

Aggregate Facility Study SPP-2006-AG2-AFS-4 For Transmission Service Requested by Aggregate Transmission Customers

SPP Engineering, SPP Tariff Studies

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1. Executive Summary

Pursuant to Attachment Z of the Southwest Power Pool Open Access Transmission Tariff (OATT), 1922 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 Z provides for facility upgrade cost recovery by stating that "[a]ny charges paid by a customer in excess of the transmission access charges in compensation for the revenue requirements for allocated facility upgrade(s) shall be recovered by such customer from future transmission service revenues until the customer has been fully compensated."

The total assigned facility upgrade Engineering and Construction (E &C) cost determined by the AFS is \$68,269,198. Additionally \$200,000 of assigned E & C cost for 3rd party facility upgrades are assignable to the customer. The total upgrade levelized revenue requirement for all transmission requests is \$160,269,654. 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 with redispatch if applicable. Total upgrade levelized revenue requirements for all transmission requests after consideration of potential base plan funding is \$7,851,152.

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, no third-party facilities were identified. Total engineering and construction cost estimates for required third-party facility upgrades are \$0.

The Transmission Provider will tender a Letter of Intent on Monday, January 29th, 2007. 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 February 13th, 2007, 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 reperformed 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. The proposed cost allocation and cost recovery provisions were accepted for filing and suspended to become effective the earlier of five months from the requested effective date (July 1, 2005) or a further order of the Commission in the proceeding subject to refund. Since that time, the cost allocation and cost recovery provisions have been accepted with modification. The following link can be used to access the SPP Regulatory/FERC webpage:

(http://www.spp.org/section.asp?group=215&pageID=27). The hyperlinks under the heading ER05-109 (Attach Z Filing) open Southwest Power Pool's October 29, 2004 filing containing Attachment Z to the SPP OATT and the Commission's January 21, 2005 Order. In compliance with this Order, the fourth open season commenced on February 1, 2006. All requests for long-term transmission service received prior to June 1, 2006 with a signed study agreement were then included in this fourth Aggregate Transmission Service Study (ATSS).

Approximately 1922 MW of long-term transmission service has been restudied in this Aggregate Facility Study (AFS) with over \$68 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 Z 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 Z. The following link can be used to access the SPP OATT: (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:

- 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 Z 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 Z

Section VII.

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

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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 3, 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. 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

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expenses though the reservation period of the new request, excluding depreciation, shall be assigned to the new request. These incremental expenses, excluding depreciation, include 1) the levelized difference in present worth of the engineering and construction expenses given the change in date to complete construction to account for additional interest expense and reduced engineering and construction expense due to inflation, 2) the

levelized present worth of all expediting fees, and 3) the levelized present worth of the incremental annual carrying charges, excluding depreciation and interest, during the new reservation period taking into account both a) the reservation in which the project was originally assigned, and b) a reservation, if any, in which the project was previously expedited.

Achievable Base Plan Avoided Revenue Requirements in the case of a Base Plan upgrade being displaced or deferred by an earlier in service date for a Requested Upgrade shall be determined per Attachment J, Section VII.B methodology. A deferred Base Plan upgrade being defined as a different requested network upgrade needed at an earlier date that negates the need for the initial base plan upgrade within the planning horizon. A displaced Base Plan upgrade being defined as the same network upgrade being displaced by a requested upgrade needed at an earlier date. Assumption of a 40 year service life is utilized for Base Plan funded projects unless provided otherwise by the Transmission Owner. A present worth analysis of revenue requirements on a common year basis between the Base Plan and Requested Upgrades was performed to determine avoided Base Plan revenue requirements due to the displacement or deferral of the Base Plan upgrade by the Requested Upgrade. The difference in present worth between the Base Plan and Requested Upgrades is assigned to the transmission requests impacting this upgrade based on the displacement or deferral.

B. Third-Party Facilities

For third-party facilities listed in Table 3 and Table 5, the Transmission Customer is responsible for funding the necessary upgrades of these facilities per Section 21.1 of the Transmission Provider's OATT. In this AFS, third-party facilities were identified. Total engineering and construction cost estimates for required third-party facility upgrades are \$200,000. 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. These facilities also include those owned by members of the Transmission Provider who have not placed their facilities under the Transmission Provider's OATT.

Third-party facilities are evaluated for only those requests whose load sinks within the SPP footprint. The Customer must arrange for study of 3rd 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 110% and 90%. The SPS Tuco 230 kV bus voltage is monitored at 92.5% due to predetermined system stability limitations.

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 69 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 twelve seasonal models to study the aggregate transfers of 1922 MW over a variety of requested service periods. The SPP MDWG 2006 Series Cases Update 4 2006 2006/07 Winter Peak (06WP), 2007 April Minimum (07AP), 2007 Spring Peak (07G), 2007 Summer Peak (07SP), 2007Summer Shoulder (07SH), 2007 Fall Peak (07FA), 2007/08 Winter Peak (07WP), 2008 Summer Peak (08SP), 2008/09 Winter Peak (08WP), 2011 Summer Peak (11SP), 2011/12 Winter Peak (11WP), and 2016 Summer Peak (16SP) were used to study the impact of the requested service on the transmission system. The Spring Peak models apply to April and May, the Summer Peak models apply to June through September, the Fall Peak models apply to October and November, and the Winter Peak models apply to December through March.

The chosen base case models were modified to reflect the most current modeling information. Four groups of requests were developed from the aggregate of 1922 MW in order to minimize counterflows among requested service. Each request was included in two to four groups depending on the requested path. From the thirteen seasonal models, three system scenarios were developed. Scenario 1 includes SWPP OASIS transmission requests not already included in the SPP 2006 Series Cases flowing in a West to East direction with ERCOT exporting and SPS exporting to outside zones and exporting to the Lamar HVDC Tie. Scenario 2 includes transmission requests not already included in the SPP 2006 Series Cases flowing in an East to West direction with ERCOT net importing

and SPS importing from an outside zone and exporting to the Lamar HVDC Tie. Scenario 3 includes transmission requests not already included in the SPP 2006 Series Cases flowing in a West to East direction with ERCOT net importing and SPS exporting from an outside zone and exporting from the Lamar HVDC Tie. Scenario 4 includes transmission requests not already included in the SPP 2006 Series Cases flowing in a North to South direction with ERCOT importing and SPS importing from outside zones and importing from 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. The Generation to Load modeling is accomplished by developing a pretransfer 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 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.

The 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 1st-Tier) and voltage threshold (0.02 change below 0.90 pu) 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). From the generation shift factors for the incremental and decremental units, top 100 relief pairs within a NERC certified control area with a greater than 3% TDF on 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 in the top 100 relief pairs. If transmission customer would like to see additional relief pairs beyond the top 100 relief pairs determined, the transmission customer can request SPP to provide the additional pairs. The potential relief pairs were 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. 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, facilities limiting rollover rights, credits to be paid for previously assigned AFS facility upgrades, and any third party upgrades required. This includes the season in the planning horizon where rollover rights are limited. 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 (COD), Estimated Date of Upgrade Completion (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 identifies deferred expansion plan projects that were replaced with requested upgrades at earlier dates.

The potential base plan funding allowable is contingent upon meeting each of the conditions for classifying upgrades associated with designated resources as base plan upgrades as defined in Section III.B of Attachment J. If the additional capacity of the new or changed designated resource exceeds the 125% resource to load forecast for the

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

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

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

Example A:

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

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

Example B:

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

Example C:

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

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

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

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B. Study Definitions

The Commercial Operation Date (COD) 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 Friday, January 29th, 2007. 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 February 13th, 2007, 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 required regardless of base plan funding consideration. 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 letters of authorization 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.

Appendix A

PSS/E CHOICES IN RUNNING LOAD FLOW PROGRAM AND ACCC

BASE CASES:

Solutions - Fixed slope decoupled Newton-Raphson solution (FDNS)

- 1. Tap adjustment Stepping
- 2. Area interchange control Tie lines and loads
- 3. Var limits Apply immediately
- 4. Solution options X Phase shift adjustment
 - _ Flat start
 - Lock DC taps
 - _ Lock switched shunts

ACCC CASES:

Solutions – AC contingency checking (ACCC)

- 1. MW mismatch tolerance -0.5
- 2. Contingency case rating Rate B
- 3. Percent of rating 100
- 4. Output code Summary
- 5. Min flow change in overload report 3mw
- 6. Excld cases w/ no overloads form report YES
- 7. Exclude interfaces from report NO
- 8. Perform voltage limit check YES
- 9. Elements in available capacity table 60000
- 10. Cutoff threshold for available capacity table 99999.0
- 11. Min. contng. case Vltg chng for report 0.02
- 12. Sorted output None

Newton Solution:

- 1. Tap adjustment Stepping
- 2. Area interchange control Tie lines and loads
- 3. Var limits Apply automatically
- 4. Solution options X Phase shift adjustment
 - _ Flat start
 - _ Lock DC taps
 - Lock switched shunts

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

Customer	Study Number	Reservation	POR	POD	Requested Amount	Requested Start Date	Requested Stop Date	Deferred Start Date without interim redispatch	Deferred Stop Date without interim redispatch	Start Date with interim redispatch	Stop Date with interim redispatch	Note	Mimimum Allocated ATC (MW) within reservation period	Season of Minimum Allocated ATC within reservation period
AEPM	AG2-2006-033	1087745	EES	CSWS	225	1/1/2007	1/1/2010	6/1/2008	6/1/2011	4/1/2007	4/1/2010	1,2	0	08SP
AEPM	AG2-2006-034	1087757	CSWS	CSWS	172	6/1/2008	6/1/2028						0	08SP
EDE	AG2-2005-064	973355	KCPL	EDE	100	1/1/2010	1/1/2030					3	0	11SP
GSEC	AG2-2006-054	1090270	CSWS	CSWS	10	10/1/2006	10/1/2036	7/1/2009	7/1/2039				0	16SP
GSEC	AG2-2006-133	1090487	SPS	SPS	150	4/1/2007	4/1/2017	6/1/2009	6/1/2019	4/1/2007	4/1/2017	1,2	0	08SP
INDP	AG1-2006-051	1033791	KCPL	INDN	50	6/1/2010	6/1/2040					03	0	11SP
KCPS	GEN-2004-008	1115127	KCPL	KCPL	332	6/1/2009	6/1/2029					3	0	11SP
KCPS	AG1-2006-009	1179751	KCPL	KCPL	168	6/1/2009	6/1/2029					3	0	11SP
KEPC	AG2-2006-067	1090416	KCPL	WR	30	6/1/2010	6/1/2030						0	11SP
MIDW	AG2-2006-107	1090817	WR	WR	25	6/1/2007	6/1/2017	7/1/2009	7/1/2019	10/1/2007	10/1/2017	1,2	0	11SP
MIDW	AG2-2006-108	1090829	WR	WR	15	6/1/2008	6/1/2028	7/1/2009	7/1/2029	6/1/2008	6/1/2028	1,2	0	16SP
MIDW	AG2-2006-097	1090917	WR	WR	20	6/1/2008	6/1/2038	7/1/2009	7/1/2039	6/1/2008	6/1/2038	1,2	0	11WP
MIDW	AG2-2006-097	1090919	WR	WR	5	6/1/2008	6/1/2038	7/1/2009	7/1/2039	6/1/2008	6/1/2038	1,2	0	11WP
MIDW	AG2-2006-097	1090920	WR	WR	40	6/1/2008	6/1/2038	7/1/2009	7/1/2039	6/1/2008	6/1/2038	1,2	0	11WP
MIDW	AG2-2006-097	1090921	WR	WR	10	6/1/2008	6/1/2038	7/1/2009	7/1/2039	6/1/2008	6/1/2038	1,2	0	11WP
MIDW	AG2-2006-106	1090964	WR	WR	35	1/1/2007	1/1/2012	6/1/2010	6/1/2015	10/1/2007	10/1/2012	1,2	0	08SP
MIDW	AG2-2006-106	1090965	WR	WR	10	1/1/2007	1/1/2012	6/1/2010	6/1/2015	10/1/2007	10/1/2012	1,2	0	08SP
MIDW	AG2-2006-108	1091057	WR	WR	10	6/1/2008	6/1/2018	7/1/2009	7/1/2019	6/1/2008	6/1/2018	1,2	0	16SP
OGE	AG2-2006-035	1087908	OKGE	EES	10	12/1/2006	12/1/2011	4/1/2007	4/1/2012	4/1/2007	4/1/2012	1,2	0	0
SPSM	AG2-2006-074	1090699	WPEK	KCPL	50	10/1/2006	10/1/2007	10/1/2007	10/1/2008				0	07SP
SPSM	AG2-2006-124	1090705	WPEK	KCPL	50	10/1/2006	10/1/2007	10/1/2007	10/1/2008				0	07SP
UCU	AG2-2006-006	1052923	KCPL	MPS	160	6/1/2010	6/1/2030						0	11SP
WRGS	AG2-2006-016	1076158	KCPL	AMRN	20	6/1/2010	6/1/2015						0	11SP
WRGS	AG2-2006-030	1086655	OKGE	WR	225	10/1/2006	10/1/2026	7/1/2009	7/1/2029	4/1/2007	4/1/2027	1,2	0	16SP

Note 1: Disregard Redispatch shown in Table 6 for limitations identified earlier than the start date with redispatch with the exception of limitations identified in the 2006 Fall Peak, 2007 Spring Peak, 2007 April Minimum, 2007 Summer Shoulder, and 2007 Fall Peak

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

Note 3: All previous transmission requests with a source of latan II were re-evaluated in this AFS due to attempting to determine an overall solution for the requested service.

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

Customer AEPM	Study Number	Reservation	⁹ Engineering and Construction Cost of Upgrades Allocated to Customer for Revenue Requirements		etter of Credit Amount Required	Plan and Fund	otential Base n Engineering Construction ding Allowable	NOTE	C C Pai	Additional ingineering and onstruction cost for 3rd rty Upgrades	Re Ass res pot	Total Revenue equirements for signed Upgrades over term of tervation without tential base plan ading allocation	R As re po	Total Revenue equirements for signed Upgrades over term of eservation WITH tential base plan nding allocation	Ва	oint-to-Point se Rate over rvation period	As con	
	AG2-2006-033	1087745		\$	-	\$	-		\$	-	\$	- 0.004.040	\$	-	\$	-		9 Charges
AEPM	AG2-2006-034	1087757	, , ,	\$	-	\$	3,000,000	40.0	\$	-	\$	8,631,816		-	\$	-		9 Charges
EDE	AG2-2005-064	973355	, , ,		70.000	\$	3,502,843	10, 8		-	\$	- , - , -	\$	3,920,092	\$	-	\$	3,920,092
GSEC	AG2-2006-054	1090270		\$	70,000		-	12		200,000	\$	264,077	\$	264,077	\$	-	\$	464,077
GSEC	AG2-2006-133	1090487	+,	\$	288,620	•	288,620		\$	-	\$	569,903	\$	2 240 450	\$	-		9 Charges
INDP	AG1-2006-051	1033791	+,	\$	938,195	_	-		\$	-	\$	3,340,156	\$	3,340,156	\$	15,840,000	\$	15,840,000
KCPS	GEN-2004-008	1115127	*	\$	- 0 404 005	\$	-		\$	-	\$	-	\$	-	\$	-		9 Charges
KCPS	AG1-2006-009	1179751	+ , - ,	\$	3,461,805		4,161,805	8	\$	-	\$	10,566,295	\$	-	\$	-		9 Charges
KEPC	AG2-2006-067	1090416	+ ,	\$	17,090		17,090		\$	-	\$	59,915		-	\$	-		9 Charges
MIDW	AG2-2006-107	1090817	Ť /-		-	\$	24,672		\$	-	\$	48,848		-	\$	-		9 Charges
MIDW	AG2-2006-108	1090829	. ,	_	-	\$	-		\$	-	\$,	\$	44,881	\$	-	\$	44,881
MIDW	AG2-2006-097	1090917	+ /		-	\$	-		\$	-	\$	- ,	\$	64,983	_	-	\$	64,983
MIDW	AG2-2006-097	1090919	+ -,	_	-	\$	-		\$	-	\$	12,998	\$	12,998	_	-	\$	12,998
MIDW	AG2-2006-097	1090920	+,	\$	-	\$	-		\$	-	\$	142,963		142,963	•	-	\$	142,963
MIDW	AG2-2006-097	1090921	+ -,-		-	\$	-	5	\$	-	\$	38,990	\$	38,990	\$	-	\$	38,990
MIDW	AG2-2006-106	1090964		_	-	\$	31,721		\$	-	\$,	\$	-	\$	-		9 Charges
MIDW	AG2-2006-106	1090965	+ -,-	\$	-	\$	10,574		\$	-	\$,	\$	-	\$	-		9 Charges
MIDW	AG2-2006-108	1091057	+ -,-	\$	-	\$	-	5	\$	-	\$	22,012		22,012		-	\$	22,012
OGE	AG2-2006-035	1087908		\$	-	\$	-		\$	-	\$	-	\$	-	\$	540,000	\$	540,000
SPSM	AG2-2006-074	1090699	*	\$	-	\$	-		\$	-	\$	-	\$	-	\$	528,000	\$	528,000
SPSM	AG2-2006-124	1090705	*	\$	-	\$	-		\$	-	\$	-	\$	-	\$	528,000	\$	528,000
UCU	AG3-2006-018D	1104638	*	\$	-	\$	-	7,13		-	\$	-	\$	-	\$	-		9 Charges
WRGS	AG2-2006-016	1076158		\$	-	\$	-		\$	-	\$	-	\$	-	\$	1,080,000	\$	1,080,000
WRGS	AG2-2006-030	1086655	\$ 54,896,021	\$	27,421,315	\$	54,896,021		\$	-	\$	121,313,926	\$	-	\$	-	Sch	9 Charges
Totals		·	\$ 68,269,198			\$	65,933,346			 -	\$	160,269,654	\$	7,851,152				

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 plus network upgrades for assigned upgrades less that \$100,000 which are base plan funded but still require a letter of credit.

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 PTP base rate exceeds revenue requirements.

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

Note 4. For PTP 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. Revenue requirements for 3rd Party facilities are not calculated. Total cost to customer is based on assumption of Revenue Requirements with confirmation of base plan funding. Customer is responsible for negotiating redispatch costs if applicable. Customer is also responsible to pay credits for previously assigned upgrades that are impacted by their request. Credits required will be determined at a later date.

Note 5: Total Base plan funding available for 2008 to serve combined M and W system Midwest load based on 333MW of load is up to 416 MW of resources or 102 Additional MW more than forecast. This equates to \$18,360,000 potential base plan funding for the full 102MW. 125MW remaining in this study exceeds cap for base funding.

Note 6: Midwest has a maximum of 425MW of resources allowable for base funding for year 2007 based on 332MW load.

Note 7: UCU has a maximum of 161MW of resources in 2010 allowable for base funding for year 2010.

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

- Note 8: All previous transmission requests with a source of latan II were re-evaluated in this AFS due to attempting to determine an overall solution for the requested service.
- Note 9: E & C allocation for determination of allocated revenue requirements does not include those upgrades estimated at \$100,000 or less as these are base plan funded. Thus this number sets the cap for base plan funding allowable for remaining assigned upgrades. Allocated E & C in Table 3 does include those upgrades less than \$100,000 in order to establish the allocation per request per upgrade detail which is required for Letter of Credit determination.
- Note 10: A ratio of total assignable \$4,733,572 for 100MW to the assignable portion above 125% resource to load cap or 26MW results in \$1,230,749 assignable to the customer.
- Note 11: RR with base plan funding may increase or decrease even if no base plan funding is applicable to a particular request if another request that shares the upgrade is now full base plan funded resulting in a different amortization period for the upgrade and thus different RR.
- Note 12: \$200,000 to install Capacitor at GSEC bus and \$70,000 SPS cost for line tap.
- Note 13: Customer UCU Study Number AG2-2006-006 Reservation 1052923 for PTP Transmission Service request replaced with equivalent Study Number AG3-2006-018D Reservation 1104638 for NITS request.

