OF BURLINGTON 69KV	72	-0.02799	WERE	55.4 0.00437 -0.03236
EMDE STATE LINE 161KV	G7EVAN 22.000 138KV	72	-0.02799	CELE	165 0.00438 -0.03238
SWPA JONESBORO 161KV	MUSKOGEE 345KV	52	-0.00298	OKGE	1548 0.02885 -0.03183
AEPW WELETKA 138KV	GRDA1 345KV	162	0.02764	GRDA	203.0309 0.05962 -0.03198
WERE BPU - CITY OF MCPHERSON 115KV	NORTHEASTERN STATION 138KV	232	0.00548	AEPW	480 0.03713 -0.03165
AEPW ELKIN GN 1 13.800 69KV	TONITOWN 161KV	60	-0.19335	AEPW	140 -0.28778 -0.03157
EMDE STATE LINE 161KV	EMPORIA ENERGY CENTER 345KV	72	-0.02799	WERE	610 0.00264 -0.03163
EMDE STATE LINE 161KV	TECHE 138KV	72	-0.02799	CELE	291.0071 0.00378 -0.03177
WERE GILL ENERGY CENTER 138KV	MUSKOGEE 161KV	84.99999	0.00748	OKGE	166 0.03892 -0.03144
WERE GILL ENERGY CENTER 69KV	MUSKOGEE 161KV	48	0.00758	OKGE	166 0.03892 -0.03133
WERE LAWRENCE ENERGY CENTER 230KV	TULSA POWER STATION 138KV	45.00714	0.00204	AEPW	240.0898 0.03348 -0.03142
EMDE RIVERTON 161KV	WELSH 345KV	92.74631	0.01986	AEPW	1044 0.01146 -0.03135
WERE HUTCHINSON ENERGY CENTER 115KV	NORTHEASTERN STATION 138KV	146.0967	0.00594	AEPW	480 0.03713 -0.03119
CELE NATCHITOCHEES 69KV	NORTHEASTERN STATION 138KV	43	0.006	AEPW	480 0.03713 -0.03113
EMDE STATE LINE 161KV	CITY OF HOUMA SUB 115KV	72	-0.02799	LEPA	95 0.00318 -0.03115
WERE TECUMSEH ENERGY CENTER 69KV	TULSA POWER STATION 138KV	71	0.0024	AEPW	240.0898 0.03348 -0.03106
EMDE STATE LINE 161KV	JEFFREY ENERGY CENTER 230KV	72	-0.02799	WERE	474 0.0029 -0.03089
EMDE STATE LINE 161KV	JEFFREY ENERGY CENTER 345KV	72	-0.02799	WERE	870 0.00292 -0.03091
WERE JEFFREY ENERGY CENTER 230KV	TULSA POWER STATION 138KV	54	0.0025	AEPW	240.0898 0.03348 -0.03056
WERE JEFFREY ENERGY CENTER 345KV	TULSA POWER STATION 138KV	108	0.00252	AEPW	240.0898 0.03348 -0.03054
EMDE RIVERTON 161KV	WILKES 138KV	92.74631	-0.01986	AEPW	410.8666 0.01068 -0.03054
AEPW FULTON 115KV	MUSKOGEE 161KV	153	0.0087	OKGE	166 0.03892 -0.03022
EMDE RIVERTON 161KV	EASTMAN 138KV	92.74631	-0.01986	AEPW	157.549 0.01033 -0.03019
EMDE RIVERTON 161KV	KNOXLEE 138KV	92.74631	-0.01986	AEPW	282 0.01028 -0.03012
EMDE RIVERTON 161KV	LEBROCK 345KV	92.74631	-0.01986	AEPW	367.1163 0.01031 -0.03017
EMDE RIVERTON 161KV	PIRKEY GENERATION 138KV	92.74631	-0.01986	AEPW	288 0.01029 -0.03015
EMDE RIVERTON 161KV	WILKES 345KV	92.74631	-0.01986	AEPW	308 0.01051 -0.03037
EMDE STATE LINE 161KV	TECUMSEH ENERGY CENTER 115KV	72	-0.02799	WERE	133 0.00238 -0.03037
EMDE RIVERTON 161KV	FITZHUGH 161KV	92.74631	-0.01986	AEPW	125.4 0.01021 -0.03007
EMDE STATE LINE 161KV	LAWRENCE ENERGY CENTER 230KV	72	-0.02799	WERE	223.9929 0.00204 -0.03003

Maximum Decrement and Maximum Increment were determined from the Source and Sink Operating Points in the study models where limiting facility was identified.