Customer Study Number AEPM AG2-2006-033

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
AEPM	1087745	EES	CSWS	225	1/1/2007	1/1/2010	6/1/2008	6/1/2011	\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

				Earliest				
				Service Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	COD	EOC	Date	Available	Cost	Total E & C Cost	Requirements
1087745	None					\$ -	\$ -	\$ -
					Total	¢ .	¢ .	¢ .

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1087745	ALUMAX TAP - NORTHWEST TEXARKANA 138KV CKT 1	6/1/2008	6/1/2008		
	CHAMBER SPRINGS - TONTITOWN 161KV CKT 1	12/1/2008	6/1/2007		
	Chamber Springs - Tontitown 345 kV	6/1/2008	6/1/2008		
	Flint Creek - East Centerton 345 kV	6/1/2011	6/1/2011		
	LINWOOD - MCWILLIE STREET 138KV CKT 1	6/1/2007	6/1/2008		Yes

Customer Study Number AEPM AG2-2006-034

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
AEPM	1087757	CSWS	CSWS	172	6/1/2008	6/1/2028			\$ 3,000,000	\$ -	\$ 3,000,000	\$ 8,631,816
									\$ 2,000,000	¢	\$ 2,000,000	¢ 9.621.916

				Earliest Service Start	Redispatch	Allo	cated E & C		Total R	Revenue
Reservation	Upgrade Name	COD	EOC	Date	Available	Cos	t	Total E & C Cost	Require	rements
1087757	SOUTHWEST SHREVEPORT (SW SHV 1) 345/138/13.8KV TRANSFORMER CKT 1	6/1/2010	6/1/2010			\$	1,500,000	\$ 1,500,000	\$	4,315,908
	SOUTHWEST SHREVEPORT (SW SHV 2) 345/138/13.8KV TRANSFORMER CKT 2	6/1/2010	6/1/2010			\$	1,500,000	\$ 1,500,000	\$	4,315,908
					Total	\$	3,000,000	\$ 3,000,000	\$	8,631,816

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1087757	5 TRIBES - HANCOCK 161KV CKT 1	6/1/2014	6/1/2014		
	5 TRIBES - PECAN CREEK 161KV CKT 1	6/1/2014	6/1/2014		
	AGENCY - PECAN CREEK 161KV CKT 1	6/1/2014	6/1/2014		
	ALUMAX TAP - NORTHWEST TEXARKANA 138KV CKT 1	6/1/2008	6/1/2008		
	CHAMBER SPRINGS - TONTITOWN 161KV CKT 1	12/1/2008	6/1/2007		
	Chamber Springs - Tontitown 345 kV	6/1/2008	6/1/2008		
	Flint Creek - East Centerton 345 kV	6/1/2011	6/1/2011		
	LINWOOD - MCWILLIE STREET 138KV CKT 1	6/1/2007	6/1/2008		
	PECAN CREEK (PECANCK1) 345/161/13.8KV TRANSFORMER CKT 2	6/1/2014	6/1/2014		
	Siloam Springs - South Fayetteville 161 kV	6/1/2015	6/1/2015		

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1087757	ARCADIA - REDBUD 345 KV CKT 1	6/1/2006	6/1/2006		
	ARCADIA - REDBUD 345 KV CKT 2	6/1/2006	6/1/2006		
	BEELINE - EXPLORER GLENPOOL 138KV CKT 1	6/1/2009	6/1/2009		
	EXPLORER GLENPOOL - RIVERSIDE STATION 138KV CKT 1 AEPW	6/1/2009	6/1/2009		
	EXPLORER GLENPOOL - RIVERSIDE STATION 138KV CKT 1 OKGE	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 GSEC AG2-2006-054

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date		Redispatch			Base Rate	Cost	Requirements
GSEC	1090270	CSWS	CSWS	10	10/1/2006	10/1/2036	7/1/2009	7/1/2039	\$ -	\$ -	\$ 270,000	
									\$ -	\$ -	\$ 270,000	\$ 264.077

				Earliest						
				Service Start	Redispatch	Alloca	ted E & C		Total Rev	enue
Reservation	Upgrade Name	COD	EOC	Date	Available	Cost		Total E & C Cost	Requirem	ients
1090270	GSEC Midway Interconnection #1	6/1/2011	6/1/2011			\$	70,000	\$ 70,000	\$	264,077
	GSEC Midway Interconnection #2	6/1/2011	6/1/2011			\$	200,000	\$ 200,000	\$	-
					Total	\$	270,000	\$ 270,000	\$	264.077

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1090270	ALTUS JCT TAP - RUSSELL 138KV CKT 1	6/1/2014	6/1/2014		
	CANADIAN - CEDAR LANE 138KV CKT 1	6/1/2015	6/1/2015		
	Hart Interchange 230/115 kV	6/1/2011	6/1/2011		
	Hitchland 345 and 115 kV Interchange	6/1/2010	6/1/2010		
	Mooreland - Potter 345 kV SPS	6/1/2015	6/1/2015		
	Mooreland - Potter 345 kV WFEC	6/1/2015	6/1/2015		
	Mooreland 345/138 kV Transformer	6/1/2015	6/1/2015		
	POTTER COUNTY INTERCHANGE (POTTR CO) 345/230/13.2KV TRANSFORMER CKT 2	6/1/2015	6/1/2015		
	SNYDER AEPW- SNYDER WFEC INTERCONNECTION	6/1/2016	6/1/2016		
	Spearville - Mooreland 345 kV SUNC	6/1/2015	6/1/2015		
	Spearville - Mooreland 345 kV WFEC	6/1/2015	6/1/2015		
	Stateline Project	6/1/2014	6/1/2014		
	Tex-Hitchland-Sherman Tap 115 kV ckt	6/1/2010	6/1/2010		
	THOMAS TAP - WEATHERFORD 69KV CKT 1	6/1/2014	6/1/2014		
	TUCO INTERCHANGE 345/115KV TRANSFORMER CKT 1	6/1/2015	6/1/2015		
	WEATHERFORD SOUTHEAST (WTH_SE) 138/69/13.8KV TRANSFORMER CKT 1	6/1/2013	6/1/2013		

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

				Earliest	ĺ
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1090270	ARCADIA - REDBUD 345 KV CKT 1	6/1/2006	6/1/2006		
	ARCADIA - REDBUD 345 KV CKT 2	6/1/2006	6/1/2006		
	BEELINE - EXPLORER GLENPOOL 138KV CKT 1	6/1/2009	6/1/2009		
	EXPLORER GLENPOOL - RIVERSIDE STATION 138KV CKT 1 AEPW	6/1/2009	6/1/2009		
	EXPLORER GLENPOOL - RIVERSIDE STATION 138KV CKT 1 OKGE	6/1/2009	6/1/2009		

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1090270	HAMON BUTLER - MOREWOOD 69KV CKT 1	12/1/2006	4/1/2008		No
	RENO - SUMMIT 345KV	1/1/2011	1/1/2011		
	WICHITA - RENO 345KV	12/1/2006	7/1/2009		No

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

Customer Study Number GSEC AG2-2006-133

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
GSEC	1090487	SPS	SPS	150	4/1/2007	4/1/2017	6/1/2009	6/1/2019	\$ 288,620		\$ 288,620	\$ 569,903
									\$ 288,620	\$ -	\$ 288,620	\$ 569,903

				Earliest					
				Service Start	Redispatch	Alloca	ated E & C		Total Revenue
Reservation	Upgrade Name	COD	EOC	Date	Available	Cost		Total E & C Cost	Requirements
1090487	Mustang-San Andr-Amerada Hess 115KV Displacement	4/1/2007	6/1/2008		Yes	\$	288,620	\$ 1,742,892	\$ 569,903
	YOAKUM COUNTY INTERCHANGE 230/115KV TRANSFORMER CKT 1 Displacement	6/1/2007	6/1/2008		Yes	\$	-	\$ 2,500,000	\$ -
					Total	\$	288,620	\$ 4,242,892	\$ 569,903

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1090487	BC-EARTH INTERCHANGE 115KV	6/1/2016	6/1/2016		
	CURRY COUNTY INTERCHANGE - ROOSEVELT COUNTY INTERCHANGE 115KV CKT 2	6/1/2013	6/1/2013		
	Hart Interchange 230/115 kV	6/1/2011	6/1/2011		
	Hitchland 345 and 115 kV Interchange	6/1/2010	6/1/2010		
	KRESS INTERCHANGE 115/69KV TRANSFORMERS	4/1/2007	4/1/2007		
	LC-SOL3 115KV	6/1/2016	6/1/2016		
	MUSTANG STATION 230/115KV TRANSFORMER CKT 1	4/1/2007	6/1/2008		Yes
	Potter - Roosevelt 345KV	6/1/2013	6/1/2013		
	Pringle - Etter 115 kV	6/1/2010	6/1/2010		
	ROOSEVELT COUNTY INTERCHANGE 230/115KV TRANSFORMER CKT 1	6/1/2013	6/1/2013		
	Seven Rivers to Pecos to Potash Junction 230kV	6/1/2007	6/1/2009		Yes
	Tex-Hitchland-Sherman Tap 115 kV ckt	6/1/2010	6/1/2010		
	TUCO INTERCHANGE 115/69KV TRANSFORMER	6/1/2008	6/1/2008		

Construction F	ending - The requested service is contingent upon completion of the following upgrades. Cost is not assign	gnable to the	transmission (customer.	
				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1090487	TERRY COUNTY INTERCHANGE 115/69KV TRANSFORMERS	6/1/2007	6/1/2007		

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

Customer Study Number KEPC AG2-2006-067

						Requested	Date Without	Date Without			Allocated E & C	
Customer	Reservation	POR	POD	Amount	Start Date		Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
KEPC		KCPL	WR	30	6/1/2010	6/1/2030			\$ 17,090	\$ -	\$ 17,090	\$ 59,915
									\$ 17,090	\$ -	\$ 17,090	\$ 59,915

				Earliest					
				Service Start	Redispatch	Allocat	ed E & C		Total Revenue
Reservation	Upgrade Name	COD	EOC	Date	Available	Cost		Total E & C Cost	Requirements
1090416	COFFEYVILLE TAP - DEARING 138KV CKT 1 AEPW Displacement	6/1/2011	6/1/2011			\$	5,167	\$ 500,000	\$ 17,801
	COFFEYVILLE TAP - DEARING 138KV CKT 1 WERE Displacement	6/1/2011	6/1/2011			\$	11,923	\$ 3,000,000	\$ 42,114
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	6/1/2011	6/1/2011			\$	-	\$ 5,000,000	\$ -
					Total	\$	17,090	\$ 8,500,000	\$ 59,915

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1090416	CIRCLEVILLE - HOYT HTI SWITCHING JUNCTION 115KV CKT 1	12/1/2006	6/1/2010		
	COFFEYVILLE SUB - CRA 69KV CKT 1	6/1/2011	6/1/2011		
	COFFEYVILLE SUB - DEARING 69KV CKT 1	6/1/2011	6/1/2011		
	COUNTY LINE - HOOK JCT 115KV CKT 1	6/1/2011	6/1/2011		
	COUNTY LINE - TECUMSEH HILL 115KV CKT 1	6/1/2011	6/1/2011		
	CRESWELL (CRESWL1X) 138/69/13.2KV TRANSFORMER	6/1/2012	6/1/2012		
	Evans - Grant - Chisolm Rebuild and Conversion Project	6/1/2008	6/1/2009		
	HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #1	6/1/2011	6/1/2011		
	HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #2	6/1/2011	6/1/2011		
	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	6/1/2013	6/1/2013		
	Stranger - Thorton 115 kV	6/1/2010	6/1/2010		
	STRANGER CREEK TRANSFORMER CKT 2	6/1/2011	6/1/2011		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2010		

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

 Reservation
 Upgrade Name
 COD
 EOC
 EOC
 Available

 1090416 |IATAN - ST JOE 345KV CKT 1
 6/1/2011
 6/1/2011
 6/1/2011
 6/1/2011

 RENO - SUMMIT 345KV
 11/1/2011
 11/2011
 7/1/2009

Customer Study Number MIDW AG2-2006-097

							Deferred Start		Potential Base			
				Requested	Requested			Date Without	Plan Funding	Point-to-Point	Allocated E & 0	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
MIDW	1090917	WR	WR	20	6/1/2008	6/1/2038	7/1/2009	7/1/2039	\$ -	\$ -	\$ 17,62	3 \$ 64,983
MIDW	1090919	WR	WR	5	6/1/2008	6/1/2038	7/1/2009	7/1/2039	\$ -	\$ -	\$ 3,52	5 \$ 12,998
MIDW	1090920	WR	WR	40	6/1/2008	6/1/2038	7/1/2009	7/1/2039	\$ -	\$ -	\$ 38,77	
MIDW	1090921	WR	WR	10	6/1/2008	6/1/2038	7/1/2009	7/1/2039	\$ -	\$ -	\$ 10,57	4 \$ 38,990
									\$ -	\$ -	\$ 70,49	3 \$ -

Reservation	Upgrade Name	COD	EOC	Earliest Service Start Date		Allocate	ed E & C		Total Revenue Requirements
	ST JOHN CAPACITOR Displacement	6/1/2008				\$	17,623		
					Total	\$	17,623	\$ 864,000	\$ 64,983
1090919	ST JOHN CAPACITOR Displacement	6/1/2008	6/1/2008			\$	3,525	\$ 864,000	\$ 12,998
					Total	\$	3,525		
1090920	ST JOHN CAPACITOR Displacement	6/1/2008	6/1/2008			\$	38,771	\$ 864,000	\$ 142,963
					Total	\$	38,771	\$ 864,000	\$ 142,963
1090921	ST JOHN CAPACITOR Displacement	6/1/2008	6/1/2008			\$	10,574	\$ 864,000	\$ 38,990
					Total	\$	10,574	\$ 864,000	\$ 38,990

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

				Earliest Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1	6/1/2014			Available
	HUNTSVILLE - ST JOHN 115KV CKT 1	6/1/2014			
	Mooreland - Potter 345 kV SPS	6/1/2015			
	Mooreland - Potter 345 kV WFEC	6/1/2015			
	Mooreland 345/138 kV Transformer	6/1/2015			
	POTTER COUNTY INTERCHANGE (POTTR CO) 345/230/13.2KV TRANSFORMER CKT 2	6/1/2015			
	Spearville - Mooreland 345 kV SUNC	6/1/2015			1
	Spearville - Mooreland 345 kV WFEC	6/1/2015			1
	TUCO INTERCHANGE 345/115KV TRANSFORMER CKT 1	6/1/2015			1
	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1	6/1/2014			1
	HUNTSVILLE - ST JOHN 115KV CKT 1	6/1/2014			1
	Mooreland - Potter 345 kV SPS	6/1/2015			1
	Mooreland - Potter 345 kV WFEC	6/1/2015			1
	Mooreland 345/138 kV Transformer	6/1/2015			
	POTTER COUNTY INTERCHANGE (POTTR CO) 345/230/13.2KV TRANSFORMER CKT 2	6/1/2015			1
	Spearville - Mooreland 345 kV SUNC	6/1/2015			1
	Spearville - Mooreland 345 kV WFEC	6/1/2015			
	TUCO INTERCHANGE 345/115KV TRANSFORMER CKT 1	6/1/2015			
	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1	6/1/2014			
	HUNTSVILLE - ST JOHN 115KV CKT 1	6/1/2014			
	Mooreland - Potter 345 kV SPS	6/1/2015			
	Mooreland - Potter 345 kV WFEC	6/1/2015			
	Mooreland 345/138 kV Transformer	6/1/2015			
	POTTER COUNTY INTERCHANGE (POTTR CO) 345/230/13.2KV TRANSFORMER CKT 2	6/1/2015	6/1/2015		
	Spearville - Mooreland 345 kV SUNC	6/1/2015	6/1/2015		
	Spearville - Mooreland 345 kV WFEC	6/1/2015	6/1/2015		
	TUCO INTERCHANGE 345/115KV TRANSFORMER CKT 1	6/1/2015	6/1/2015		
1090921	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1	6/1/2014	6/1/2014		
	HUNTSVILLE - ST JOHN 115KV CKT 1	6/1/2014	6/1/2014		
	Mooreland - Potter 345 kV SPS	6/1/2015	6/1/2015		
	Mooreland - Potter 345 kV WFEC	6/1/2015	6/1/2015		
	Mooreland 345/138 kV Transformer	6/1/2015	6/1/2015		1
	POTTER COUNTY INTERCHANGE (POTTR CO) 345/230/13.2KV TRANSFORMER CKT 2	6/1/2015	6/1/2015		1
	Spearville - Mooreland 345 kV SUNC	6/1/2015	6/1/2015		1
	Spearville - Mooreland 345 kV WFEC	6/1/2015	6/1/2015		1
	TUCO INTERCHANGE 345/115KV TRANSFORMER CKT 1	6/1/2015	6/1/2015		İ

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1090917	RENO - SUMMIT 345KV	1/1/2011			
	WICHITA - RENO 345KV	12/1/2006	7/1/2009		Yes
1090919	RENO - SUMMIT 345KV	1/1/2011			
	WICHITA - RENO 345KV	12/1/2006	7/1/2009		Yes
1090920	RENO - SUMMIT 345KV	1/1/2011	1/1/2011		
	WICHITA - RENO 345KV	12/1/2006	7/1/2009		Yes
1090921	RENO - SUMMIT 345KV	1/1/2011	1/1/2011		
	WICHITA - RENO 345KV	12/1/2006	7/1/2009		Yes

Customer Study Number MIDW AG2-2006-106

									Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
MIDW	1090964	WR	WR	35	1/1/2007	1/1/2012	6/1/2010	6/1/2015			\$ 31,721	\$ 52,964
MIDW	1090965	WR	WR	10	1/1/2007	1/1/2012	6/1/2010	6/1/2015	\$ 10,574	\$ -	\$ 10,574	\$ 17,655
									\$ -	\$ -	\$ 42,295	\$ -

Reservation	Upgrade Name	COD	EOC	Earliest Service Start Date		Allocat Cost	ed E & C		Total Revenue Requirements
1090964	ST JOHN CAPACITOR Displacement	6/1/2008	6/1/2008			\$	31,721	\$ 864,000	\$ 52,964
					Total	\$	31,721	\$ 864,000	\$ 52,964
1090965	ST JOHN CAPACITOR Displacement	6/1/2008	6/1/2008			\$	10,574	\$ 864,000	\$ 17,655
	_		•	•	Total	\$	10,574	\$ 864,000	\$ 17,655

		Expansion Plan -	The reques	sted service is	contingent up	on completion	of the following u	pgrades. Cos	t is not assignable	e to the transmission cu	stomer.
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Reservation	Upgrade Name	COD	EOC	Earliest Service Start Date	Redispatch Available
1090964	CHAPMAN - CLAY CENTER JUNCTION 115KV CKT 1	6/1/2007	6/1/2009		Yes
	CIRCLEVILLE - HOYT HTI SWITCHING JUNCTION 115KV CKT 1	12/1/2006	6/1/2010		Yes
	CLAY CENTER - GREENLEAF 115KV CKT 1	6/1/2007	6/1/2009		Yes
	COUNTY LINE - HOOK JCT 115KV CKT 1	6/1/2011	6/1/2011		
	COUNTY LINE - TECUMSEH HILL 115KV CKT 1	6/1/2011	6/1/2011		
	GILL ENERGY CENTER EAST - GILLJCT269.0 69KV CKT 1	6/1/2007	6/1/2008	10/1/2007	Yes
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1 #1	6/1/2007	7/1/2007		Yes
	HAYS PLANT - SOUTH HAYS 115KV CKT 1	6/1/2008	6/1/2009	10/1/2008	Yes
	HAYS PLANT - VINE STREET 115KV CKT 1	6/1/2008	6/1/2009	10/1/2008	Yes
	HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #1	6/1/2011	6/1/2011		
	HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #2	6/1/2011	6/1/2011		
	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1	6/1/2014	6/1/2014		
	HUNTSVILLE - ST JOHN 115KV CKT 1	6/1/2014	6/1/2014		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2010		
1090965	CHAPMAN - CLAY CENTER JUNCTION 115KV CKT 1	6/1/2007	6/1/2009		Yes
	CIRCLEVILLE - HOYT HTI SWITCHING JUNCTION 115KV CKT 1	12/1/2006	6/1/2010		Yes
	CLAY CENTER - GREENLEAF 115KV CKT 1	6/1/2007	6/1/2009		Yes
	COUNTY LINE - HOOK JCT 115KV CKT 1	6/1/2011	6/1/2011		
	COUNTY LINE - TECUMSEH HILL 115KV CKT 1	6/1/2011	6/1/2011		
	GILL ENERGY CENTER EAST - GILLJCT269.0 69KV CKT 1	6/1/2007	6/1/2008	10/1/2007	Yes
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1 #1	6/1/2007	7/1/2007		Yes
	HAYS PLANT - SOUTH HAYS 115KV CKT 1	6/1/2008	6/1/2009	10/1/2008	Yes
	HAYS PLANT - VINE STREET 115KV CKT 1	6/1/2008	6/1/2009	10/1/2008	Yes
	HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #1	6/1/2011	6/1/2011		
	HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #2	6/1/2011	6/1/2011		
	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1	6/1/2014	6/1/2014		
•	HUNTSVILLE - ST JOHN 115KV CKT 1	6/1/2014	6/1/2014		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2010		

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1090964	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		
1090965	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1090964	HEIZER TO KNOLL 230KV	6/1/2007	10/1/2007		No
	IATAN - ST JOE 345KV CKT 1	6/1/2011	6/1/2011		
	RENO - SUMMIT 345KV	1/1/2011	1/1/2011		
	WICHITA - RENO 345KV	12/1/2006	7/1/2009		Yes
1090965	HEIZER TO KNOLL 230KV	6/1/2007	10/1/2007		No
	IATAN - ST JOE 345KV CKT 1	6/1/2011	6/1/2011		
	RENO - SUMMIT 345KV	1/1/2011	1/1/2011		
	WICHITA - RENO 345KV	12/1/2006	7/1/2009		Yes

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

Customer Study Number MIDW AG2-2006-107

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
MIDW	1090817	WR	WR	25	6/1/2007	6/1/2017	7/1/2009	7/2/2019	\$ 24,672	\$ -	\$ 24,672	\$ 48,848
									\$ 24,672	\$ -	\$ 24,672	\$ 48,848

				Earliest				
				Service Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	COD	EOC	Date	Available	Cost	Total E & C Cost	Requirements
1090817	ST JOHN CAPACITOR Displacement	6/1/2008	6/1/2008			\$ 24,672	\$ 864,000	\$ 48,848
					Total	\$ 24.672	\$ 864,000	\$ 48.848

Expansion Pla	in - The requested service is contingent upon completion of the following upgrades. Cost is not assign	able to the transi	mission custor	ner.	
				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1090817	CHAPMAN - CLAY CENTER JUNCTION 115KV CKT 1	6/1/2007	6/1/2009		Yes
	CLAY CENTER - GREENLEAF 115KV CKT 1	6/1/2007	6/1/2009		Yes
	COUNTY LINE - HOOK JCT 115KV CKT 1	6/1/2011	6/1/2011		
	COUNTY LINE - TECUMSEH HILL 115KV CKT 1	6/1/2011	6/1/2011		
	GILL ENERGY CENTER EAST - GILLJCT269.0 69KV CKT 1	6/1/2007	6/1/2008	10/1/2007	Yes
	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1 #1	6/1/2007	7/1/2007		Yes
	HAYS PLANT - SOUTH HAYS 115KV CKT 1	6/1/2008	6/1/2009	10/1/2008	Yes
	HAYS PLANT - VINE STREET 115KV CKT 1	6/1/2008	6/1/2009	10/1/2008	Yes
	HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #1	6/1/2011	6/1/2011		
	HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #2	6/1/2011	6/1/2011		
	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1	6/1/2014	6/1/2014		
	HUNTSVILLE - ST JOHN 115KV CKT 1	6/1/2014	6/1/2014		
	Mooreland - Potter 345 kV SPS	6/1/2015	6/1/2015		
	Mooreland - Potter 345 kV WFEC	6/1/2015	6/1/2015		
	Mooreland 345/138 kV Transformer	6/1/2015	6/1/2015		
	POTTER COUNTY INTERCHANGE (POTTR CO) 345/230/13.2KV TRANSFORMER CKT 2	6/1/2015	6/1/2015		
	Spearville - Mooreland 345 kV SUNC	6/1/2015	6/1/2015		
	Spearville - Mooreland 345 kV WFEC	6/1/2015	6/1/2015		
	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	6/1/2010	6/1/2010		
	TUCO INTERCHANGE 345/115KV TRANSFORMER CKT 1	6/1/2015	6/1/2015		

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

 Reservation
 Upgrade Name
 COD
 EOC
 Date
 Available

 1090817 | HEIZER TO KNOLL 230KV
 6/1/2007
 10/1/2007
 No

 IATAN - ST JOE 345KV CKT 1
 6/1/2011
 6/1/2011

 RENO - SUMMIT 345KV
 1/1/2011
 1/1/2011

 WICHITA - RENO 345KV
 1/2/1/2006
 7/1/2009
 Yes

Customer Study Number MIDW AG2-2006-108

									Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
MIDW	1090829	WR	WR	15	6/1/2008	6/1/2028	7/1/2009	7/1/2029	\$ -	\$ -	\$ 10,574	\$ 44,881
MIDW	1091057	WR	WR	10	6/1/2008	6/1/2018	7/1/2009	7/2/2019	\$ -	\$ -	\$ 15,861	\$ 22,012
									\$ -	\$ -	\$ 26,435	\$ -

6/1/2015

6/1/2015

6/1/201

6/1/20

6/1/201

6/1/201

6/1/201

6/1/2015

6/1/2015

6/1/201

6/1/201

6/1/201

6/1/2010

6/1/2015

	Upgrade Name	COD			Allocat Cost	ed E & C		Total Revenue Requirements
1090829	ST JOHN CAPACITOR Displacement	6/1/2008	6/1/2008		\$	10,574	\$ 864,000	\$ 44,881
				Total	\$	10,574	\$ 864,000	\$ 44,881
1091057	ST JOHN CAPACITOR Displacement	6/1/2008	6/1/2008		\$	15,861	\$ 864,000	\$ 22,012
				Total	\$	15.861	\$ 864,000	\$ 22,012

Service Start Redispatch EOC Reservation Upgrade Name COD Available 1090829 COUNTY LINE - HOOK JCT 115KV CKT 1 6/1/2011 6/1/201 COUNTY LINE - TECUMSEH HILL 115KV CKT 1 6/1/2011 6/1/2011 HAYS PLANT - SOUTH HAYS 115KV CKT 1 6/1/2008 6/1/200 10/1/2008 HAYS PLANT - VINE STREET 115KV CKT 1 6/1/2008 6/1/200 10/1/2008 Yes HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #1 6/1/2011 6/1/201 HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #2 6/1/2011 6/1/201 HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1 HUNTSVILLE - ST JOHN 115KV CKT 1 6/1/2014 6/1/201 6/1/2014

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

6/1/2014 6/1/2015 Mooreland - Potter 345 kV SPS 6/1/2015 Mooreland - Potter 345 kV WFEC 6/1/2015 6/1/201 Mooreland 345/138 kV Transformer 6/1/201 6/1/20 POTTER COUNTY INTERCHANGE (POTTR CO) 345/230/13.2KV TRANSFORMER CKT 2 6/1/201 6/1/201 Spearville - Mooreland 345 kV SUNC 6/1/201 6/1/20 Spearville - Mooreland 345 kV WFEC 6/1/2015 6/1/201 TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1 6/1/201 TUCO INTERCHANGE 345/115KV TRANSFORMER CKT 1 6/1/2015 1091057 COUNTY LINE - HOOK JCT 115KV CKT 1 6/1/2011 6/1/201 COUNTY LINE - TECUMSEH HILL 115KV CKT 1 6/1/2011 6/1/201 HAYS PLANT - SOUTH HAYS 115KV CKT 1 6/1/2008 6/1/200 10/1/2008 HAYS PLANT - VINE STREET 115KV CKT 1
HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #1
HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #2
HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1 #2 6/1/2008 6/1/200 10/1/2008 Yes 6/1/2011 6/1/201 6/1/2011 6/1/201 6/1/2014 6/1/2014 6/1/2014 HUNTSVILLE - ST JOHN 115KV CKT 1 6/1/201 Mooreland - Potter 345 kV SPS 6/1/2015

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

POTTER COUNTY INTERCHANGE (POTTR CO) 345/230/13.2KV TRANSFORMER CKT 2

TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1

TUCO INTERCHANGE 345/115KV TRANSFORMER CKT 1

Mooreland - Potter 345 kV WFEC

Mooreland 345/138 kV Transformer

Spearville - Mooreland 345 kV SUNC

Spearville - Mooreland 345 kV WFEC

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
10910	7 LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		

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

					Service Start	Redispatch
ı	Reservation	Upgrade Name	COD	EOC	Date	Available
[1090829	IATAN - ST JOE 345KV CKT 1	6/1/2011	6/1/2011		
[RENO - SUMMIT 345KV	1/1/2011	1/1/2011		
[WICHITA - RENO 345KV	12/1/2006	7/1/2009		No
[1091057	IATAN - ST JOE 345KV CKT 1	6/1/2011	6/1/2011		
[RENO - SUMMIT 345KV	1/1/2011	1/1/2011		
		WICHITA - RENO 345KV	12/1/2006	7/1/2009		Yes

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

Customer Study Number OGE AG2-2006-035

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
OGE	1087908	OKGE	EES	10	12/1/2006	12/1/2011			\$ -	\$ 540,000	\$ -	\$ -
									\$ -	\$ 540,000	\$ -	\$ -

Reservation	Uporrade Name	COD				Allocated E & C Cost		Total Revenue Requirements
1087908		COD	EUC	Date	Available	¢ .	e COSI	e Requirements
1007 900	None			l	Total	¢ .	•	6

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1087908	ARCADIA - REDBUD 345 KV CKT 1	6/1/2006	6/1/2006		
	ARCADIA - REDBUD 345 KV CKT 2	6/1/2006	6/1/2006		
	FPL SWITCH - MOORELAND 138KV CKT 1 OKGE	6/1/2006	4/1/2008		
	FPL SWITCH - MOORELAND 138KV CKT 1 WFEC	6/1/2006	4/1/2008		
	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1087908	IATAN - ST JOE 345KV CKT 1	6/1/2011	6/1/2011		

Customer Study Number AG2-2006-074

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
SPSM	1090699	WPEK	KCPL	50	10/1/2006	10/1/2007	10/1/2007	10/1/2008	\$ -	\$ 528,000	\$ -	\$ -
									\$ -	\$ 528,000	\$ -	\$ -

					Earliest				1	
					Service Start	Redispatch	Allocated E & C	ı	Total Revenue	
	Reservation	Upgrade Name	COD	EOC	Date	Available	Cost	Total E & C Cost	Requirements	
ſ	1090699	None					\$ -	\$ -	\$ -	
						Total	\$ -	\$ -	\$ -	

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1090699	MARTIN CITY - TURNER ROAD SUBSTATION 161KV CKT 1	12/1/2006	10/1/2008	4/1/2007	
	GREENSBURG - JUDSON LARGE 115KV CKT 1	4/1/2007	10/1/2007		

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

					Earliest	
-					Service Start	Redispatch
١	Reservation	Upgrade Name	COD	EOC	Date	Available
ſ	1090699	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		

Customer Study Number SPSM AG2-2006-124

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
SPSM	1090705	WPEK	KCPL	50	10/1/2006	10/1/2007	10/1/2007	10/1/2008	\$ -	\$ 528,000	\$ -	\$ -
									\$ -	\$ 528,000	\$ -	\$ -

			Earliest				
			Service Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	EOC	Date	Available	Cost	Total E & C Cost	Requirements
1090705	None				\$ -	\$ -	\$ -
				Total	¢ .	¢ .	¢ .

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

 Reservation
 Upgrade Name
 COD
 EOC
 Date
 Available

 10990999
 MARTIN CITY - TURNER ROAD SUBSTATION 161KV CKT 1
 12/1/2006
 10/1/2008
 4/1/2007

 GREENSBURG - JUDSON LARGE 115KV CKT 1
 4/1/2007
 10/1/2007

Customer Study Number UCU AG2-2006-006

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
UCU	1052923	KCPL	MPS	160	6/1/2010	6/1/2030			\$ -	\$ 61,862,400	\$ -	\$ -
									\$ -	\$ 61.862.400	\$ -	\$ -

					Earliest				
					Service Start	Redispatch	Allocated E & C		Total Revenue
F	Reservation	Upgrade Name	COD	EOC	Date	Available	Cost	Total E & C Cost	Requirements
	1052923	None					\$ -	\$ -	\$ -
						Total	\$ -	\$ -	\$ -

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1052923	MARTIN CITY - TURNER ROAD SUBSTATION 161KV CKT 1	12/1/2006	10/1/2008	4/1/2007	No
	Stranger - Thorton 115 kV	6/1/2010	6/1/2010		
	STRANGER CREEK TRANSFORMER CKT 2	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.

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1052022	IATANI ET IOE 24EKV CKT 1	6/1/2011	6/1/2011		

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

Customer Study Number WRGS AG2-2006-016

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
WRGS	1076158	KCPL	AMRN	20	6/1/2010	6/1/2015			\$ -	\$ 1,080,000	\$ -	\$ -
									\$	\$ 1,080,000	\$ -	\$ -

				Earliest				
				Service Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	COD	EOC	Date	Available	Cost	Total E & C Cost	Requirements
1076158	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
 COD
 EOC
 Date
 Available

 1076158
 Stranger - Thorton 115 kV
 6/1/2010
 6/1/2010
 6/1/2011

 STRANGER CREEK TRANSFORMER CKT 2
 6/1/2011
 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.										
				Earliest						
				Service Start	Redispatch					
Reservation	Upgrade Name	COD	EOC	Date	Available					
1076158	IATAN - ST. IOE 345KV CKT 1	6/1/2011	6/1/2011							

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

Customer Study Number WRGS AG2-2006-030

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
WRGS	1086655	OKGE	WR	225	10/1/2006	10/1/2026	7/1/2009	7/1/2029	\$ 40,500,000	\$ -	\$ 54,896,021	\$ 121,313,926
									\$ 40,500,000	\$ -	\$ 54,896,021	\$ 121,313,926

				Earliest Service Start	Redispatch	Alloca	ated E & C		Total	I Revenue
Reservation	Upgrade Name	COD	EOC	Date	Available	Cost		Total E & C Cost	Requ	uirements
1086655	COFFEYVILLE TAP - DEARING 138KV CKT 1 AEPW Displacement	6/1/2010*	6/1/2010*			\$	40,828	\$ 500,000	\$	136,797
	COFFEYVILLE TAP - DEARING 138KV CKT 1 WERE Displacement	6/1/2010*	6/1/2010*			\$	94,219	\$ 3,000,000	\$	324,491
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	6/1/2011	6/1/2011			\$		\$ 5,000,000	\$	-
	Sooner to Rose Hill 345 kV OKGE	6/1/2016	6/1/2016			\$ 2	7,380,487	\$ 27,500,000	\$	62,306,245
	Sooner to Rose Hill 345 kV WERE	6/1/2016	6/1/2016			\$ 2	7,380,487	\$ 27,500,000	\$	58,546,393
					Total	\$ 5	4.896.021	\$ 63,500,000	\$	121.313.926

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1086655	COFFEYVILLE SUB - CRA 69KV CKT 1	6/1/2010*	6/1/2010*		
	COFFEYVILLE SUB - DEARING 69KV CKT 1	6/1/2010*	6/1/2010*		
	CRESWELL (CRESWL1X) 138/69/13.2KV TRANSFORMER	6/1/2012	6/1/2012		
	DEARING (DEARIN1X) 138/69/13.2KV TRANSFORMER CKT 1	12/1/2011	12/1/2011		
	Evans - Grant - Chisolm Rebuild and Conversion Project	6/1/2008	6/1/2009		Yes
	GILL ENERGY CENTER EAST - INTERSTATE 138KV CKT 1	6/1/2012	6/1/2012		
	Mooreland - Potter 345 kV SPS	6/1/2015	6/1/2015		
	Mooreland - Potter 345 kV WFEC	6/1/2015	6/1/2015		
	Mooreland 345/138 kV Transformer	6/1/2015	6/1/2015		
	POTTER COUNTY INTERCHANGE (POTTR CO) 345/230/13.2KV TRANSFORMER CKT 2	6/1/2015	6/1/2015		
	Spearville - Mooreland 345 kV SUNC	6/1/2015	6/1/2015		
	Spearville - Mooreland 345 kV WFEC	6/1/2015	6/1/2015		
	STRANGER CREEK TRANSFORMER CKT 2	6/1/2011	6/1/2011		
	TUCO INTERCHANGE 345/115KV TRANSFORMER CKT 1	6/1/2015	6/1/2015		

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1086655	LACYGNE - WEST GARDNER 345KV CKT 1	6/1/2006	6/1/2006		

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

					Earliest	
- 1					Service Start	Redispatch
١	Reservation	Upgrade Name	COD	EOC	Date	Available
[1086655	RENO - SUMMIT 345KV	1/1/2011	1/1/2011		
ı		WICHITA - RENO 345KV	12/1/2006	7/1/2009		Yes

^{*} See Note 12 in Table 2

Customer Study Number EDE AG2-2005-064

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
EDE	973355	KCPL	EDE	100	1/1/2010	1/1/2030			\$ 3,502,843	\$ -	\$ 4,733,572	\$ 15,077,273
									\$ 3,502,843	\$ -	\$ 4,733,572	\$ 15,077,273

				Earliest					
				Service Start	Redispatch	Allo	cated E & C		Total Revenue
Reservation	Upgrade Name	COD	EOC	Date	Available	Cos	t	Total E & C Cost	Requirements
973355	SUB 110 - ORONOGO JCT SUB 167 - RIVERTON 161KV CKT 1	6/1/2011	6/1/2011			\$	3,387,204	\$ 5,400,000	\$ 10,788,850
	SUB 110 - ORONOGO JCT. (ORONOGO) 161/69/12.5KV TRANSFORMER CKT 1	6/1/2011	6/1/2011			\$	1,346,368	\$ 2,000,000	\$ 4,288,423
					Total	\$	4.733.572	\$7,400,000	\$ 15,077,273