Factor = Source GSF - Sink GSF

Redispatch Amount = Relief Amount / Factor

Upgrade: STRANGER CREEK - NW LEAVENWORTH 115KV  
 Limiting Facility: JARBAL O JUNCTION SWITCHING STATION - STRANGER CREEK  
 Direction: TO-FROM  
 Line Outage: STRANGER CREEK - THORNTON STREET 115KV CKT 1  
 Flowgate: 2007AG2AFS81T323210SP  
 Date Redispatch Needed: Starting 2010 6/1 - 10/1 Until EOC of Upgrade  
 Season Flowgate Identified: 2010 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount
1281706	1.6	8.1
1285893	1.3	8.1
1286201	5.2	8.1

Source Control Area	Source	Maximum Increment (MW)	GSF	Sink Control Area	Sink	Maximum Decrement (MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	KACP	IATAN 345KV	1908	0.05294	-0.20691	39
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	KACP	IATAN 345KV	371	0.05294	-0.20691	39
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	MIPU	LAKE ROAD 161KV	35	0.02101	-0.17498	47
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	MIPU	LAKE ROAD 34KV	92	0.02101	-0.17498	47
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	COOPERIG 22.000 345KV	551.2802	0.01578	-0.18973	48
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OPPD	CASS IG 15.000 345KV	42.51923	0.01256	-0.16653	49
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OPPD	CASS 2G 15.000 345KV	52.99999	0.01256	-0.16653	49
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OPPD	FREM 8G 13.800 69KV	90	0.01093	-0.1649	49
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OPPD	FT CALIG 22.000 4KV	378	0.01168	-0.16565	49
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OPPD	N OMA 1G 13.800 2KV	48.5	0.01178	-0.16575	49
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OPPD	N OMA 2G 13.800 2KV	80.59999	0.0118	-0.16577	49
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OPPD	N OMA 3G 13.800 2KV	80.59999	0.0118	-0.16577	49
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OPPD	N OMA 4G 15.000 2KV	107.4	0.0118	-0.16577	49
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OPPD	N OMA 5G 20.000 4KV	173.9	0.0118	-0.16577	49
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OPPD	NEBCTY1G 18.000 4KV	466	0.01352	-0.16749	49
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OPPD	NEBCTY2G 23.000 345KV	503	0.01352	-0.16749	49
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	BPS GT1G 13.800 115KV	80	0.00728	-0.16123	50
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	BPS GT2G 13.800 115KV	45.19851	0.00728	-0.16123	50
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	BPS ST3G 13.800 115KV	49.98482	0.00728	-0.16123	50
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	KACP	BULL CREEK 161KV	61.8	0.00177	-0.16314	50
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	COL.COG7 115.00 115KV	75	0.01011	-0.16414	50
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	D.HENRYG 34.500 115KV	18	0.00968	-0.16363	50
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	DENVER G 34.500 115KV	34.32393	0.00968	-0.16363	50
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	EGY CTRG 13.800 115KV	54	0.00968	-0.16363	50
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	PLT 2 G 13.800 115KV	40	0.00945	-0.16346	50
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	PLATTE1G 13.800 115KV	71.51868	0.00944	-0.16341	50
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	SHELDN1G 13.800 115KV	68.40001	0.01038	-0.16433	50
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	SHELDN2G 13.800 115KV	81	0.01038	-0.16433	50
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	GENTLM1G 23.000 230KV	463	0.00668	-0.16065	51