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
973355	BULL SHOALS - BULL SHOALS 161KV CKT 1 SWPA	6/1/2011	6/1/2011		
	RIVERSIDE CAPACITOR	6/1/2015	6/1/2015		
	Line - JOPLIN 59 161 kV - SUB 439 - STATELINE	6/1/2016	6/1/2016		
	Line - SUB 59 - JOPLIN 26TH ST SUB 258 - GATEWAY SOUTH	6/1/2016	6/1/2016		
	XFR - JOPLIN 59 161 kV - SUB 59 - JOPLIN 26TH ST. 69kV	6/1/2016	6/1/2016		

Customer Study Number INDP AG1-2006-051

							Deferred Start	Deferred Stop	Potential Base			i l
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
INDP	1033791	KCPL	INDN	50	6/1/2010	6/1/2040			\$ -	\$ 15,840,000	\$ 938,195	\$ 3,340,156
									\$ -	\$ 15,840,000	\$ 938,195	\$ 3,340,156

				Earliest						
				Service Start	Redispatch	Alloc	ated E & C		Total Revenue	
Reservation	Upgrade Name	COD	EOC	Date	Available	Cost		Total E & C Cost	Requirements	
1033	791 166TH STREET - JAGGARD JUNCTION 115KV CKT 1	6/1/2009	6/1/2009			\$	213,226	\$ 1,000,000	\$ 1,105,1	09
	166TH STREET - JARBALO JUNCTION SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2009			\$	405,130	\$ 1,900,000		
	JAGGARD JUNCTION - PENTAGON 115KV CKT 1	6/1/2009	6/1/2009			\$	319,839	\$ 1,500,000	\$ 1,657,6	63
					Total	\$	938.195	\$4,400,000	\$ 3,340,1	56

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

				Earliest	
				Service Start	Redispatch
Reservation	Upgrade Name	COD	EOC	Date	Available
1033791	Stranger - Thorton 115 kV	6/1/2009	6/1/2009		

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

ı					Earliest	
-					Service Start	Redispatch
	Reservation	Upgrade Name	COD	EOC	Date	Available
ſ	1033791	IATAN - ST JOE 345KV CKT 1	6/1/2011	6/1/2011		
ſ		IATAN5 161 - PLATTE CITY 161KV CKT 1	6/1/2011	6/1/2011		

Note: Expansion Plan Project Stranger - Thorton 115 kV replaces 2006-AG1-AFS-4 assignment of STRANGER CREEK - NW LEAVENWORTH 115KV

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

Customer Study Number KCPS AG1-2006-009

							Deferred Start	Deferred Stop	Potential Base			
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
KCPS	1179751	KCPL	KCPL	168	6/1/2009	6/1/2029			\$ 4,161,805	\$ -	\$ 4,161,805	\$ 10,566,295
									\$ 4,161,805	\$ -	\$ 4,161,805	\$ 10,566,295

				Earliest					T	
				Service Start	Redispatch	Alloc	ated E & C		Total	Revenue
Reservation	Upgrade Name	COD	EOC	Date	Available	Cost		Total E & C Cost	Requ	irements
1179751	166TH STREET - JAGGARD JUNCTION 115KV CKT 1	6/1/2009	6/1/2009			\$	786,774	\$ 1,000,000	\$	2,927,001
	166TH STREET - JARBALO JUNCTION SWITCHING STATION 115KV CKT 1	6/1/2009	6/1/2009			\$	1,494,870	\$ 1,900,000	\$	1,529,261
	COLLEGE - CRAIG 161KV CKT 1	6/1/2016	6/1/2016			\$	700,000			1,719,531
	JAGGARD JUNCTION - PENTAGON 115KV CKT 1	6/1/2009	6/1/2009			\$	1,180,161	\$ 1,500,000	\$	4,390,502
-		•			Total	\$	4 161 805	\$5,100,000	2 (10 566 205

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

Г					Earliest	
					Service Start	Redispatch
- I	Reservation	Upgrade Name	COD	EOC	Date	Available
Γ	1179751	Stranger - Thorton 115 kV	6/1/2009	6/1/2009		
Г		AVONDALE - GLADSTONE 161KV CKT 1	6/1/2014	6/1/2014		

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

					Earliest	
					Service Start	Redispatch
-	Reservation	Upgrade Name	COD	EOC	Date	Available
ſ	1179751	IATAN - ST JOE 345KV CKT 1	6/1/2011	6/1/2011		
ſ		IATAN5 161 - PLATTE CITY 161KV CKT 1	6/1/2011	6/1/2011		

Note: Expansion Plan Project Stranger - Thorton 115 kV replaces 2006-AG1-AFS-4 assignment of STRANGER CREEK - NW LEAVENWORTH 115KV

Customer Study Number KCPS GEN-2004-008

							Deferred Start	Deferred Stop	Potential Base	ļ	ı	1
				Requested	Requested	Requested	Date Without	Date Without	Plan Funding	Point-to-Point	Allocated E & C	Total Revenue
Customer	Reservation	POR	POD	Amount	Start Date	Stop Date	Redispatch	Redispatch	Allowable	Base Rate	Cost	Requirements
KCPS	1115127	KCPL	KCPL	332	6/1/2009	6/1/2029			\$ -	\$ -	\$ -	\$ -
									\$ -	\$ -	\$ -	\$ -

			Earliest				
			Service Start	Redispatch	Allocated E & C		Total Revenue
Reservation	Upgrade Name	EOC	Date	Available	Cost	Total E & C Cost	Requirements
111512	7 None						
				Total	\$ -	\$ -	\$ -

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

			Forlingt Data	Estimated Date	
					Estimated
Transmission					Engineering &
Owner	Upgrade	Solution			Construction Cost
	COFFEYVILLE TAP - DEARING 138KV CKT 1 AEPW Displacement	Rebuild 1.09 miles of line using 1590 ACSR	6/1/2011	6/1/2011	
7.2.1 **	DOTTET VIELE I'M DEMINIO TONY ON THE WOOD DOORS	Using IEEE Guide for Loading of Mineral-Oil Immersed Power Transformers (C57.91-2000) Re-rate	0/1/2011	0/1/2011	\$ 000,000
AEPW	SOUTHWEST SHREVEPORT (SW SHV 1) 345/138/13.8KV TRANSFORMER CKT 1	the autos. Replace .two 138 kV breakers and five 138 kV switches. Reset relays and CTs	6/1/2010	6/1/2010	\$ 1,500,000
ALI W	GOOTHWEST STIKEVEL SIXT (SW STIV 1) 343/130/13.SKV TIKANSI SKWEK SIXT 1	Using IEEE Guide for Loading of Mineral-Oil Immersed Power Transformers (C57.91-2000) Re-rate	0/1/2010	0/1/2010	9 1,300,000
AEPW	SOUTHWEST SHREVEPORT (SW SHV 2) 345/138/13.8KV TRANSFORMER CKT 2	the autos. Replace .two 138 kV breakers and five 138 kV switches. Reset relays and CTs	6/1/2010	6/1/2010	\$ 1,500,000
7.2.1 44	COOTHINEOT OF METER ON TOTAL EJ OTO TOU TOUR TOUR OF ONMER ON E	the dated. Replace and 100 kV breakers and 110 kV switches. Reservings and 010	0/1/2010	0/1/2010	4 1,000,000
EMDE	SUB 110 - ORONOGO JCT SUB 167 - RIVERTON 161KV CKT 1	Reconductor Oronogo 59467 to Riverton 59469 with Bundled 556 ACSR	6/1/2011	6/1/2011	\$ 5,400,000
		•			
EMDE	SUB 110 - ORONOGO JCT. (ORONOGO) 161/69/12.5KV TRANSFORMER CKT 1	Installl new 161/12 kV 22.4 transmer and take load off 69 kV system	6/1/2011	6/1/2011	\$ 2,000,000
MIDW	ST JOHN CAPACITOR Displacement	20MVar capacitor at ST John	6/1/2008	6/1/2008	\$ 864,000
	Sooner to Rose Hill 345 kV OKGE	New 345 kV line from Sooner to Oklahoma/Kansas	6/1/2016	6/1/2016	\$ 27,500,000
SPS	GSEC Midway Interconnection #1	New Delivery Point tapping 69 kV Tie Line from AEPW Shamrock to SPS Magic City	6/1/2011	6/1/2011	\$ 70,000
		Terminate V53 at Mustang instead of Denver City - 3 mi of new 115 kV circuit. Mustang-San Andr-			
	Mustang-San Andr-Amerada Hess 115KV Displacement	Amerada Hess 115 kV ckt	4/1/2007	6/1/2008	\$ 1,742,892
SPS	YOAKUM COUNTY INTERCHANGE 230/115KV TRANSFORMER CKT 1 Displacement	Upgrade Transformer 230/115 kV 252 MVA	6/1/2007	6/1/2008	
WERE	166TH STREET - JAGGARD JUNCTION 115KV CKT 1	Tear down and rebuild 3.66 mile 166-Jaggard 115 kV line.	6/1/2009		
WERE	166TH STREET - JARBALO JUNCTION SWITCHING STATION 115KV CKT 1	Tear down and rebuild 7.22 mile Jarbalo-166 115 kV line.	6/1/2009		
	COFFEYVILLE TAP - DEARING 138KV CKT 1 WERE Displacement	Tie Line, Rebuild 3.93 miles of 795 ACSR with 1590 ACSR.	6/1/2011	6/1/2011	
WERE	JAGGARD JUNCTION - PENTAGON 115KV CKT 1	Tear down and rebuild Jaggard - Pentagon 115 kV line.	6/1/2009		
	ROSE HILL (ROSEHL1X) 345/138/13.8KV TRANSFORMER CKT 3 Displacement	Add third 345-138 kV transformer at Rose Hill	6/1/2011	6/1/2011	
WERE	Sooner to Rose Hill 345 kV WERE	New 345 kV line from Oklahoma/Kansas Stateline to Rose Hill	6/1/2016	6/1/2016	\$ 27,500,000

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

				Estimated Date of Upgrade
Transmission			Required	Completion
Owner	Upgrade	Solution	(COD)	(EOC)
MIDW	HEIZER TO KNOLL 230KV	Convert Knoll to Heizer 115 kV line to 230kV (already constructed for 230kV).	6/1/2007	10/1/2007
MIPU	IATAN5 161 - PLATTE CITY 161KV CKT 1	Terminal Equipment	6/1/2011	6/1/2011
MIPU	IATAN - ST JOE 345KV CKT 1	Circuit Breaker	6/1/2011	6/1/2011
SPS	TERRY COUNTY INTERCHANGE 115/69KV TRANSFORMERS	Upgrade both existing transformer by 10/1/2007	6/1/2007	6/1/2007
		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;		
WERE	RENO - SUMMIT 345KV	Substation work required at Summit for new 345 kV terminal	1/1/2011	1/1/2011
WERE	WICHITA - RENO 345KV	Build 345kV from Wichita to Reno Co	12/1/2006	7/1/2009
WFEC	HAMON BUTLER - MOREWOOD 69KV CKT 1	Reconductor 1/0 to 336 ACSR - 15.0 miles	12/1/2006	4/1/2008

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	not assignable to the transmission customer. Solution	Earliest Data Upgrade Required (COD)	Estimated Date of Upgrade Completion (EOC)
		Rebuild 1.68 miles of 1024 ACAR with 2156 ACSR, Replace wavetrap & jumpers with 2156 ACSR.		
AEPW	ALUMAX TAP - NORTHWEST TEXARKANA 138KV CKT 1	Replace Switch 2285 @ Alumax Tap.	6/1/2008	6/1/2008
		Reconductor 666 ACSR (11.6 mies)and 1272 ACSR (.1 mile) to Drake ACCC (2156 ACSR section		
AEPW	CHAMBER SPRINGS - TONTITOWN 161KV CKT 1	0.6 miles is not replaced) and remove the series reactors at Chamber Springs on the Chamber Springs to Tontitown 161 kV line	12/1/2008	6/1/2007
	Chamber Springs - Tontitown 161kV CKT 1 Chamber Springs - Tontitown 345 kV	New 345 kV Line and Tontitown 345/161 kV Transformer	6/1/2008	6/1/2008
	Flint Creek - East Centerton 345 kV	New 345 kV Line and East Centerton 345/161 kV Transformer	6/1/2011	
	LINWOOD - MCWILLIE STREET 138KV CKT 1	Rebuild 2.09 miles of 666 ACSR with 1272 ACSR	6/1/2007	6/1/2008
AEPW	Siloam Springs - South Fayetteville 161 kV	Convert Existing 69 kV Line to 161 kV Operation	6/1/2015	6/1/2015
AEPW	THOMAS TAP - WEATHERFORD 69KV CKT 1	Rebuild 0.9 miles of 4/0 ACSR with 795 ACSR. Replace Weatherford wavetrap.	6/1/2014	6/1/2014
AEPW	WEATHERFORD SOUTHEAST (WTH_SE) 138/69/13.8KV TRANSFORMER CKT 1	Install new 90 MVA Auto	6/1/2013	6/1/2013
AEPW/WFEC	SNYDER AEPW- SNYDER WFEC INTERCONNECTION	New Tie line between AEPW's Snyder and WFEC's Snyder	6/1/2016	6/1/2016
EMDE	Line - JOPLIN 59 161 kV - SUB 439 - STATELINE	Install new line from Sub #439 to new Sub Joplin 59.	6/1/2016	6/1/2016
TMDE	Line CUR EQ. IODUN OCTU CT. CUR OFQ. CATEMAX COUTU	Reconductor 1.6 miles of 69kV Joplin sub 59 to GAT sub 258 with same conductor as 69kV Joplin	6/1/2016	0/4/0046
EMDE EMDE	Line - SUB 59 - JOPLIN 26TH ST SUB 258 - GATEWAY SOUTH XFR - JOPLIN 59 161 kV - SUB 59 - JOPLIN 26TH ST. 69kV	sub 64 to Joplin sub 145 Install 3-wind transformer from 161 kV Joplin 59 bus to Sub #59 Joplin 26th St.	6/1/2016	6/1/2016
	AVONDALE - GLADSTONE 161KV CKT 1	Replace 800 amp wavetrap at Gladstone with 1200 amp wavetrap	6/1/2014	6/1/2014
	HAYS PLANT - SOUTH HAYS 115KV CKT 1	Reconductor line	6/1/2008	6/1/2009
	HAYS PLANT - VINE STREET 115KV CKT 1	Reconductor line	6/1/2008	6/1/2009
	HUNTSVILLE - ST JOHN 115KV CKT 1	Rebuild Huntsville - St. John 115 kV line and replace CT, wavetrap, breakers, and relays.	6/1/2014	6/1/2014
	HUNTSVILLE - HUTCHINSON ENERGY CENTER 115KV CKT 1	Rebuild HEC - Huntsville 115 kV line and replace CT, wavetrap and relays.	6/1/2014	
MIPU	MARTIN CITY - TURNER ROAD SUBSTATION 161KV CKT 1	Replace Wavetrap at Martin City	12/1/2006	
OKGE	5 TRIBES - HANCOCK 161KV CKT 1	Replace 800A Wave Trap, increase Relay CTR to 1200-5A.	6/1/2014	
OKGE	5 TRIBES - PECAN CREEK 161KV CKT 1	replace 636AS33 conductor with 795AS33	6/1/2014	6/1/2014
OKGE	AGENCY - PECAN CREEK 161KV CKT 1	Replace Terminal Equipment	6/1/2014	6/1/2014
	CANADIAN - CEDAR LANE 138KV CKT 1	Replace 800A trap at Cedar Lane	6/1/2015	
	CONTINENTAL BLACKS - OSAGE 69KV CKT 1	Rebuild & Reconductor 0.57 Miles of 477AS33 to 477 ACCC/TW	6/1/2016	6/1/2016
OKGE	PECAN CREEK (PECANCK1) 345/161/13.8KV TRANSFORMER CKT 2	Add a 345/161 kV 369MVA transformer	6/1/2014	
SPS SPS	BC-EARTH INTERCHANGE 115KV CURRY COUNTY INTERCHANGE - ROOSEVELT COUNTY INTERCHANGE 115KV CKT 2	Install 1 - 14.4 MVar capacitor bank Upgrade Roosevelt to Curry 115 kV circuit w/795 ACSR	6/1/2016	6/1/2016 6/1/2013
353	CORKT COUNTT INTERCHANGE - ROOSEVELT COUNTT INTERCHANGE TISKY CRT 2	New 230/115 kV Hart Intg with 115 kV 397 ACSR ckt to Kress Int, 3-brkr 230 kV ring, 150 MVA auto		0/1/2013
SPS	Hart Interchange 230/115 kV	115 kV terminal	6/1/2011	6/1/2011
	Hitchland 345 and 115 kV Interchange	Three breaker 345 kV bus, 345/115 kV transformer, five 115 kV breakers.	6/1/2010	6/1/2010
SPS	KRESS INTERCHANGE 115/69KV TRANSFORMERS	Upgrade both existing transformer	4/1/2007	4/1/2007
	LC-SOL3 115KV	Install 14.4 MVAR cap at LC SOL	6/1/2016	6/1/2016
SPS	Mooreland - Potter 345 kV SPS	New 345 kV line from Potter to Mooreland on wooden h-frame structures.	6/1/2015	
	MUSTANG STATION 230/115KV TRANSFORMER CKT 1	Install 252 MVA Transformer	4/1/2007	6/1/2008
	Potter - Roosevelt 345KV	New 345 kV circuit from Potter - Roosevelt 2-795 ACSR & 345/230 kV 560 MVA transformer	6/1/2013	6/1/2013
SPS	POTTER COUNTY INTERCHANGE (POTTR CO) 345/230/13.2KV TRANSFORMER CKT 2	New 345/230 kV 560 MVA transformer	6/1/2015	6/1/2015
SPS SPS	Pringle - Etter 115 kV ROOSEVELT COUNTY INTERCHANGE 230/115KV TRANSFORMER CKT 1	Build New 115 kV line from Pringle to Etter Add 2nd transformer 230/115 kV 252 MVA	6/1/2010	6/1/2010
	Seven Rivers to Pecos to Potash Junction 230kV	Seven Rivers to Pecos to Potash Junction 230kV	6/1/2013	
353	Seven Rivers to Fecos to Fotasii Juriction 230kV	Seven Rivers to Fecos to Foldsh Julication 230kV	0/1/2007	0/1/2008
SPS	Stateline Project	Tap Elk City - Grapevine. New line from Stateline Tap to Graves Co. New 115/69xfmr at Graves Co.	6/1/2014	6/1/2014
SPS	Tex-Hitchland-Sherman Tap 115 kV ckt	Route Sherman Tap to Texas Co in/out of New Hitchland Interchange	6/1/2010	6/1/2010
SPS	TUCO INTERCHANGE 115/69KV TRANSFORMER	Move Load to 115 kV at TUCO	6/1/2008	6/1/2008
	TUCO INTERCHANGE 345/115KV TRANSFORMER CKT 1	Install 345/115 kV Transformer at Tuco	6/1/2015	
	Spearville - Mooreland 345 kV SUNC	New 345 kV line from Spearville to Kansas/Oklahoma Stateline	6/1/2015	6/1/2015
	CLAY CENTER - GREENLEAF 115KV CKT 1	Building a new 115 kV tie with Westar from Greenleaf to Clay Center	6/1/2007	6/1/2009
	GREENSBURG - JUDSON LARGE 115KV CKT 1	Replace relaying	4/1/2007	10/1/2007
WERE	CHAPMAN - CLAY CENTER JUNCTION 115KV CKT 1	Reset terminal equipment	6/1/2007	6/1/2009
WERE	CIRCLEVILLE - HOYT HTI SWITCHING JUNCTION 115KV CKT 1	Rebuild 16.66 mile Circleville-Hoyt HTI Junction 115 kV line.	12/1/2006 6/1/2011	6/1/2010 6/1/2011
WERE WERE	COFFEYVILLE SUB - CRA 69KV CKT 1 COFFEYVILLE SUB - DEARING 69KV CKT 1	Rebuild Coffeyville - CRA 69 kV line. Rebuild Dearing - Coffeyville 69 kV line.	6/1/2011	6/1/2011
	COUNTY LINE - HOOK JCT 115KV CKT 1	Rebuild 2.52 mile line with 1192.5 kcmil ACSR	6/1/2011	6/1/2011
	COUNTY LINE - TECUMSEH HILL 115KV CKT 1	Tear down and rebuild 5.32 mile Tecumseh Hill-County Line 115 kV line.	6/1/2011	6/1/2011
	CRESWELL (CRESWL1X) 138/69/13.2KV TRANSFORMER	Replace transformers	6/1/2012	
	DEARING (DEARIN1X) 138/69/13.2KV TRANSFORMER CKT 1	2nd Dearing 138-69 kV Transformer	12/1/2011	12/1/2011
		Build Evans - Grant 138 kV line, Convert Grant - Chisolm 69 kV line to 138 kV, Install New Grant		
WERE	Evans - Grant - Chisolm Rebuild and Conversion Project	138/69 kV XFMR. And Rebuild Grant - Grant Jct. 69 kV line.	6/1/2008	6/1/2009
	GILL ENERGY CENTER EAST - GILLJCT269.0 69KV CKT 1	Rebuild Gill-Gill Jct	6/1/2007	6/1/2008
WERE	GILL ENERGY CENTER EAST - INTERSTATE 138KV CKT 1	Replace wave trap	6/1/2012	6/1/2012
	OUL ENERGY OF MED EAST. MAGARITHUS COMMON OVER A 114	Replace bus, jumpers and disconnect switches at MacArthur 69 kV substation to increase line	0/4/07-7-	744
WERE	GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1 #1	capacity to conductor rating	6/1/2007	7/1/2007
WERE WERE	HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #1 HOOK JCT - TECUMSEH ENERGY CENTER 115KV CKT 1 #2	Replace wave traps on TEC-County Line 115 kV line. Rebuild 1.52 mile line with 1192.5 kcmil ACSR	6/1/2011	6/1/2011
	NEOSHO - NORTHEAST PARSONS 138KV CKT 1	Rebuild 1.52 mile line with 1192.5 kcmil ACSR Replace bus and Jumpers at NE Parsons 138 kV substation	6/1/2011	6/1/2011
WERE	Stranger - Thorton 115 kV	Build Stranger - Thorton 115kV	6/1/2013	6/1/2013
	STRANGER CREEK TRANSFORMER CKT 2	Install second Stranger Creek 345-115 transformer	6/1/2011	6/1/2011
WERE	TECUMSEH ENERGY CENTER - TECUMSEH HILL 115KV CKT 1	Uprate 0.24 mile TEC-Tecumseh Hill 115 kV line to 100 degree operation.	6/1/2010	6/1/2010
	ALTUS JCT TAP - RUSSELL 138KV CKT 1	Change CT Ratio	6/1/2014	
	Mooreland - Potter 345 kV WFEC	345 kV line Terminal	6/1/2015	6/1/2015
WFEC	Mooreland 345/138 kV Transformer	New Mooreland 345/138 kV Transformer	6/1/2015	6/1/2015
	Spearville - Mooreland 345 kV WFEC	New 345 kV line from Kansas/Oklahoma Stateline to Mooreland	6/1/2015	