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	GENTLM2G 24.000 345KV	443.3608	0.00653	-0.1605	51
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	NPPD	SIBLEY 4G 23.000 230KV	19.3852	0.00677	-0.16017	51
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	KACP	CITY OF HIGGINSVILLE 69KV	36	-0.0012	-0.15277	53
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	KACP	HAWTHORN 161KV	517.7498	0.0011	-0.15497	53
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	MIPU	SIBLEY 161KV	228.9597	0.00058	-0.15453	53
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	MIPU	SIBLEY 69KV	45.99999	0.0008	-0.15477	53
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OKGE	AES 161KV	320	-0.00358	-0.15041	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	ARSENAL HILL 138KV	458	-0.00268	-0.15128	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	ARSENAL HILL 69KV	90	-0.00268	-0.15128	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	WERE	CNTRPL2 34.500 115KV	99	-0.00347	-0.1505	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	EASTMAN 138KV	356.7947	-0.00291	-0.15106	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	FITZHUGH 161KV	125.4	-0.00324	-0.15073	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	FLINT CREEK 161KV	428	-0.00463	-0.14934	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	KNOXLEE 138KV	225	-0.00288	-0.15108	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	EMDE	LARUSSEL 161KV	100	-0.00428	-0.14968	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	LEBROCK 345KV	517.1024	-0.0028	-0.15107	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	LIEBERMAN 138KV	174	-0.00273	-0.15124	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	PIRKEY GENERATION 138KV	288	-0.00288	-0.15108	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	WELSH 345KV	1044	-0.00318	-0.15081	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	WILKES 138KV	410.8099	-0.00299	-0.15098	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	WILKES 345KV	308	-0.00298	-0.15102	54
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	EMDE	ASBURY 161KV	192	-0.005	-0.14897	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OKGE	CENTENIAL WIND 34KV	120	-0.00718	-0.14678	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	WERE	CHANUTE 69KV	54.8	-0.00682	-0.14715	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	MKEC	CIMARRON RIVER 115KV	44	-0.00528	-0.14868	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	COSENTRIX 345KV	222.0669	-0.00532	-0.14865	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	COMANCHE 138KV	145	-0.00645	-0.14752	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	AEPW	COMANCHE 69KV	80	-0.00644	-0.14753	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OKGE	FPLWIND2 34KV	59	-0.00728	-0.14671	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	MKEC	GRAY COUNTY WIND FARM 115KV	38	-0.00718	-0.14681	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397	OKGE	HORSESHOE LAKE 138KV	796	-0.00665	-0.14732	55

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/AEPW	NORTHEASTERN STATION 138KV	480	-0.00538	-0.14859	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/AEPW	NORTHEASTERN STATION 345KV	629	-0.00537	-0.1486	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/AEPW	CEP 345KV	390	-0.00524	-0.14873	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/OKGE	REDBUD 345KV	43.60958	-0.00664	-0.14733	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/EMDE	RIVERTON 161KV	100.0327	-0.00484	-0.14913	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/EMDE	RIVERTON 69KV	44.07887	-0.00478	