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

Transmission Owner	Upgrade		Upgrade Required	Estimated Date of Upgrade Completion (EOC)
AEPW	EXPLORER GLENPOOL - RIVERSIDE STATION 138KV CKT 1 AEPW	Reconductor 1.9 miles with ACCC. Replace wave trap jumpers at Riverside.	6/1/2009	6/1/2009
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	ARCADIA - REDBUD 345 KV CKT 1	Sponsored Project to Uprate Terninal Equipment	6/1/2006	6/1/2006
OKGE	ARCADIA - REDBUD 345 KV CKT 2	Sponsored Project to Uprate Terninal Equipment	6/1/2006	6/1/2006
OKGE	BEELINE - EXPLORER GLENPOOL 138KV CKT 1	Reconductor .92miles of line with Drake ACCC/TW.	6/1/2009	6/1/2009
OKGE	EXPLORER GLENPOOL - RIVERSIDE STATION 138KV CKT 1 OKGE	Reconductor 1.82 miles line with Drake ACCC/TW.	6/1/2009	6/1/2009
		OGE would rebuild .18 miles of 267AS33 with 795AS33. This would raise OGE's summer and winte	r	
OKGE	FPL SWITCH - MOORELAND 138KV CKT 1 OKGE	Rate B to 287MVA. The limit will still be at WFEC's Mooreland at 390A & 600A.	6/1/2006	4/1/2008
WFEC	FPL SWITCH - MOORELAND 138KV CKT 1 WFEC	Upgrade terminal equipment FPL Sw & Mooreland	6/1/2006	4/1/2008

Table 5 - Third Party Facility Constraints

Transmission			Earliest Data Upgrade	Estimated Date of Upgrade	Estimated Engineering &
Owner	Upgrade	Solution	Required (COD)	Completion (EOC)	Construction Cost
GSEC	GSEC Midway Interconnection #2	Install 7.2 MVAR Capacitor at GSEC Midway 69 kV	6/1/2011	6/1/2011	\$200,000.00

CHAPMAN - CLAY CENTER JUNCTION 115KV CKT 1 & CLAY CENTER - GREENLEAF 115KV CKT 1
KELLY - SOUTH SENECA 115KV CKT 1
From->To
CONCORDIA - EAST MANHATTAN 230KV CKT 1
572175733715875856868112207SH
6/1 - 10/1 Until EOC of Upgrade
2007 Summer Shoulder

Aggregate Relief

Reservation

Relief Amount

Upgrade: Limiting Facility: Direction: Line Outage: Flowgate: Date Redispatch Needed: Season Flowgate Identified:

11000114411011	Troilor / triodit	, unount	_1						
1090817	1.1								
1090964	1.5								
1090965	0.4	3.1							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'TECUMSEH ENERGY CENTER 115KV'	108		-0.88358	
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'CHANUTE 69KV'	46.617		-0.87876	
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'CITY OF BURLINGTON 69KV'	4.8		-0.87868	
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'CITY OF ERIE 69KV'	23.258		-0.87876	
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'CITY OF FREDONIA 69KV'	2.496		-0.87868	
WERE	'SOUTH SENECA 115KV'	16.7			'CITY OF GIRARD 69KV'	2.989		-0.87878	
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'CITY OF IOLA 69KV'	19.865	-0.00052	-0.87883	j
WERE	'SOUTH SENECA 115KV'	16.7			'CITY OF MULVANE 69KV'	6.189		-0.87752	
WERE	'SOUTH SENECA 115KV'	16.7			'CITY OF WELLINGTON 69KV'	31.07001		-0.8773	
WERE	'SOUTH SENECA 115KV'	16.7			'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96		-0.87868	
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'EVANS ENERGY CENTER 138KV'	305		-0.87754	
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935	WERE	'GILL ENERGY CENTER 138KV'	77		-0.87673	j
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'JEFFREY ENERGY CENTER 230KV'	470		-0.87766	i
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'JEFFREY ENERGY CENTER 345KV'	940		-0.87742	
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.00179	-0.88114	
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935	WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00132	-0.88067	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935	WERE	'WACO 138KV'	17.947	-0.00253	-0.87682	4
WEPL	'RUSSELL 115KV'	27.9	-0.14239	WEPL	'GRAY COUNTY WIND FARM 115KV'	73	-0.02842	-0.11397	7 2
WEPL	'RUSSELL 115KV'	27.9	-0.14239	WEPL	'JUDSON LARGE 115KV'	99.9321	-0.02839	-0.114	
WERE	'KNOLL 3 115 115KV'	75	-0.06968	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00423	-0.07391	
WERE	'KNOLL 3 115 115KV'	75	-0.06968	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.00179	-0.07147	
WERE	'KNOLL 3 115 115KV'	75	-0.06968	WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00132	-0.071	
WERE	'KNOLL 3 115 115KV'	75	-0.06968	WERE	'CITY OF ERIE 69KV'	23.258	-0.00059	-0.06909	
WERE	'KNOLL 3 115 115KV'	75			'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	-0.00067	-0.06901	
WERE	'KNOLL 3 115 115KV'	75	-0.06968	WERE	'EVANS ENERGY CENTER 138KV'	305	-0.00181	-0.06787	7 4
WERE	'KNOLL 3 115 115KV'	75			'JEFFREY ENERGY CENTER 230KV'	470	-0.00169	-0.06799	
WERE	'KNOLL 3 115 115KV'	75	-0.06968	WERE	'GILL ENERGY CENTER 138KV'	77	-0.00262	-0.06706	6
WERE	'KNOLL 3 115 115KV'	75	-0.06968	WERE	'JEFFREY ENERGY CENTER 345KV'	940	-0.00193	-0.06775	5 4
WERE	'KNOLL 3 115 115KV'	75	-0.06968	WERE	'WACO 138KV'	17.947	-0.00253	-0.06715	
WERE	'PAWNEE 115KV'	999	-0.03835	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00423	-0.04258	
WERE	'RICE 115KV'	999	-0.03835	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00423	-0.04258	
WERE	'PAWNEE 115KV'	999	-0.03835	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.00179	-0.04014	
WERE	'RICE 115KV'	999	-0.03835	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.00179	-0.04014	
WERE	'PAWNEE 115KV'	999	-0.03835	WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00132	-0.03967	7
WERE	'RICE 115KV'	999	-0.03835	WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00132	-0.03967	
WERE	'PAWNEE 115KV'	999	-0.03835	WERE	'EVANS ENERGY CENTER 138KV'	305	-0.00181	-0.03654	
WERE	'PAWNEE 115KV'	999	-0.03835	WERE	'JEFFREY ENERGY CENTER 230KV'	470	-0.00169	-0.03666	6 8
WERE	'RICE 115KV'	999	-0.03835	WERE	'EVANS ENERGY CENTER 138KV'	305	-0.00181	-0.03654	1 8
WERE	'RICE 115KV'	999	-0.03835	WERE	'JEFFREY ENERGY CENTER 230KV'	470	-0.00169	-0.03666	6 8
WERE	'PAWNEE 115KV'	999	-0.03835	WERE	'JEFFREY ENERGY CENTER 345KV'	940	-0.00193	-0.03642	2
WERE	'RICE 115KV'	999	-0.03835	WERE	'JEFFREY ENERGY CENTER 345KV'	940	-0.00193	-0.03642	2
WERE	'PAWNEE 115KV'	999			'GILL ENERGY CENTER 138KV'	77		-0.03573	
WERE	'RICE 115KV'	999	-0.03835	WERE	'GILL ENERGY CENTER 138KV'	77	-0.00262	-0.03573	3 8
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303		WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00423	-0.03003	
WEDE	ILLUTOLINGON ENERGY CENTER COLOU		0.00504	WEDE	TECHNOCH ENERGY CENTER 445KM	400	0.00400	0.00004	4.0

GILL ENERGY CENTER 138KV'
TECUMSEH ENERGY CENTER 115KV'
TECUMSEH ENERGY CENTER 115KV' WERE HUTCHINSON ENERGY CENTER 69KV.
Maximum Decrement and Maximum Increment were determine from the
Factor = Source GSF - Sink GSF
Redispatch Amount = Relief Amount / Factor

Aggregate Relie

CHAPMAN - CLAY CENTER JUNCTION 115KV CKT 1 & CLAY CENTER - GREENLEAF 115KV CKT 1 KELLY - SOUTH SENECA 115KV CKT 1 From->To CONCORDIA (CONCORD6) 230/115/13.8KV TRANSFORMER CKT 1 57217573371CONCNCORD66312207SH 6/1 - 10/1 Until EOC of Upgrade 2007 Summer Shoulder

Upgrade: Limiting Facility: Direction: Line Outage:

Flowgate: Date Redispatch Needed:

Season Flowgate Identifie

1090817	1.1	3.1	1						
1090964	1.5	3.1	1						
1090965	0.4	3.1							
Source Control Area	Source	Maximum Increment(MW)	GSF	Sink Control Area	Sink	Maximum Decrement(MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		TECUMSEH ENERGY CENTER 115KV	108		-0.88358	Alliount (WW)
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		CHANUTE 69KV'	46.617		-0.87876	3
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		CITY OF BURLINGTON 69KV	40.017		-0.87868	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'CITY OF ERIE 69KV'	23.258	-0.00059	-0.87876	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		CITY OF ERIE 09KV	2,496		-0.87868	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'CITY OF GIRARD 69KV'	2.989		-0.87878	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'CITY OF IOLA 69KV'	19.865	-0.00052	-0.87883	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'CITY OF MULVANE 69KV'	6.189		-0.87752	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'CITY OF WELLINGTON 69KV'	31.07001	-0.00205	-0.8773	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96		-0.87868	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935	WERE	'EVANS ENERGY CENTER 138KV'	305	-0.00181	-0.87754	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935		'GILL ENERGY CENTER 138KV'	77		-0.87673	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935	WERE	'JEFFREY ENERGY CENTER 230KV'	470	-0.00169	-0.87766	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935	WERE	'JEFFREY ENERGY CENTER 345KV'	940	-0.00193	-0.87742	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.00179	-0.88114	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935	WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00132	-0.88067	4
WERE	'SOUTH SENECA 115KV'	16.7	-0.87935	WERE	'WACO 138KV'	17.947	-0.00253	-0.87682	4
WEPL	'RUSSELL 115KV'	27.9	-0.14239		'GRAY COUNTY WIND FARM 115KV'	73	-0.02842	-0.11397	27
WEPL	'RUSSELL 115KV'	27.9	-0.14239		'JUDSON LARGE 115KV'	99.9321	-0.02839	-0.114	27
WERE	'KNOLL 3 115 115KV'	75			'TECUMSEH ENERGY CENTER 115KV'	108	0.00423	-0.07391	42
WERE	'KNOLL 3 115 115KV'	75			'LAWRENCE ENERGY CENTER 115KV'	60	0.00	-0.07147	43
WERE	'KNOLL 3 115 115KV'	75	-0.06968		'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00132		43
WERE	'KNOLL 3 115 115KV'	75	-0.06968		'CITY OF ERIE 69KV'	23.258	-0.00059	-0.06909	45
WERE	'KNOLL 3 115 115KV'	75			'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96		-0.06901	45
WERE	'KNOLL 3 115 115KV'	75			'EVANS ENERGY CENTER 138KV'	305		-0.06787	45
WERE	'KNOLL 3 115 115KV'	75			'JEFFREY ENERGY CENTER 230KV'	470		-0.06799	
WERE	'KNOLL 3 115 115KV'	75	-0.06968	WERE	'GILL ENERGY CENTER 138KV'	77	-0.00262	-0.06706	46

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

WERE	'KNOLL 3 115 115KV'	75	-0.06968	WERE	'JEFFREY ENERGY CENTER 345KV'	940	-0.00193	-0.06775	46
WERE	'KNOLL 3 115 115KV'	75	-0.06968	WERE	'WACO 138KV'	17.947	-0.00253	-0.06715	46
WERE	'PAWNEE 115KV'	999	-0.03835	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00423	-0.04258	72
WERE	'RICE 115KV'	999	-0.03835		'TECUMSEH ENERGY CENTER 115KV'	108	0.00423	-0.04258	72
WERE	'PAWNEE 115KV'	999	-0.03835		'LAWRENCE ENERGY CENTER 115KV'	60	0.00179	-0.04014	77
WERE	'RICE 115KV'	999	-0.03835		'LAWRENCE ENERGY CENTER 115KV'	60	0.00179	-0.04014	77
WERE	'PAWNEE 115KV'	999	-0.03835		'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00132	-0.03967	78
WERE	'RICE 115KV'	999	-0.03835	WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00132	-0.03967	78
WERE	'PAWNEE 115KV'	999	-0.03835	WERE	'EVANS ENERGY CENTER 138KV'	305	-0.00181	-0.03654	84
WERE	'PAWNEE 115KV'	999	-0.03835	WERE	'JEFFREY ENERGY CENTER 230KV'	470	-0.00169	-0.03666	84
WERE	'RICE 115KV'	999	-0.03835	WERE	'EVANS ENERGY CENTER 138KV'	305	-0.00181	-0.03654	84
WERE	'RICE 115KV'	999	-0.03835	WERE	'JEFFREY ENERGY CENTER 230KV'	470	-0.00169	-0.03666	84
WERE	'PAWNEE 115KV'	999	-0.03835	WERE	'JEFFREY ENERGY CENTER 345KV'	940	-0.00193	-0.03642	85
WERE	'RICE 115KV'	999	-0.03835	WERE	'JEFFREY ENERGY CENTER 345KV'	940	-0.00193	-0.03642	85
WERE	'PAWNEE 115KV'	999	-0.03835	WERE	'GILL ENERGY CENTER 138KV'	77	-0.00262	-0.03573	86
WERE	'RICE 115KV'	999	-0.03835		'GILL ENERGY CENTER 138KV'	77	-0.00262	-0.03573	86
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.0258		'TECUMSEH ENERGY CENTER 115KV'	108	0.00423	-0.03003	103
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.02581	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00423	-0.03004	103