-0.14919	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/OKGE	SEMINOLE 138KV	334.858	-0.00634	-0.14763	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/OKGE	SEMINOLE 345KV	1019	-0.0064	-0.14757	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/OKGE	SMITH COGEN 138KV	106	-0.00683	-0.14714	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/AEPW	SOUTHWESTERN STATION 138KV	712	-0.00247	-0.1475	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/AEPW	SOUTHWESTERN STATION 138KV	287	-0.00647	-0.1475	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/OKGE	SPGCK1&2 13.200 345KV	78	-0.00718	-0.14678	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/EMDE	STATE LINE 161KV	520	-0.00475	-0.14922	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/AEPW	TONTITOWN 161KV	140	-0.00468	-0.14931	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/AEPW	TULSA POWER STATION 138KV	129.8887	-0.00534	-0.14863	55
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/EMDE	CITY OF BURLINGTON 69KV	55.4	-0.0063	-0.14577	56
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/EMDE	COFFEY COUNTY NO. 2 SHARPE 69KV	19.98	-0.0062	-0.14577	56
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/OKGE	SOONER 138KV	53.8	-0.00803	-0.14594	56
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/OKGE	SOONER 345KV	57	-0.00812	-0.14585	56
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/MIPU	SOUTH HARPER 161KV	67.00598	-0.00901	-0.14496	56
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/MKEC	A. M. MULLERGEN GENERATOR 115KV	63	-0.01118	-0.14278	57
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/WERE	CITY OF WINFIELD 69KV	31.2	-0.01157	-0.1424	57
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/MKEC	CLIFTON 115KV	65	-0.01137	-0.1426	57
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/EMDE	ELK RIVER 345KV	44.986	-0.01034	-0.14363	57
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/MIDW	KNOLL 115KV	75.60001	-0.01202	-0.14195	57
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/KACY	QUINDARO 161KV	129.4176	-0.01136	-0.14261	57
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/KACY	QUINDARO 69KV	136.3562	-0.01062	-0.14335	57
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/WERE	CITY OF AUGUSTA 69KV	20	-0.01403	-0.13994	58
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/WERE	EVANS ENERGY CENTER 138KV	560	-0.0143	-0.13967	58
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/WERE	GILL ENERGY CENTER 138KV	155	-0.01353	-0.14044	58
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/WERE	GILL ENERGY CENTER 69KV	52	-0.01348	-0.14048	58
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/KACY	NEARMAN 161KV	77	-0.01258	-0.14139	58
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/KACY	NEARMAN 20KV	235	-0.01258	-0.14139	58
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/WERE	HUTCHINSON ENERGY CENTER 115KV	230	-0.01538	-0.13862	59
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/WERE	JEFFREY ENERGY CENTER 230KV	440	-0.01515	-0.13862	59
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/EMDE	MRWYG11 34.500 230KV	100	-0.01618	-0.13778	59
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/MIDW	SMOKEY HILLS 34KV	25	-0.01547	-0.1385	59
WERE	TECUMSEH ENERGY CENTER 115KV	28	-0.0728/KACP	IATAN 345KV	371	0.05294	-0.12574	65
WERE	TECUMSEH ENERGY CENTER 115KV	28	-0.0728/KACP	IATAN 345KV	1806	0.05294	-0.12574	65
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/WERE	EMPHORIA ENERGY CENTER 345KV	610	-0.03317	-0.1222	67
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/KACP	IATAN 345KV	1806	0.05294	-0.1207	67