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Season Flowgate Identified:	2006 Winter Peak	Aggregate Relief	1						
Reservation	Relief Amount	Amount							
109096		0.3							
109096	0.1	0.3							
		Maximum		Sink Control		Maximum			Aggregate Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'HOLTON 115KV'	19.8	-0.67909		'CHANUTE 69KV'	35.344		-0.68381	0
WERE	'HOLTON 115KV'	19.8			'CITY OF AUGUSTA 69KV'	17.25201	-0.00279	-0.6763	0
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'CITY OF BURLINGTON 69KV'	4.8		-0.68753	0
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'CITY OF ERIE 69KV'	1.998		-0.68381	0
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	CITY OF FREDONIA 69KV	1.298	0.00377	-0.68286	0
WERE WERE	'HOLTON 115KV' 'HOLTON 115KV'	19.8 19.8	-0.67909 -0.67909	WERE WERE	CITY OF GIRARD 69KV' CITY OF IOLA 69KV'	1.493 13.978		-0.68494 -0.68456	0
WERE	'HOLTON 115KV'	19.8			'CITY OF NULVANE 69KV'	3.694		-0.68307	0
WERE	'HOLTON 115KV'	19.8		WERE	'CITY OF WELLINGTON 69KV'	24		-0.68301	0
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00844	-0.68753	0
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'COLBY 115KV'	6.639483	-0.01029	-0.6688	0
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'EVANS ENERGY CENTER 138KV'	118.696		-0.68508	0
WERE WERE	'HOLTON 115KV' 'HOLTON 115KV'	19.8 19.8	-0.67909 -0.67909		'HUTCHINSON ENERGY CENTER 115KV' 'JEFFREY ENERGY CENTER 230KV'	40 470		-0.69184 -0.7136	0
WERE	HOLTON 115KV	19.8	-0.67909	WERE	JEFFREY ENERGY CENTER 345KV'	940		-0.7130	0
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'LAWRENCE ENERGY CENTER 115KV'	60		-0.70739	0
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'LAWRENCE ENERGY CENTER 230KV'	225.5185		-0.70772	0
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'TECUMSEH ENERGY CENTER 115KV'	48		-0.72266	0
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'WACO 138KV'	17.953		-0.68377	0
WERE	'BROWN COUNTY 115KV'	5.5		WERE	'CHANUTE 69KV'	35.344		-0.3311	1
WERE WERE	'BROWN COUNTY 115KV' 'BROWN COUNTY 115KV'	5.5 5.5	-0.32638 -0.32638	WERE	CITY OF AUGUSTA 69KV'	17.25201	-0.00279 0.00844	-0.32359 -0.33482	1
WERE	BROWN COUNTY 115KV	5.5	-0.32638	WERE	CITY OF BURLINGTON 69KV	1.998	0.00844	-0.33482	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'CITY OF FREDONIA 69KV'	1,298	0.00377	-0.33015	1
WERE	'BROWN COUNTY 115KV'	5.5		WERE	'CITY OF GIRARD 69KV'	1.493	0.00585	-0.33223	1
WERE	'BROWN COUNTY 115KV'	5.5		WERE	'CITY OF IOLA 69KV'	13.978		-0.33185	1
WERE	'BROWN COUNTY 115KV'	5.5		WERE	'CITY OF MULVANE 69KV'	3.694		-0.33036	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	CITY OF WELLINGTON 69KV'	24	0.00392	-0.3303	1
WERE WERE	'BROWN COUNTY 115KV' 'BROWN COUNTY 115KV'	5.5 5.5	-0.32638 -0.32638	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV' 'COLBY 115KV'	19.97 6.639483	0.00844	-0.33482 -0.31609	1
WERE	BROWN COUNTY 115KV	5.5		WERE	'EVANS ENERGY CENTER 138KV'	118.696		-0.33237	1
WERE	'BROWN COUNTY 115KV'	5.5		WERE	'HUTCHINSON ENERGY CENTER 115KV'	40		-0.33913	1
WERE	'BROWN COUNTY 115KV'	5.5		WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.03451	-0.36089	1
WERE	'BROWN COUNTY 115KV'	5.5		WERE	'JEFFREY ENERGY CENTER 345KV'	940		-0.36119	1
WERE	'BROWN COUNTY 115KV'	5.5		WERE	'LAWRENCE ENERGY CENTER 115KV'	60		-0.35468	1
WERE WERE	BROWN COUNTY 115KV' BROWN COUNTY 115KV'	5.5 5.5			'LAWRENCE ENERGY CENTER 230KV' 'TECUMSEH ENERGY CENTER 115KV'	225.5185 48		-0.35501 -0.36995	1
WERE	BROWN COUNTY 115KV	5.5		WERE	'WACO 138KV'	17.953		-0.33106	1
WEPL	'CLIFTON 115KV'	70	-0.1882	WEPL	'GRAY COUNTY WIND FARM 115KV'	36		-0.18318	1
WEPL	'CLIFTON 115KV'	70	-0.1882	WEPL	'JUDSON LARGE 115KV'	42.10201	-0.00501	-0.18319	1
WEPL	'GREENLEAF 115KV'	14.2	-0.21434	WEPL	'GRAY COUNTY WIND FARM 115KV'	36		-0.20932	1
WEPL	'GREENLEAF 115KV'	14.2	-0.21434	WEPL	'JUDSON LARGE 115KV'	42.10201	-0.00501	-0.20933	1
WERE WERE	'SOUTH SENECA 115KV' 'SOUTH SENECA 115KV'	16.7 16.7	-0.30778 -0.30778	WERE	CHANUTE 69KV' CITY OF AUGUSTA 69KV'	35.344 17.25201		-0.3125 -0.30499	1
WERE	SOUTH SENECA 115KV	16.7	-0.30778	WERE	'CITY OF BURLINGTON 69KV'	4.8		-0.30499	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778	WERE	'CITY OF ERIE 69KV'	1.998		-0.3125	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778	WERE	'CITY OF FREDONIA 69KV'	1.298	0.00377	-0.31155	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778	WERE	'CITY OF GIRARD 69KV'	1.493		-0.31363	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778	WERE	'CITY OF IOLA 69KV'	13.978		-0.31325	1
WERE WERE	'SOUTH SENECA 115KV'	16.7	-0.30778	WERE	CITY OF MULVANE 69KV	3.694		-0.31176 -0.3117	1
WERE WERE	'SOUTH SENECA 115KV' 'SOUTH SENECA 115KV'	16.7 16.7	-0.30778 -0.30778	WERE	'CITY OF WELLINGTON 69KV' 'COFFEY COUNTY NO. 2 SHARPE 69KV'	24 19.97		-0.3117 -0.31622	1
WERE	SOUTH SENECA 115KV	16.7	-0.30778	WERE	COLBY 115KV'	6.639483		-0.31622	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778	WERE	'EVANS ENERGY CENTER 138KV'	118.696		-0.31377	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778		'HUTCHINSON ENERGY CENTER 115KV'	40		-0.32053	1
WERE	'SOUTH SENECA 115KV'	16.7			'JEFFREY ENERGY CENTER 230KV'	470		-0.34229	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778		'JEFFREY ENERGY CENTER 345KV'	940		-0.34259	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778	WERE	'LAWRENCE ENERGY CENTER 115KV'	225.5185	0.0283	-0.33608	1
WERE WERE	'SOUTH SENECA 115KV' 'SOUTH SENECA 115KV'	16.7 16.7	-0.30778 -0.30778		'LAWRENCE ENERGY CENTER 230KV' TECUMSEH ENERGY CENTER 115KV'	225.5185		-0.33641 -0.35135	1
WERE	SOUTH SENECA 115KV	16.7	-0.30778	WERE	'WACO 138KV'	17.953		-0.35135	1
WEPL	'BELOIT 115KV'	16.6	-0.12815	WEPL	'GRAY COUNTY WIND FARM 115KV'	36		-0.12313	2
WEPL	'BELOIT 115KV'	16.6	-0.12815	WEPL	'JUDSON LARGE 115KV'	42.10201	-0.00501	-0.12314	2
WEPL	'SMITH CENTER 115KV'	6.15	-0.09275	WEPL	'GRAY COUNTY WIND FARM 115KV'	36		-0.08773	3
WEPL	'SMITH CENTER 115KV'	6.15	-0.09275	WEPL	'JUDSON LARGE 115KV'	42.10201		-0.08774	3
WERE WERE	'ATWOOD 115KV'	10.08799	-0.01002 -0.00279	WERE	TECUMSEH ENERGY CENTER 115KV'	48		-0.05359 -0.04636	5
WERE WERE	'CITY OF AUGUSTA 69KV' 'COLBY 115KV'	10.08799	-0.00279	WERE	TECUMSEH ENERGY CENTER 115KV' TECUMSEH ENERGY CENTER 115KV'	48		-0.04636 -0.05386	5
WERE	GETTY 69KV	6.360517		WERE	TECUMSEH ENERGY CENTER 115KV	48		-0.05386	5
WERE	'GREAT BEND PLANT 69KV'	10	0.00.00		TECUMSEH ENERGY CENTER 115KV	48		-0.0312	5
·-·-	1		0.0040			1 10	0.0.007	0.0 07	

WERE	'KNOLL 3 115 115KV'	75	-0.00767	WERE	'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.05124	5
WERE	'ATWOOD 115KV'	4	-0.01002	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.03451	-0.04453	6
WERE	'ATWOOD 115KV'	4	-0.01002	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03481	-0.04483	6
WERE	'CITY OF FREDONIA 69KV'	8.996	0.00377	WERE	'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.0398	6
WERE	'CITY OF MULVANE 69KV'	12.096	0.00398	WERE	'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.03959	6
WERE	'CITY OF NEODESHA 69KV'	4.5	0.00402	WERE	'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.03955	6
WERE	'CITY OF WELLINGTON 69KV'	19.5	0.00392	WERE	'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.03965	6
WERE	'CITY OF WINFIELD 69KV'	40	0.00302		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.04055	6
WERE	'COLBY 115KV'	6.360517	-0.01029	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.03451	-0.0448	6
WERE	'COLBY 115KV'	6.360517	-0.01029		'JEFFREY ENERGY CENTER 345KV'	940	0.03481	-0.0451	6
WERE	'GETTY 69KV'	35	-0.00763		'JEFFREY ENERGY CENTER 230KV'	470	0.03451	-0.04214	6
WERE	'GETTY 69KV'	35	-0.00763		'JEFFREY ENERGY CENTER 345KV'	940	0.03481	-0.04244	6
WERE	'KNOLL 3 115 115KV'	75	-0.00767		'JEFFREY ENERGY CENTER 230KV'	470	0.03451	-0.04218	6
WERE	'KNOLL 3 115 115KV'	75	-0.00767		'JEFFREY ENERGY CENTER 345KV'	940	0.03481	-0.04248	6
WERE	'LYONS 115KV'	999	0.00428	WERE	'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.03929	6
WERE	'OXFORD 138KV'	3	0.00366		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.03991	6
WERE	'PAWNEE 115KV'	999	-0.00053		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.0441	6
WERE	'RICE 115KV'	999	-0.00053		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.0441	6
WERE	'ST JOHN 115KV'	7.5	-0.00053		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.0441	6
WERE	'ATWOOD 115KV'	4	-0.01002		'LAWRENCE ENERGY CENTER 115KV'	60	0.0283	-0.03832	7
WERE	'ATWOOD 115KV'	4	-0.01002		'LAWRENCE ENERGY CENTER 230KV'	225.5185	0.02863	-0.03865	7
WERE	'CHANUTE 69KV'	52.456	0.00472		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.03885	7
WERE	'CITY OF AUGUSTA 69KV'	10.08799	-0.00279		'JEFFREY ENERGY CENTER 230KV'	470	0.03451	-0.0373	7
WERE	'CITY OF AUGUSTA 69KV'	10.08799	-0.00279		'JEFFREY ENERGY CENTER 345KV'	940	0.03481	-0.0376	7
WERE	'CITY OF BURLINGTON 69KV'	7.7	0.00844		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.03513	7
WERE	'CITY OF ERIE 69KV'	24.532	0.00472	WERE	'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.03885	7
WERE	'CITY OF GIRARD 69KV'	9.207	0.00585		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.03772	7
WERE	'CITY OF IOLA 69KV'	23.65	0.00547		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.0381	7
WERE	'COLBY 115KV'	6.360517	-0.01029		'LAWRENCE ENERGY CENTER 115KV'	60	0.0283	-0.03859	7
WERE	'COLBY 115KV'	6.360517	-0.01029		'LAWRENCE ENERGY CENTER 230KV'	225.5185	0.02863	-0.03892	7

Upgrade: CIRCLEVILLE - HOYT HTI SWITCHING JUNCTION 115KV CKT 1
Limiting Facility: CIRCLEVILLE - HOYT HTI SWITCHING JUNCTION 115KV CKT 1
Direction: To->From
CONCORDIA (CONCORD6) 230/115/13.8KV TRANSFORMER CKT 1
Flowgate: 5715257165TCONCNCORD66314406WP
Date Redispatch Needed: 24/1/07
Season Flowgate Identified: Af/1/07
2006 Winter Peak

Aggregate Relief

Season Flowgate Identified:	2006 Winter Peak								
	5 5 7 4	Aggregate Relief							
Reservation	Relief Amount	Amount							
1090964	0.2	0.2							
1090965	0.1	0.2							A garagata
		Maximum		Sink Control		Maximum			Aggregate Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'HOLTON 115KV'	19.8	-0.67909		CHANUTE 69KV	35.344		-0.68381	. ,
WERE	HOLTON 115KV	19.8	-0.67909		CHANUTE 69KV	17.25201		-0.6763	(
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	CITY OF AUGUSTA 69KV			-0.68753	(
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'CITY OF ERIE 69KV'	4.8 1.998	0.00644	-0.68381	
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'CITY OF FREDONIA 69KV'	1.298	0.00377	-0.68286	
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'CITY OF GIRARD 69KV'	1.493	0.00585	-0.68494	
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'CITY OF IOLA 69KV'	13.978	0.00547	-0.68456	
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'CITY OF MULVANE 69KV'	3.694	0.00398	-0.68307	Ö
WERE	'HOLTON 115KV'	19.8	-0.67909		'CITY OF WELLINGTON 69KV'	24		-0.68301	
WERE	'HOLTON 115KV'	19.8	-0.67909		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00844	-0.68753	i
WERE	'HOLTON 115KV'	19.8	-0.67909		'COLBY 115KV'	6.639483	-0.01029	-0.6688	ì
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'EVANS ENERGY CENTER 138KV'	118.696	0.00599	-0.68508	ì
WERE	'HOLTON 115KV'	19.8	-0.67909		'HUTCHINSON ENERGY CENTER 115KV'	40		-0.69184	ì
WERE	'HOLTON 115KV'	19.8	-0.67909		'JEFFREY ENERGY CENTER 230KV'	470		-0.7136	ì
WERE	'HOLTON 115KV'	19.8	-0.67909		'JEFFREY ENERGY CENTER 345KV'	940		-0.7139	ì
WERE	'HOLTON 115KV'	19.8	-0.67909		'LAWRENCE ENERGY CENTER 115KV'	60		-0.70739	Ċ
WERE	'HOLTON 115KV'	19.8	-0.67909		'LAWRENCE ENERGY CENTER 230KV'	225.5185		-0.70772	Ċ
WERE	'HOLTON 115KV'	19.8	-0.67909		'TECUMSEH ENERGY CENTER 115KV'	48		-0.72266	(
WERE	'HOLTON 115KV'	19.8	-0.67909	WERE	'WACO 138KV'	17.953	0.00468	-0.68377	(
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638		'CHANUTE 69KV'	35.344		-0.3311	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'CITY OF AUGUSTA 69KV'	17.25201	-0.00279	-0.32359	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'CITY OF BURLINGTON 69KV'	4.8	0.00844	-0.33482	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'CITY OF ERIE 69KV'	1.998	0.00472	-0.3311	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'CITY OF FREDONIA 69KV'	1.298	0.00377	-0.33015	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'CITY OF GIRARD 69KV'	1.493	0.00585	-0.33223	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'CITY OF IOLA 69KV'	13.978	0.00547	-0.33185	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'CITY OF MULVANE 69KV'	3.694	0.00398	-0.33036	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'CITY OF WELLINGTON 69KV'	24	0.00392	-0.3303	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00844	-0.33482	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'COLBY 115KV'	6.639483	-0.01029	-0.31609	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638		'EVANS ENERGY CENTER 138KV'	118.696		-0.33237	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638		'HUTCHINSON ENERGY CENTER 115KV'	40		-0.33913	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'JEFFREY ENERGY CENTER 230KV'	470		-0.36089	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638		'JEFFREY ENERGY CENTER 345KV'	940		-0.36119	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638		'LAWRENCE ENERGY CENTER 115KV'	60		-0.35468	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638		'LAWRENCE ENERGY CENTER 230KV'	225.5185		-0.35501	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'TECUMSEH ENERGY CENTER 115KV'	48		-0.36995	1
WERE	'BROWN COUNTY 115KV'	5.5	-0.32638	WERE	'WACO 138KV'	17.953		-0.33106	1
WEPL	'CLIFTON 115KV'	70	-0.1882	WEPL	'GRAY COUNTY WIND FARM 115KV'	36		-0.18318	
WEPL	'CLIFTON 115KV'	70	-0.1882	WEPL	'JUDSON LARGE 115KV'	42.10201	-0.00501	-0.18319	1
WEPL	'GREENLEAF 115KV'	14.2	-0.21434	WEPL	'GRAY COUNTY WIND FARM 115KV'	36		-0.20932	1
WEPL	'GREENLEAF 115KV'	14.2	-0.21434	WEPL	'JUDSON LARGE 115KV'	42.10201	-0.00501	-0.20933	
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778		CHANUTE 69KV'	35.344 17.25201		-0.3125	1
WERE WERE	'SOUTH SENECA 115KV'	16.7	-0.30778 -0.30778	WERE	CITY OF AUGUSTA 69KV		-0.00279 0.00844	-0.30499 -0.31622	1
WERE	'SOUTH SENECA 115KV' 'SOUTH SENECA 115KV'	16.7 16.7	-0.30778	WERE WERE	CITY OF BURLINGTON 69KV'	4.8 1.998	0.00844	-0.31622	
WERE	SOUTH SENECA 115KV	16.7	-0.30778		CITY OF ERIE 69KV	1.998	0.00472	-0.3125	-
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778		CITY OF FREDONIA 69KV	1.298		-0.31155	
WERE	SOUTH SENECA 115KV	16.7	-0.30778		CITY OF GIRARD 69KV	13,978	0.00585	-0.31363	
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778		'CITY OF MULVANE 69KV'	3.694		-0.31325	
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778		CITY OF MOLVAINE 69KV	3.694		-0.31176	-
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00392	-0.3117	-
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778		COLBY 115KV'	6.639483		-0.31622	
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778		'EVANS ENERGY CENTER 138KV'	118.696		-0.29749	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778		'HUTCHINSON ENERGY CENTER 115KV'	40		-0.32053	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778		JEFFREY ENERGY CENTER 230KV'	470		-0.34229	-
	'SOUTH SENECA 115KV'						0.03481	-0.34259	
WERE		16.7	-0.30778		'JEFFREY ENERGY CENTER 345KV'	940			