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/KACP	IATAN 345KV	371	0.05294	-0.1207	67
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/MIPU	LAKE ROAD 161KV	93	0.02101	-0.08877	92
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/MIPU	LAKE ROAD 34KV	92	0.02101	-0.08877	92
WERE	EMPHORIA ENERGY CENTER 345KV	201	-0.03317/KACP	IATAN 345KV	1806	0.05294	-0.08465	96
WERE	EMPHORIA ENERGY CENTER 345KV	201	-0.03317/KACP	IATAN 345KV	371	0.05294	-0.08465	96
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/NPPD	COOPERIG 22.000 345KV	551.2802	-0.01578	-0.08352	97
WERE	LAWRENCE ENERGY CENTER 230KV	45.07056	-0.15397/WERE	TECUMSEH ENERGY CENTER 115KV	133	-0.0728	-0.08117	100
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/OPPD	NEBCTY1G 18.000 4KV	466	0.01352	-0.08128	100
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/OPPD	NEBCTY2G 23.000 345KV	503	0.01352	-0.08128	100
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/OPPD	CASS 1G 15.000 345KV	42.51929	-0.01258	-0.08032	101
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/OPPD	CASS 2G 15.000 345KV	52.99999	-0.01188	-0.08032	101
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/OPPD	CT CALIG 22.000 4KV	93	0.01093	-0.07969	102
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/OPPD	N OMA 1G 13.800 2KV	46.5	0.01178	-0.07954	102
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/OPPD	N OMA 2G 13.800 2KV	80.59999	0.0118	-0.07956	102
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/OPPD	N OMA 3G 13.800 2KV	80.59999	0.0118	-0.07956	102
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/OPPD	N OMA 4G 15.000 2KV	107.4	0.0118	-0.07956	102
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/OPPD	N OMA 5G 20.000 4KV	173	0.0118	-0.07956	102
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/OPPD	PREM 8G 13.800 69KV	93	0.01093	-0.07969	103
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/NPPD	COL COG7 115.00 115KV	75	0.01017	-0.07793	104
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/NPPD	SHELDN1G 13.800 115KV	68.40000	0.01036	-0.07812	104
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/NPPD	SHELDN2G 13.800 115KV	81	0.01036	-0.07812	104
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/NPPD	EGY CTRG 13.800 115KV	54	0.00968	-0.07742	105
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/NPPD	GT-2 G 13.800 115KV	40	0.00945	-0.07725	105
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/NPPD	PLATE1G 13.800 115KV	71.51868	-0.0094	-0.0772	105
WERE	ABILENE ENERGY CENTER 115KV	66	-0.02358/KACP	IATAN 345KV	1806	0.05294	-0.07652	106
WERE	ABILENE ENERGY CENTER 115KV	66	-0.02358/KACP	IATAN 345KV	371	0.05294	-0.07652	106
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/KACP	BULL CREEK 161KV	61.8	0.00917	-0.07693	106
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/NPPD	BPS GT1G 13.800 115KV	80	0.00728	-0.07502	108
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/NPPD	BPS GT2G 13.800 115KV	45.19951	0.00728	-0.07502	108
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/NPPD	BPS ST2G 13.800 115KV	49.99482	0.00728	-0.07502	108
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/NPPD	GENTLMT2 23.000 230KV	463	0.00668	-0.07444	109
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/NPPD	GENTLMT2G 24.000 345KV	443.3608	0.00653	-0.07429	110
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.01628/KACP	IATAN 345KV	371	0.05294	-0.06922	118
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.01628/KACP	IATAN 345KV	1806	0.05294	-0.06922	118
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/KACP	HAWTHORN 161KV	517.7498	0.001	-0.06876	118