WERE	'SOUTH SENECA 115KV'	16.7	-0.30778 V		'LAWRENCE ENERGY CENTER 230KV'	225.5185	0.02863	-0.33641	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778 V	VERE	'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.35135	1
WERE	'SOUTH SENECA 115KV'	16.7	-0.30778 V		'WACO 138KV'	17.953	0.00468	-0.31246	1
WEPL	'BELOIT 115KV'	16.6	-0.12815 V	VEPL	'GRAY COUNTY WIND FARM 115KV'	36	-0.00502	-0.12313	2
WEPL	'BELOIT 115KV'	16.6	-0.12815 V	VEPL	'JUDSON LARGE 115KV'	42.10201	-0.00501	-0.12314	2
WEPL	'SMITH CENTER 115KV'	6.15	-0.09275 V		'GRAY COUNTY WIND FARM 115KV'	36	-0.00502	-0.08773	3
WEPL	'SMITH CENTER 115KV'	6.15	-0.09275 V		'JUDSON LARGE 115KV'	42.10201	-0.00501	-0.08774	3
WERE	'ATWOOD 115KV'	4	-0.01002 V		'TECUMSEH ENERGY CENTER 115KV'	48		-0.05359	4
WERE	'COLBY 115KV'	6.360517	-0.01029 V		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.05386	4
WERE	'GETTY 69KV'	35	-0.00763 V	VERE	'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.0512	4
WERE	'KNOLL 3 115 115KV'	75	-0.00767 V	VERE	'TECUMSEH ENERGY CENTER 115KV'	48		-0.05124	4
WERE	'ATWOOD 115KV'	4	-0.01002 V		'JEFFREY ENERGY CENTER 230KV'	470		-0.04453	5
WERE	'ATWOOD 115KV'	4	-0.01002 V	VERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03481	-0.04483	5
WERE	'CITY OF AUGUSTA 69KV'	10.08799	-0.00279 V		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.04636	5
WERE	'CITY OF WINFIELD 69KV'	40	0.00302 V		'TECUMSEH ENERGY CENTER 115KV'	48		-0.04055	5
WERE	'COLBY 115KV'	6.360517	-0.01029 V	VERE	'JEFFREY ENERGY CENTER 230KV'	470	0.03451	-0.0448	5
WERE	'COLBY 115KV'	6.360517	-0.01029 V	VERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03481	-0.0451	5
WERE	'GETTY 69KV'	35	-0.00763 V		'JEFFREY ENERGY CENTER 230KV'	470		-0.04214	5
WERE	'GETTY 69KV'	35	-0.00763 V		'JEFFREY ENERGY CENTER 345KV'	940		-0.04244	5
WERE	'GREAT BEND PLANT 69KV'	10	-0.0043 V		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.04787	5
WERE	'KNOLL 3 115 115KV'	75	-0.00767 V	VERE	'JEFFREY ENERGY CENTER 230KV'	470	0.03451	-0.04218	5
WERE	'KNOLL 3 115 115KV'	75	-0.00767 V		'JEFFREY ENERGY CENTER 345KV'	940		-0.04248	5
WERE	'PAWNEE 115KV'	999	-0.00053 V		'TECUMSEH ENERGY CENTER 115KV'	48		-0.0441	5
WERE	'RICE 115KV'	999	-0.00053 V		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.0441	5
WERE	'ST JOHN 115KV'	7.5	-0.00053 V		'TECUMSEH ENERGY CENTER 115KV'	48		-0.0441	5
WERE	'ATWOOD 115KV'	4	-0.01002 V		'LAWRENCE ENERGY CENTER 115KV'	60		-0.03832	6
WERE	'ATWOOD 115KV'	4	-0.01002 V		'LAWRENCE ENERGY CENTER 230KV'	225.5185		-0.03865	6
WERE	'CHANUTE 69KV'	52.456	0.00472 V		'TECUMSEH ENERGY CENTER 115KV'	48		-0.03885	6
WERE	'CITY OF AUGUSTA 69KV'	10.08799	-0.00279 V		'JEFFREY ENERGY CENTER 230KV'	470		-0.0373	6
WERE	'CITY OF AUGUSTA 69KV'	10.08799	-0.00279 V		'JEFFREY ENERGY CENTER 345KV'	940		-0.0376	6
WERE	'CITY OF BURLINGTON 69KV'	7.7	0.00844 V		'TECUMSEH ENERGY CENTER 115KV'	48		-0.03513	6
WERE	'CITY OF ERIE 69KV'	24.532	0.00472 V		'TECUMSEH ENERGY CENTER 115KV'	48		-0.03885	6
WERE	'CITY OF FREDONIA 69KV'	8.996	0.00377 V		'TECUMSEH ENERGY CENTER 115KV'	48		-0.0398	6
WERE	'CITY OF GIRARD 69KV'	9.207	0.00585 V		'TECUMSEH ENERGY CENTER 115KV'	48		-0.03772	6
WERE	'CITY OF IOLA 69KV'	23.65	0.00547 V	VERE	'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.0381	6
WERE	'CITY OF MULVANE 69KV'	12.096	0.00398 V	VERE	'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.03959	6
WERE	'CITY OF NEODESHA 69KV'	4.5	0.00402 V		'TECUMSEH ENERGY CENTER 115KV'	48		-0.03955	6
WERE	'CITY OF WELLINGTON 69KV'	19.5	0.00392 V		'TECUMSEH ENERGY CENTER 115KV'	48	0.04357	-0.03965	6
WERE	'COLBY 115KV'	6.360517	-0.01029 V		'LAWRENCE ENERGY CENTER 115KV'	60	0.0283	-0.03859	6
WERE	'COLBY 115KV'	6.360517	-0.01029 V		'LAWRENCE ENERGY CENTER 230KV'	225.5185		-0.03892	6
WERE	'EVANS ENERGY CENTER 138KV'	674.304	0.00599 V		'TECUMSEH ENERGY CENTER 115KV'	48		-0.03758	6
WERE	'GETTY 69KV'	35	-0.00763 V		'LAWRENCE ENERGY CENTER 115KV'	60	0.0283	-0.03593	6
Maximum Decrement ar	nd Maximum Increment were determine from the Sou	uce and Sink Operating	Points in the	study m	odels where limiting facility was identified.				
Factor = Source GSF - S	Sink GSF			-					
Redispatch Amount = R	elief Amount / Factor								

Upgrade: Limiting Facility: Direction: Line Outage:

Evans - Grant - Chisolm Rebuild and Conversion Project
CHISHOLM (CHISLM1X) 138/69/13.2KV TRANSFORMER CKT 1
From->To
EVANS ENERGY CENTER NORTH - SEDGWICK COUNTY NO. 12 COLWICH 138KV CKT 1

CHIISLM1X1421570405706512208SP Starting 2008 6/1 - 10/1 Until EOC 2008 Summer Peak Flowgate: Date Redispatch Needed:

Season Flowgate Identified:

	Aggregate Relief							
2.2	2.2							
								Aggregate
į	Maximum		Sink Control		Maximum			Redispatch
Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
'GILL ENERGY CENTER 69KV'	73	-0.05046	WERE	'CITY OF ERIE 69KV'	23.374	0.00084	-0.0513	42
'GILL ENERGY CENTER 69KV'	73	-0.05046	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.98	0.00167	-0.05213	42
'GILL ENERGY CENTER 69KV'	73	-0.05046	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.00006	-0.05052	43
'GILL ENERGY CENTER 69KV'	73	-0.05046	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.00006	-0.05052	43
'GILL ENERGY CENTER 69KV'	73	-0.05046	WERE	'LAWRENCE ENERGY CENTER 115KV'	85	0.00031	-0.05077	43
'GILL ENERGY CENTER 69KV'	73	-0.05046	WERE	'LAWRENCE ENERGY CENTER 230KV'	229.0237	0.0003	-0.05076	43
'GILL ENERGY CENTER 69KV'	73	-0.05046	WERE	'TECUMSEH ENERGY CENTER 115KV'	128	0.00035	-0.05081	43
'GILL ENERGY CENTER 69KV'	73	-0.05046	WERE	'BPU - CITY OF MCPHERSON 115KV'	135	-0.00136	-0.0491	44
'GILL ENERGY CENTER 69KV'	73	-0.05046	WERE	'HUTCHINSON ENERGY CENTER 115KV'	120	-0.00183	-0.04863	45
'GILL ENERGY CENTER 69KV'	73	-0.05046	WERE	'KNOLL 3 115 115KV'	75	-0.00192	-0.04854	45
'GILL ENERGY CENTER 69KV'	73	-0.05046	WERE	'EVANS ENERGY CENTER 138KV'	431.0884	-0.00301	-0.04745	46
	Relief Amount 2.2 Source 'GILL ENERGY CENTER 69KV' GILL ENERGY CENTER 69KV'	Amount Amount Amount	Amount Amount Amount 2.2 2	Amount 2.2 2.2	Amount 2.2 2.2	Amount 2.2 2	Amount 2.2 2	Amount 2.2 2

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

Factor = Source GSF - Sink GSF

Redispatch Amount = Relief Amount / Factor

GILL ENERGY CENTER EAST - GILLJCT269.0 69KV CKT 1 GILL ENERGY CENTER EAST - GILLJCT269.0 69KV CKT 1

Upgrade: Limiting Facility: Direction: Line Outage: GILL ENERGY CENTER EAST - GILLJO 1269.0 69KV CKT 1
From->TO
GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1
57795577981577955781311107SP
6/1/07 - 101/1/07
2007 Summer Peak

Date Redispatch Needed:

Season Flowgate Identified: Aggregate Relie Amount Relief Amount Reservation

Source Control Area	Source	Maximum Increment(MW)	GSF	Sink Control Area	Sink	Maximum Decrement(MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
WERE	'CITY OF MULVANE 69KV'	7.502			'GILL ENERGY CENTER 69KV'	75			
WERE	'CITY OF IOLA 69KV'	13,361	-0.00105		'GILL ENERGY CENTER 69KV'	75			
WERE	'CLAY CENTER JUNCTION 115KV'	15,161			'GILL ENERGY CENTER 69KV'	75			
WERE	'GETTY 69KV'	35			'GILL ENERGY CENTER 69KV'	75			
WERE	'HOLTON 115KV'	19.8	-0.00022	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.23301	28
WERE	'JEFFREY ENERGY CENTER 230KV'	24	-0.00007	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.23286	28
WERE	'JEFFREY ENERGY CENTER 345KV'	42	-0.00007	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.23286	28
WERE	'LATHAM1234.0 345KV'	150	-0.00298	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.23577	28
WERE	'LYONS 115KV'	999	-0.00036	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.23315	28
WERE	'NEOSHO ENERGY CENTER 138KV'	47	-0.00104	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.23383	28
WERE	'SMOKYHIL 230 230KV'	72	0.00205	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.23074	28
WERE	'SOUTH SENECA 115KV'	16.7	0	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.23279	28
WERE	'BPU - CITY OF MCPHERSON 115KV'	21.13672	0.00286	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.22993	29
WERE	'GREAT BEND PLANT 69KV'	10	0.00699	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.2258	29
WERE	'HUTCHINSON ENERGY CENTER 115KV'	133	0.00389	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.2289	29
WERE	'HUTCHINSON ENERGY CENTER 69KV'	12	0.0039	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.22889	29

WERE	'KNOLL 3 115 115KV'	75	0.00351	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.22928	29
WERE	'PAWNEE 115KV'	999	0.01303	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.21976	30
WERE	'RICE 115KV'	999	0.01303		'GILL ENERGY CENTER 69KV'	75	0.23279	-0.21976	30
WERE	'CITY OF WINFIELD 69KV'	40	0.02493	WERE	'GILL ENERGY CENTER 69KV'	75	0.23279	-0.20786	32
WERE	'GETTY 69KV'	35	-0.00422	WERE	'GILL ENERGY CENTER 138KV'	171	0.07582	-0.08004	82
WERE	'LATHAM1234.0 345KV'	150			'GILL ENERGY CENTER 138KV'	171	0.07582	-0.0788	83
WERE	'NEOSHO ENERGY CENTER 138KV'	47	-0.00104	WERE	'GILL ENERGY CENTER 138KV'	171	0.07582	-0.07686	85
WERE	'LYONS 115KV'	999	-0.00036		'GILL ENERGY CENTER 138KV'	171	0.07582	-0.07618	86
WERE	'JEFFREY ENERGY CENTER 345KV'	42	-0.00007		'GILL ENERGY CENTER 138KV'	171	0.07582	-0.07589	87
WERE	'SMOKYHIL 230 230KV'	72	0.00205	WERE	'GILL ENERGY CENTER 138KV'	171	0.07582	-0.07377	89
WERE	'HUTCHINSON ENERGY CENTER 115KV'	133	0.00389	WERE	'GILL ENERGY CENTER 138KV'	171	0.07582	-0.07193	91
WERE	'KNOLL 3 115 115KV'	75	0.00351	WERE	'GILL ENERGY CENTER 138KV'	171	0.07582	-0.07231	91

Aggregate Relie Amount

GILL ENERGY CENTER EAST - GILLJCT269.0 69KV CKT 1 GILL ENERGY CENTER EAST - GILLJCT269.0 69KV CKT 1 Upgrade: Limiting Facility: Direction: Line Outage:

Tiom->To
HOOVER NORTH (HOOVER1X) 138/69/13.2KV TRANSFORMER CKT 1
57795577981HOOVOVER1X4211107SP
6/1/07 - 10/1/07

Flowgate: Date Redispatch Needed:

Relief Amount

Season Flowgate Identified: 2007 Summer Peak

Reservation

1090817	1.6	4.5	1						
1090964	2.3	4.5	ì						
1090965	0.6	4.5	ì						
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'CITY OF MULVANE 69KV'	7.502	-0.0605	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.21929	21
WERE	'CITY OF IOLA 69KV'	13.361	-0.00102	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.15981	28
WERE	'GETTY 69KV'	35			'GILL ENERGY CENTER 69KV'	75	0.15879	-0.16325	
WERE	'HOLTON 115KV'	19.8	-0.00003	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.15882	28
WERE	'JEFFREY ENERGY CENTER 230KV'	24	0.00018	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.15861	28
WERE	'JEFFREY ENERGY CENTER 345KV'	42	0.00017	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.15862	
WERE	'LATHAM1234.0 345KV'	150	-0.00277	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.16156	
WERE	'LYONS 115KV'	999	-0.00033	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.15912	
WERE	'NEOSHO ENERGY CENTER 138KV'	47	-0.001	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.15979	
WERE	'SOUTH SENECA 115KV'	16.7	0.0001	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.15869	28
WERE	'BPU - CITY OF MCPHERSON 115KV'	21.13672	0.0024	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.15639	
WERE	'CLAY CENTER JUNCTION 115KV'	15.161	0.00077	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.15802	29
WERE	'GREAT BEND PLANT 69KV'	10	0.00548	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.15331	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	133	0.00318	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.15561	29
WERE	'HUTCHINSON ENERGY CENTER 69KV'	12	0.00319	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.1556	
WERE	'KNOLL 3 115 115KV'	75	0.00286	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.15593	
WERE	'SMOKYHIL 230 230KV'	72	0.00179	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.157	
WERE	'PAWNEE 115KV'	999	0.01005	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.14874	30
WERE	'RICE 115KV'	999	0.01005	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.14874	30
WERE	'CITY OF WINFIELD 69KV'	40	0.01599	WERE	'GILL ENERGY CENTER 69KV'	75	0.15879	-0.1428	
WERE	'GETTY 69KV'	35	-0.00446	WERE	'GILL ENERGY CENTER 138KV'	171	0.05754	-0.062	73
WERE	'LATHAM1234.0 345KV'	150	-0.00277	WERE	'GILL ENERGY CENTER 138KV'	171	0.05754	-0.06031	75
WERE	'NEOSHO ENERGY CENTER 138KV'	47	-0.001	WERE	'GILL ENERGY CENTER 138KV'	171	0.05754	-0.05854	77
WERE	'LYONS 115KV'	999	-0.00033	WERE	'GILL ENERGY CENTER 138KV'	171	0.05754	-0.05787	
WERE	'JEFFREY ENERGY CENTER 345KV'	42	0.00017	WERE	'GILL ENERGY CENTER 138KV'	171	0.05754	-0.05737	
WERE	'SMOKYHIL 230 230KV'	72	0.00179	WERE	'GILL ENERGY CENTER 138KV'	171	0.05754	-0.05575	81
WERE	'HUTCHINSON ENERGY CENTER 115KV'	133	0.00318	WERE	'GILL ENERGY CENTER 138KV'	171	0.05754	-0.05436	83
WERE	'KNOLL 3 115 115KV'	75	0.00286	WERE	'GILL ENERGY CENTER 138KV'	171	0.05754	-0.05468	83
WERE	'CITY OF WINFIELD 69KV'	40	0.01599	WERE	'GILL ENERGY CENTER 138KV'	171	0.05754	-0.04155	109

WERE CITY OF WINFIELD 69KV' 40 0.01599 WERE GILL ENERGY CENTER 138KV'
Maximum Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified.
Factor = Source GSF - Sink GSF

Aggregate Relief

Reservation

Redispatch Amount = Relief Amount / Factor

GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1 GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1 From->TO GILL ENERGY CENTER EAST - GILLJCT269.0 69KV CKT 1 Upgrade: Limiting Facility: Direction: Line Outage:

Flowgate: Date Redispatch Needed: Season Flowgate Identified 57795578131577955779811107SP 7/1/07 - 10/1/07 2007 Summer Peak