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.01538/KACP	IATAN 345KV	371	0.05294	-0.06829	119
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.01538/KACP	IATAN 345KV	1806	0.05294	-0.06829	119
MIDW	SMOKEY HILLS 34KV	75	-0.01547/KACP	IATAN 345KV	371	0.05294	-0.06841	119
MIDW	SMOKEY HILLS 34KV	75	-0.01547/KACP	IATAN 345KV	1806	0.05294	-0.06841	119
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/MIPU	SIBLEY 161KV	228.9597	0.00058	-0.06832	119
WERE	TECUMSEH ENERGY CENTER 69KV	41	-0.06776/MIPU	SIBLEY 69KV	45.99999	0.0006	-0.06856	119
WERE	JEFFREY ENERGY CENTER 230KV	54	-0.01515/KACP	IATAN 345KV	371	0.05294	-0.06809	120
WERE	JEFFREY ENERGY CENTER 230KV	54	-0.01515/KACP	IATAN 345KV	1806	0.05294	-0.06809	120
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.01353/KACP	IATAN 345KV	1806	0.05294	-0.06647	122
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.01353/KACP	IATAN 345KV	371	0.05294	-0.06647	122
WERE	GILL ENERGY CENTER 69KV	48	-0.01349/KACP	IATAN 345KV	1806	0.05294	-0.06643	122
WERE	GILL ENERGY CENTER 69KV	48	-0.01349/KACP	IATAN 345KV	371	0.05294	-0.06643	122
KACY	QUINDARO 161KV	107.5824	-0.01136/KACP	IATAN 345KV	371	0.05294	-0.0643	127
KACY	QUINDARO 161KV	107.5824	-0.01136/KACP	IATAN 345KV	1806	0.05294	-0.0643	127
KACY	KAW 69KV	242	-0.0098/KACP	IATAN 345KV	371	0.05294	-0.06274	130
KACY	KAW 69KV	242	-0.0098/KACP	IATAN 345KV	1806	0.05294	-0.06274	130
MIPU	SOUTH HARPER 161KV	247.994	-0.00901/KACP	IATAN 345KV	1806	0.05294	-0.06195	131
MIPU	SOUTH HARPER 161KV	247.994	-0.00901/KACP	IATAN 345KV	371	0.05294	-0.06195	131
OKGE	SPGCK3&4 13.200 345KV	111	-0.00718/KACP	IATAN 345KV	371	0.05294	-0.06013	135
OKGE	SPGCK3&4 13.200 345KV	111	-0.00718/KACP	IATAN 345KV	1806	0.05294	-0.06013	135
OKGE	MCCLAIN 138KV	50	-0.00675/KACP	IATAN 345KV	371	0.05294	-0.05969	136
OKGE	MCCLAIN 138KV	50	-0.00675/KACP	IATAN 345KV	1806	0.05294	-0.05969	136
OKGE	MUSTANG 69KV	54.27831	-0.00688/KACP	IATAN 345KV	371	0.05294	-0.05979	136
OKGE	MUSTANG 69KV	54.27831	-0.00688/KACP	IATAN 345KV	1806	0.05294	-0.05979	136
MIPU	ARIES 161KV	576.6668	-0.00633/KACP	IATAN 345KV	1806	0.05294	-0.05927	137
MIPU	ARIES 161KV	576.6668	-0.00633/KACP	IATAN 345KV	371	0.05294	-0.05927	137
OKGE	HORSESHOE LAKE 138KV	64	-0.00665/KACP	IATAN 345KV	371	0.05294	-0.05959	137
OKGE	HORSESHOE LAKE 138KV	64	-0.00665/KACP	IATAN 345KV	1806	0.05294	-0.05959	137
WERE	JEFFREY ENERGY CENTER 345KV	108	-0.00638/KACP	IATAN 345KV	371	0.05294	-0.05932	137
WERE	JEFFREY ENERGY CENTER 345KV	108	-0.00638/KACP	IATAN 345KV	1806	0.05294	-0.05932	137
KACP	PAOLA 5 161.00 161KV	82.5	-0.00637/KACP	IATAN 345KV	371	0.05294	-0.05931	137
KACP	PAOLA 5 161.00 161KV	82.5	-0.00637/KACP	IATAN 345KV	1806	0.05294	-0.05931	137
KACP	PAOLA COMBUSTION TURBINES 161KV	76	-0.00637/KACP	IATAN 345KV	1806	0.05294	-0.05931	137
KACP	PAOLA COMBUSTION TURBINES 161KV	76	-0.00637/KACP	IATAN 345KV	371	0.05294	-0.05931	137
MIPU	RALPH GREEN 69KV	73.7	-0.00649/KACP	IATAN 345KV	371	0.05294	-0.05943	137
MIPU	RALPH GREEN 69KV	73.7	-0.00649/KACP	IATAN 345KV	1806	0.05294	-0.05943	137
OKGE	REDBUD 345KV	1158.39	-0.00664/KACP	IATAN 345KV	1806	0.05294	-0.05958	137
OKGE	REDBUD 345KV	1158.39	-0.00664/KACP	IATAN 345KV	371	0.05294	-0.05958	137
OKGE	SEMINOLE 138KV	200.142	-0.00634/KACP	IATAN 345KV	1806	0.05294	-0.05928	137
OKGE	SEMINOLE 138KV	200.142	-0.00634/KACP	IATAN 345KV	371	0.05294	-0.05928	

Table 6 - Potential Redispatch Relief Pairs to Prevent Deferral of Service

AEPW	KIOWA 345KV	1336.177	-0.0057	KACP	IATAN 345KV	371	0.05294	-0.05851	139
AEPW	WELETKA 138KV	162	-0.00548	KACP	IATAN 345KV	371	0.05294	-0.0584	139
AEPW	WELETKA 138KV	162	-0.00548	KACP	IATAN 345KV	1806	0.05294	-0.0584	139
AEPW	COGENTRIX 345KV	671.9331	-0.00532	KACP	IATAN 345KV	1806	0.05294	-0.05826	140
AEPW	COGENTRIX 345KV	671.9331	-0.00532	KACP	IATAN 345KV	371	0.05294	-0.05826	140
AEPW	MID-CONTINENT 138KV	142.11	-0.00504	KACP	IATAN 345KV	1806	0.05294	-0.05798	140
AEPW	MID-CONTINENT 138KV	142.11	-0.00504	KACP	IATAN 345KV	371	0.05294	-0.05798	140
AEPW	OEC 345KV	1756.622	-0.00524	KACP	IATAN 345KV	1806	0.05294	-0.05818	140
AEPW	OEC 345KV	1756.622	-0.00524	KACP	IATAN 345KV	371	0.05294	-0.05818	140
AEPW	TULSA POWER STATION 138KV	177.1113	-0.00534	KACP	IATAN 345KV	371	0.05294	-0.05828	140
AEPW	TULSA POWER STATION 138KV	177.1113	-0.00534	KACP	IATAN 345KV	1806	0.05294	-0.05828	140
AEPW	TULSA POWER STATION 69KV	80	-0.00534	KACP	IATAN 345KV	371	0.05294	-0.05828	140
AEPW	TULSA POWER STATION 69KV	80	-0.00534	KACP	IATAN 345KV	1806	0.05294	-0.05828	140
AEPW	ELKIN GN 1 13.800 69KV	60	-0.00466	KACP	IATAN 345KV	1806	0.05294	-0.0576	141
AEPW	ELKIN GN 1 13.800 69KV	60	-0.00466	KACP	IATAN 345KV	371	0.05294	-0.0576	141
EMDE	RIVERTON 161KV	182.9673	-0.00484	KACP	IATAN 345KV	371	0.05294	-0.05778	141
EMDE	RIVERTON 161KV	182.9673	-0.00484	KACP	IATAN 345KV	1806	0.05294	-0.05778	141
EMDE	STATE LINE 161KV	90	-0.00475	KACP	IATAN 345KV	371	0.05294	-0.05769	141
EMDE	STATE LINE 161KV	90	-0.00475	KACP	IATAN 345KV	1806	0.05294	-0.05769	141
AEPW	TONTITOWN 161KV	186.12	-0.00466	KACP	IATAN 345KV	1806	0.05294	-0.0576	141
AEPW	TONTITOWN 161KV	186.12	-0.00466	KACP	IATAN 345KV	371	0.05294	-0.0576	141
EMDE	LARUSSEL 161KV	171	-0.00428	KACP	IATAN 345KV	371	0.05294	-0.05723	142
EMDE	LARUSSEL 161KV	171	-0.00428	KACP	IATAN 345KV	1806	0.05294	-0.05723	142
AEPW	LONESTAR POWER PLANT 69KV	50	-0.00301	KACP	IATAN 345KV	1806	0.05294	-0.05595	145
AEPW	LONESTAR POWER PLANT 69KV	50	-0.00301	KACP	IATAN 345KV	371	0.05294	-0.05595	145
AEPW	WILKES 138KV	52.19009	-0.00299	KACP	IATAN 345KV	371	0.05294	-0.05593	145
AEPW	WILKES 138KV	52.19009	-0.00299	KACP	IATAN 345KV	1806	0.05294	-0.05593	145
AEPW	ARSENAL HILL 138KV	337.2	-0.00268	KACP	IATAN 345KV	371	0.05294	-0.05563	146
AEPW	ARSENAL HILL 138KV	337.2	-0.00268	KACP	IATAN 345KV	1806	0.05294	-0.05563	146
AEPW	EASTMAN 138KV	128.2153	-0.00291	KACP	IATAN 345KV	371	0.05294	-0.05585	146
AEPW	EASTMAN 138KV	128.2153	-0.00291	KACP	IATAN 345KV	1806	0.05294	-0.05585	146
AEPW	KNOXLEE 138KV	176	-0.00289	KACP	IATAN 345KV	1806	0.05294	-0.05583	146
AEPW	KNOXLEE 138KV	176	-0.00289	KACP	IATAN 345KV	371	0.05294	-0.05583	146
AEPW	LEBROCK 345KV	179.8976	-0.00228	KACP	IATAN 345KV	1806	0.05294	-0.05584	146
AEPW	LEBROCK 345KV	179.8976	-0.00228	KACP	IATAN 345KV	371	0.05294	-0.05584	146
AEPW	FULTON 115KV	153	-0.00258	KACP	IATAN 345KV	371	0.05294	-0.05553	147
AEPW	FULTON 115KV	153	-0.00258	KACP	IATAN 345KV	1806	0.05294	-0.05553	147
KACP	NORTHEAST 13KV	223	-0.00094	KACP	IATAN 345KV	1806	0.05294	-0.05388	151
KACP	NORTHEAST 13KV	223	-0.00094	KACP	IATAN 345KV	371	0.05294	-0.05388	151
KACP	NORTHEAST 161KV	224	-0.00098	KACP	IATAN 345KV	1806	0.05294	-0.05388	151
KACP	NORTHEAST 161KV	224	-0.00098	KACP	IATAN 345KV	371	0.05294	-0.05388	151
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	MIPU	LAKE ROAD 34KV	92	0.02101	-0.05272	154
KACP	MARSHALL 161KV	54.1	0.00059	KACP	IATAN 345KV	1806	0.05294	-0.05235	155
KACP	MARSHALL 161KV	54.1	0.00059	KACP	IATAN 345KV	371	0.05294	-0.05235	155
KACP	HAWTHORN 161KV	245.2502	0.001	KACP	IATAN 345KV	371	0.05294	-0.05194	157
KACP	HAWTHORN 161KV	245.2502	0.001	KACP	IATAN 345KV	1806	0.05294	-0.05194	157
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	NPPD	COOPER1G 22.000 345KV	551.2802	0.01578	-0.04747	171
NPPD	SIDNEY 4 230.00 230KV	230.6148	0.00673	KACP	IATAN 345KV	371	0.05294	-0.04621	176
NPPD	SIDNEY 4 230.00 230KV	230.6148	0.00673	KACP	IATAN 345KV	1806	0.05294	-0.04621	176
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	OPPD	NEBCTY1G 18.000 4KV	466	0.01352	-0.04523	180
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	OPPD	NEBCTY2G 23.000 345KV	503	0.01352	-0.04523	180
NPPD	CANADY1G 13.800 115KV	125	0.00787	KACP	IATAN 345KV	371	0.05294	-0.04507	181
NPPD	CANADY1G 13.800 115KV	125	0.00787	KACP	IATAN 345KV	1806	0.05294	-0.04507	181
WERE	ABILENE ENERGY CENTER 115KV	66	-0.02356	MIPU	LAKE ROAD 34KV	92	0.02101	-0.04459	182
KACP	BULL CREEK 161KV	246.4	0.00917	KACP	IATAN 345KV	1806	0.05294	-0.04377	186
KACP	BULL CREEK 161KV	246.4	0.00917	KACP	IATAN 345KV	371	0.05294	-0.04377	186
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	OPPD	N OMA 2G 13.800 2KV	80.59999	0.0118	-0.04351	187
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	OPPD	N OMA 3G 13.800 2KV	80.59999	0.0118	-0.04351	187
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	OPPD	N OMA 4G 15.000 2KV	107.4	0.0118	-0.04351	187
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	OPPD	N OMA 5G 20.000 4KV	173.9	0.0118	-0.04351	187
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	OPPD	FT CAL1G 22.000 4KV	376	0.01169	-0.04339	188
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	OPPD	FREM 8G 13.800 69KV	90	0.01093	-0.04264	191
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	NPPD	SHELDN1G 13.800 115KV	68.40001	0.01038	-0.04207	193
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	NPPD	SHELDN2G 13.800 115KV	81	0.01038	-0.04207	193
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	NPPD	COL_COG7 115.00 115KV	75	0.01017	-0.04188	194
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	NPPD	PLATTE1G 13.800 115KV	71.51868	0.00944	-0.04115	198
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	NPPD	BPS GT1G 13.800 115KV	80	0.00728	-0.03897	209
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	NPPD	GENTLM1G 23.000 230KV	463	0.00668	-0.03839	212
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	NPPD	GENTLM2G 24.000 345KV	443.3608	0.00653	-0.03824	213
MIDW	BPU - CITY OF MCPHERSON 115KV	232	-0.01628	MIPU	LAKE ROAD 34KV	92	0.02101	-0.03729	218
MIDW	SMOKEY HILLS 34KV	75	-0.01547	MIPU	LAKE ROAD 34KV	92	0.02101	-0.03648	223
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.01535	MIPU	LAKE ROAD 34KV	92	0.02101	-0.03636	224
WERE	GILL ENERGY CENTER 138KV	84.99999	-0.01353	MIPU	LAKE ROAD 34KV	92	0.02101	-0.03454	236
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	KACP	HAWTHORN 161KV	517.7498	0.001	-0.03271	249
KACY	QUINDARO 161KV	107.5824	-0.01136	MIPU	LAKE ROAD 34KV	92	0.02101	-0.03237	251
WERE	EMPORIA ENERGY CENTER 345KV	201	-0.03171	MIPU	SIBLEY 161KV	228.9597	0.00056	-0.03227	252
WERE	BPU - CITY OF MCPHERSON 115KV	232	-0.01628	NPPD	COOPER1G 22.000 345KV	551.2802	0.01578	-0.03204	254
MIPU	LAKE ROAD 161KV	91	0.02101	KACP	IATAN 345KV	371	0.05294	-0.03193	255
MIPU	LAKE ROAD 161KV	91	0.02101	KACP	IATAN 345KV	1806	0.05294	-0.03193	255
WERE	HUTCHINSON ENERGY CENTER 115KV	214	-0.01535	NPPD	COOPER1G 22.000 345KV	551.2802	0.01578	-0.03111	262
KACY	KAW 69KV	242	-0.0098	MIPU	LAKE ROAD 34KV	92	0.02101	-0.03081	264
MIPU	SOUTH HARPER 161KV	247.994	-0.00901	MIPU	LAKE ROAD 34KV	92	0.02101	-0.03002	271

Maximum Decrement and Maximum Increment were determined from the Source and Sink Operating Points in the study models where limiting facility was identified.

Factor = Source GSF - Sink GSF

Redispatch Amount = Relief Amount / Factor