Relief Amount

Source Control Area Source Maximum Increment(MW) GSF Factor Redispate Factor Amount (Note 1) Factor Factor Factor Factor Amount (Note 1) Factor 109081	7 2	.0 5.6	5							
Source Control Area Source Maximum Increment(MW) GSF Area Sink Control A	109096	4 2	.8 5.6	5						
Source Control Area Source Maximum Increment(MW) GSF Factor Redispate Factor Amount (Note 1) Factor Factor Factor Factor Amount (Note 1) Factor 109096	5 0	.8 5.6	5							
WERE										Aggregate Redispatch
WERE CITY OF IOLA 69KV 13.381 0.00097 WERE CILL ENERGY CENTER 69KV 75 0.19986 0.20033										Amount (MW)
WERE CLAY CENTER JUNCTION 115KV 15.161 0.00067 WERE GILL ENERGY CENTER 69KV 75 0.19986 -0.19919										
WERE GETTY 69KV 35 -0.004 WERE GILL ENERGY CENTER 69KV 75 0.19986 -0.2036										
WERE	WERE	'CLAY CENTER JUNCTION 115KV'	15.161				75			
WERE JEFFREY ENERGY CENTER 230KV 24 0.00001 WERE GILL ENERGY CENTER 69KV 75 0.19986 0.19985		'GETTY 69KV'	35				75	0.19986		
WERE JEFFREY ENERGY CENTER 345KV	WERE	'HOLTON 115KV'	19.8	-0.00015	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.20001	28
WERE LATHAM1234.0 345KV' 150 0.00271 WERE GILL ENERGY CENTER 69KV' 75 0.19986 0.20257	WERE	'JEFFREY ENERGY CENTER 230KV'	24	0.00001	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.19985	28
WERE	WERE	'JEFFREY ENERGY CENTER 345KV'	42	2 0	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.19986	
WERE NEOSHO ENERGY CENTER 138KV' 47 -0.00096 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.20082 WERE SOUTH SENECA 115KV' 16.7 0.00003 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19983 WERE BPU - CITY OF MCPHERSON 115KV' 21.13672 0.00255 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19931 WERE GREAT BEND PLANT 69KV' 10 0.00255 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19372 WERE HUTCHINSON ENERGY CENTER 115KV' 133 0.00345 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.1964 WERE HUTCHINSON ENERGY CENTER 69KV' 12 0.00345 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.1964 WERE HOLTCHINSON ENERGY CENTER 69KV' 75 0.0031 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.1964 WERE HOLTCHINSON ENERGY CENTER 69KV' 75 0.0938 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.1964 WERE	WERE	'LATHAM1234.0 345KV'	150	-0.00271	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.20257	
WERE SOUTH SENECA 115KV' 16.7 0.00003 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19983 WERE BPU - CITY OF MCPHERSON 115KV' 21.13672 0.00255 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19731 WERE 'GREAT BEND PLANT 69KV' 10 0.00614 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19372 WERE 'HUTCHINSON ENERGY CENTER 115KV' 133 0.00345 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19841 WERE 'HUTCHINSON ENERGY CENTER 69KV' 12 0.00346 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19841 WERE 'KNOLL 3 115 115KV' 75 0.00311 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19841 WERE SMOKYHLZ30 230KV' 72 0.00185 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.198675 WERE PAWNEE 115KV' 999 0.01139 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.18847 WERE 'TIS ON SANDERS WERE	WERE	'LYONS 115KV'	999	-0.00033	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.20019	
WERE BPU - CITY OF MCPHERSON 115KV' 21.13672 0.00255 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19731 WERE 'GREAT BEND PLANT 69KV' 10 0.00614 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19372 WERE 'HUTCHINSON ENERGY CENTER 15KV' 133 0.00345 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19641 WERE 'HUTCHINSON ENERGY CENTER 69KV' 12 0.00346 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19644 WERE 'KNOLL 3 115 115KV' 75 0.00311 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19644 WERE 'SMOKYHIL 230 230KV' 72 0.00189 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19675 WERE 'PAWNEE 115KV' 999 0.01139 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.18847 WERE 'RICE 115KV' 999 0.01139 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.18847 WERE 'GILL SENGRY CENTER	WERE	'NEOSHO ENERGY CENTER 138KV'	47	-0.00096	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.20082	
WERE GREAT BEND PLANT 69KV' 10 0.00614 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19372	WERE	'SOUTH SENECA 115KV'	16.7	0.00003	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.19983	3 28
WERE HUTCHINSON ENERGY CENTER 115KV 133 0.00345 WERE GILL ENERGY CENTER 69KV 75 0.19986 0.19641	WERE	'BPU - CITY OF MCPHERSON 115KV'	21.13672	0.00255	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.19731	
WERE HUTCHINSON ENERGY CENTER 69KV' 12 0.00346 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.1964	WERE	'GREAT BEND PLANT 69KV'	10	0.00614	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.19372	
WERE KNOLL 3 115 115KV' 75 0.00311 WERE GILL ENERGY CENTER 69KV' 75 0.19886 -0.19875 WERE SMOKYHIL 230 230KV' 72 0.0188 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19801 WERE PAWNEE 115KV' 999 0.01139 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.18847 WERE RICE 115KV' 999 0.01139 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.18847 WERE 'CITY OF WINFIELD 69KV' 40 0.02287 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.18847 WERE GETTY 69KV 35 -0.004 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.07003 WERE LATHAMIZAJO 345KV' 150 -0.0271 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06874 WERE NEOSHO ENERGY CENTER 138KV' 47 -0.00096 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06699 WERE LYONS 115KV' 999 -0.00033 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06693 WERE JEFFREY ENERGY CENTER 345KV' 42 0.0FFREY CENTER 138KV' 171 0.06603 -0.06603 <td>WERE</td> <td>'HUTCHINSON ENERGY CENTER 115KV'</td> <td>133</td> <td>0.00345</td> <td>WERE</td> <td>'GILL ENERGY CENTER 69KV'</td> <td>75</td> <td>0.19986</td> <td>-0.19641</td> <td>29</td>	WERE	'HUTCHINSON ENERGY CENTER 115KV'	133	0.00345	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.19641	29
WERE SMOKYHIL 230 230KV' 72 0.00188 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.19801 WERE PAWWEE 115KV' 999 0.01139 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.18847 WERE RICE 115KV' 999 0.01139 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.18847 WERE CITY OF WINFIELD 69KV' 40 0.02087 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.17899 WERE 'GETTY 69KV' 35 -0.004 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.07003 WERE 'LATHAMI234.0 345KV' 150 -0.00271 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06803 WERE NEOSHO ENERGY CENTER 138KV' 47 -0.00096 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06636 WERE 'LYONS 115KV' 999 -0.00033 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06636 WERE JEFFREY ENERGY CENTER 3	WERE	'HUTCHINSON ENERGY CENTER 69KV'	12	0.00346	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.1964	1 29
WERE PAWNEE 115KV' 999 0.01139 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.18847 WERE 'RICE 115KV' 999 0.01139 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.18847 WERE 'CITY OF WINFIELD 69KV' 40 0.02087 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.18847 WERE 'GETTY 69KV' 35 -0.004 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.07003 WERE 'LATHAMIZAL4 0.345KV' 150 -0.00271 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06874 WERE NEOSHO ENERGY CENTER 138KV' 47 -0.00096 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06699 WERE 'LYONS 115KV' 99 -0.0003 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06603 WERE 'JEFFREY ENERGY CENTER 345KV' 42 O'WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06603	WERE	'KNOLL 3 115 115KV'	75	0.00311	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.19675	
WERE RICE 115KV' 999 0.01139 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.18847 WERE 'CITY OF WINFIELD 69KV' 40 0.02087 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.17899 WERE 'GETTY 69KV' 35 -0.04 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.07003 WERE 'LATHAM1234.0 345KV' 150 -0.00271 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06874 WERE 'NEOSHO ENERGY CENTER 138KV' 47 -0.00096 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06839 WERE 'LYONS 115KV' 999 -0.00033 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06636 WERE 'JEFFREY ENERGY CENTER 345KV' 42 0 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06603	WERE	'SMOKYHIL 230 230KV'	72	0.00185	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.19801	
WERE CITY OF WINFIELD 69KV' 40 0.02087 WERE GILL ENERGY CENTER 69KV' 75 0.19986 -0.17899 WERE 'GETTY 69KV' 35 -0.004 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.07003 WERE 'LATHAMI234.0 345KV' 150 -0.00271 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06874 WERE NEOSHO ENERGY CENTER 138KV' 47 -0.00096 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06603 WERE 'LYONS 115KV' 999 -0.00033 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06636 WERE 'JEFFREY ENERGY CENTER 345KV' 42 0 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06603	WERE	'PAWNEE 115KV'	999	0.01139	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.18847	7 30
WERE GETTY 69KV 35 -0.004 WERE GILL ENERGY CENTER 138KV 171 0.06603 -0.07003 WERE 1.ATHAMI234.0 345KV 150 -0.00271 WERE GILL ENERGY CENTER 138KV 171 0.06603 -0.06874 WERE NEOSHO ENERGY CENTER 138KV 47 -0.00096 WERE GILL ENERGY CENTER 138KV 171 0.06609 WERE 1.YONS 115KV 999 -0.00033 WERE GILL ENERGY CENTER 138KV 171 0.06603 -0.06636 WERE JEFFREY ENERGY CENTER 345KV 42 0 WERE GILL ENERGY CENTER 138KV 171 0.06603 -0.06603	WERE	'RICE 115KV'	999	0.01139	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.18847	7 30
WERE LATHAM1234.0 345KV' 150 -0.00271 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06874 WERE NEOSHO ENERGY CENTER 138KV' 47 -0.00096 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06899 WERE LYONS 115KV' 999 -0.00033 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06636 WERE JEFFREY ENERGY CENTER 345KV' 42 0 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06603	WERE	'CITY OF WINFIELD 69KV'	40	0.02087	WERE	'GILL ENERGY CENTER 69KV'	75	0.19986	-0.17899	32
WERE LATHAM1234.0 345KV' 150 -0.00271 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06874 WERE NEOSHO ENERGY CENTER 138KV' 47 -0.00096 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06899 WERE LYONS 115KV' 999 -0.00033 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06636 WERE JEFFREY ENERGY CENTER 345KV' 42 0 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06603	WERE	'GETTY 69KV'	35	-0.004	WERE	'GILL ENERGY CENTER 138KV'	171	0.06603	-0.07003	81
WERE 'LYONS 115KV' 999 -0.00033 WERE 'GILL ENERGY CENTER 138KV' 171 0.06603 -0.06636 WERE JEFFREY ENERGY CENTER 345KV' 42 0 WERE 'GILL ENERGY CENTER 138KV' 171 0.06603 -0.06603	WERE	'LATHAM1234.0 345KV'	150	-0.00271	WERE	'GILL ENERGY CENTER 138KV'	171	0.06603	-0.06874	1 82
WERE 'JEFFREY ENERGY CENTER 345KV' 42 0 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06603	WERE	'NEOSHO ENERGY CENTER 138KV'	47	-0.00096	WERE	'GILL ENERGY CENTER 138KV'	171	0.06603	-0.06699	84
WERE JEFFREY ENERGY CENTER 345KV' 42 0 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06603	WERE	'LYONS 115KV'	999	-0.00033	WERE	'GILL ENERGY CENTER 138KV'	171	0.06603	-0.06636	
WERE SMOKYHIL 230 230KV' 72 0.00185 WERE GILL ENERGY CENTER 138KV' 171 0.06603 -0.06418	WERE	'JEFFREY ENERGY CENTER 345KV'	42	. 0	WERE	'GILL ENERGY CENTER 138KV'	171	0.06603	-0.06603	
	WERE	'SMOKYHIL 230 230KV'	72	0.00185	WERE	'GILL ENERGY CENTER 138KV'	171	0.06603	-0.06418	

WERE	'HUTCHINSON ENERGY CENTER 115KV'	133	0.00345 WERE	'GILL ENERGY CENTER 138KV'	171	0.06603	-0.06258	90
WERE	'KNOLL 3 115 115KV'	75	0.00311 WERE	'GILL ENERGY CENTER 138KV'	171	0.06603	-0.06292	90

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

Redispatch Amount = Relief Amount / Factor

GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1 #1
GILL ENERGY CENTER EAST - MACARTHUR 69KV CKT 1
From->To
GILLJCT269.0 - OATVILLE 69KV CKT 1
57795578131577995782511107SP
7/1/07 - 101/107
2007 Summer Peak Upgrade: Limiting Facility: Direction: Line Outage:

Flowgate:

Date Redispatch Needed: Season Flowgate Identified:

Reservation		Aggregate Relief Amount
1090817	1.6	4.4
1090964	2.2	4.4
1090965	0.6	4.4

	0.0								Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'CITY OF MULVANE 69KV'	7.502	-0.09763	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.25205	
WERE	'CITY OF IOLA 69KV'	13.361	-0.00091	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15533	2
WERE	'GETTY 69KV'	35	-0.00398	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.1584	2
WERE	'HOLTON 115KV'	19.8	-0.00002	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15444	2
WERE	'JEFFREY ENERGY CENTER 230KV'	24	0.00016	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15426	2
WERE	'JEFFREY ENERGY CENTER 345KV'	42	0.00015	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15427	28
WERE	'LATHAM1234.0 345KV'	150	-0.00245	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15687	28
WERE	'LYONS 115KV'	999	-0.0003	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15472	28
WERE	'NEOSHO ENERGY CENTER 138KV'	47	-0.00089	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15531	28
WERE	'SOUTH SENECA 115KV'	16.7	0.0001	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15432	
WERE	'BPU - CITY OF MCPHERSON 115KV'	21.13672	0.00221	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15221	29
WERE	'CLAY CENTER JUNCTION 115KV'	15.161	0.0007	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15372	29
WERE	'GREAT BEND PLANT 69KV'	10	0.00505	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.14937	29
WERE	'HUTCHINSON ENERGY CENTER 115KV'	133	0.00293	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15149	29
WERE	'HUTCHINSON ENERGY CENTER 69KV'	12	0.00293	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15149	29
WERE	'KNOLL 3 115 115KV'	75	0.00263	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15179	29
WERE	'SMOKYHIL 230 230KV'	72	0.00164	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.15278	29
WERE	'PAWNEE 115KV'	999	0.00929	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.14513	30
WERE	'RICE 115KV'	999	0.00929	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.14513	30
WERE	'CITY OF WINFIELD 69KV'	40	0.01487	WERE	'GILL ENERGY CENTER 69KV'	75	0.15442	-0.13955	
WERE	'GETTY 69KV'	35	-0.00398	WERE	'GILL ENERGY CENTER 138KV'	171	0.0532	-0.05718	77
WERE	'LATHAM1234.0 345KV'	150	-0.00245	WERE	'GILL ENERGY CENTER 138KV'	171	0.0532	-0.05565	79
WERE	'NEOSHO ENERGY CENTER 138KV'	47	-0.00089	WERE	'GILL ENERGY CENTER 138KV'	171	0.0532	-0.05409	81
WERE	'LYONS 115KV'	999	-0.0003	WERE	'GILL ENERGY CENTER 138KV'	171	0.0532	-0.0535	
WERE	'JEFFREY ENERGY CENTER 345KV'	42	0.00015	WERE	'GILL ENERGY CENTER 138KV'	171	0.0532	-0.05305	
WERE	'SMOKYHIL 230 230KV'	72	0.00164	WERE	'GILL ENERGY CENTER 138KV'	171	0.0532	-0.05156	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	133	0.00293	WERE	'GILL ENERGY CENTER 138KV'	171	0.0532	-0.05027	87
WERE	'KNOLL 3 115 115KV'	75	0.00263	WERE	'GILL ENERGY CENTER 138KV'	171	0.0532	-0.05057	87
WERE	'CITY OF WINFIELD 69KV'	40	0.01487	WERE	'GILL ENERGY CENTER 138KV'	171	0.0532	-0.03833	114

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

HAYS PLANT - SOUTH HAYS 115KV CKT 1 HAYS PLANT - SOUTH HAYS 115KV CKT 1 To->From KNOLL 230/115KV TRANSFORMER CKT 1 56562565531565585656111208SP Starting 2008 6/1 - 10/1 Until EOC Upgrade: Limiting Facility: Direction: Line Outage: Flowgate: Date Redispatch Needed: Season Flowgate Identified: 2008 Summer Peak

Reservation		Aggregate Relief Amount
1090817		23.7
1090829	3.8	23.7
1090964	8.7	23.7
1090965	2.5	23.7
1091057	2.5	23.7

1091057	2.5	23.7							
		Maximum		Sink Control		Maximum			Aggregate Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'KNOLL 3 115 115KV'	75	-0.64896	WERE	'BPU - CITY OF MCPHERSON 115KV'	135	0.03494	-0.6839	35
WERE	'KNOLL 3 115 115KV'	75	-0.64896	WERE	'HUTCHINSON ENERGY CENTER 115KV'	180	0.03708	-0.68604	35
WERE	'KNOLL 3 115 115KV'	75	-0.64896	WERE	'HUTCHINSON ENERGY CENTER 69KV'	40	0.03708	-0.68604	35
WERE	'KNOLL 3 115 115KV'	75	-0.64896		'ABILENE ENERGY CENTER 115KV'	40	0.02013		
	'KNOLL 3 115 115KV'	75	-0.64896		'JEFFREY ENERGY CENTER 345KV'	940	0.00657		
	'KNOLL 3 115 115KV'	75	-0.64896		'CITY OF ERIE 69KV'	23.374	0.00208		
WERE	'KNOLL 3 115 115KV'	75	-0.64896	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.98	0.00308	-0.65204	36
WERE	'KNOLL 3 115 115KV'	75	-0.64896	WERE	'EVANS ENERGY CENTER 138KV'	510	0.00389	-0.65285	36
WERE	'KNOLL 3 115 115KV'	75	-0.64896	WERE	'GILL ENERGY CENTER 138KV'	155	0.00438	-0.65334	36
WERE	'KNOLL 3 115 115KV'	75	-0.64896	WERE	'GILL ENERGY CENTER 69KV'	45	0.00418	-0.65314	36
WERE	'KNOLL 3 115 115KV'	75	-0.64896	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.00397	-0.65293	36
WERE	'KNOLL 3 115 115KV'	75	-0.64896	WERE	'LAWRENCE ENERGY CENTER 115KV'	105	0.00392	-0.65288	36
WERE	'KNOLL 3 115 115KV'	75	-0.64896	WERE	'LAWRENCE ENERGY CENTER 230KV'	221.8893	0.00429	-0.65325	36
WERE	'KNOLL 3 115 115KV'	75	-0.64896	WERE	'TECUMSEH ENERGY CENTER 115KV'	145.8125	0.00402	-0.65298	36
WERE	'KNOLL 3 115 115KV'	75	-0.64896	WERE	'WACO 138KV'	17.967	0.00433	-0.65329	36

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

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

Upgrade: Limiting Facility: Direction: LINWOOD - MCWILLIE STREET 138KV CKT 1 LINWOOD - MCWILLIE STREET 138KV CKT 1 From->To HARTS ISLAND - SOUTH SHREVEPORT 138KV CKT 1 53422534281534145344612407SP 6/1/07 - 10/1/07

Line Outage: Flowgate: Date Redispatch Needed:

Season Flowgate Identified: 2007 Summer Peal

Reservation Relief Amount

Maximum			Aggregate Redispatch
Decrement(MW)	GSF	Factor	Amount (MW)
200	-0.00426	-0.35651	13
	/	Decrement(MW) GSF	Maximum Decrement(MW) GSF Factor

AEPW ARSENAL HILL 69KV 75 0, 36077 AEPW FITZHUGH 161KV 30, 39,999 0, 0,00243 0,38,384 13 AEPW ARSENAL HILL 69KV 75 0, 36077 AEPW FITZHUGH 161KV 220,00354 0,39723 13 AEPW ARSENAL HILL 69KV 75 0, 36077 AEPW KNOXLEE 138KV 220,2402 0,000927 0,3515 13 AEPW ARSENAL HILL 69KV 75 0, 36077 AEPW KNOXLEE 138KV 220,2402 0,000927 0,3515 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 138KV 95 0,00394 0,35683 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 138KV 95 0,00394 0,35683 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 138KV 95 0,00394 0,35686 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 34KV 95 0,000394 0,35686 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 34KV 96 0,00031 0,3666 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 138KV 96 0,000113 0,3666 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW REPROVED ARSENAL HILL 69KV 75 0,36										
AEPW ARSENAL HILL 68KV 75 0.38077 AEPW FILTOGREE 16KV 30.9999 0.00243 0.35834 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW FILTOGREE 16KV 420 0.00364 0.35723 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KONTHEASTERN STATION 138KV 405 0.00364 0.35683 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KONTHEASTERN STATION 138KV 65 0.00364 0.35683 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KONTHEASTERN STATION 138KV 65 0.00384 0.35683 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KONTHEASTERN STATION 138KV 65 0.00384 0.35683 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KONTHEASTERN STATION 138KV 65 0.00383 0.35684 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KONTHEASTERN STATION 138KV 65 0.00383 0.35683 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KONTHEASTERN STATION 138KV 65 0.00383 0.35685 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KONTHEASTERN STATION 138KV 65 0.00383 0.35686 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KONTHEASTERN STATION 138KV 65 0.00383 0.00661 0.3565 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KONTHEASTERN STATION 138KV 112 0.00423 0.36651 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KONTHEASTERN STATION 138KV 112 0.00423 0.36654 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KULL 68KW 75 0.38077 AEPW KULL 68KW 117 0.00423 0.36654 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW KULL 68KW 117 0.00423 0.36654 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW WELETIKN 138KV 117 0.00423 0.36654 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW WELETIKN 138KV 10 0.00514 0.35658 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW WELETIKN 138KV 10 0.00514 0.35658 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW WELETIKN 138KV 10 0.00514 0.35658 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW WELETIKN 138KV 10 0.00514 0.35658 13 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW WELETIKN 138KV 10 0.00516 0.34241 14 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW WELETIKN 138KV 10 0.00516 0.34241 14 AEPW ARSENAL HILL 68KV 75 0.38077 AEPW WELETIKN 138KV 10 0.0056 0.0026 0.3026 0.30277 0.3026 0.30277 0.3026 0.30277 0.3026 0.30277 0.3026 0.30277 0.3026 0.30277 0.3026 0.30277 0.3026 0.30277 0.3026 0.30277 0						'COMANCHE 138KV'	160			
AEPW ARSENAL HILL 69KY 75 0.36077 AEPW KNOZE 139KY 280.2020 0.00354 0.35722 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW KNOZE 139KY 280.2020 0.00927 0.3515 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW KNOZE 139KY 260.00394 0.35683 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW NORTHEASTERN STATION 139KY 65 0.00394 0.35683 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW NORTHEASTERN STATION 139KY 65 0.00394 0.35683 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW NORTHEASTERN STATION 139KY 65 0.00394 0.35684 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW NORTHEASTERN STATION 139KY 66 0.00393 0.35684 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW NORTHEASTERN STATION 139KY 66 0.00393 0.35684 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW ROTTHEASTERN STATION 139KY 66 0.00392 0.35684 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW ROTTHEASTERN STATION 139KY 66 0.00392 0.35686 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW ROTTHEASTERN STATION 139KY 66 0.00427 0.3565 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW NOTTHEASTERN STATION 139KY 10 0.00421 0.35661 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW NOTTHEASTERN STATION 139KY 10 0.00421 0.3564 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW WELL 60 0.00427 0.3565 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW WELL 60 0.00427 0.3564 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW WELL 60 0.00427 0.3564 13 AEPW ARSENAL HILL 69KY 75 0.36077 AEPW WELFARD WELFARD WAR	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW	'COMANCHE 69KV'	63	-0.00568	-0.35509	
AEPW ARSENAL HILL 69KV 75 0, 36077 AEPW NORTHEASTERN STATION 138KV 90, 200394 0, 305683 13 AEPW ARSENAL HILL 69KV 75 0, 36077 AEPW NORTHEASTERN STATION 138KV 95 0,00394 0,35683 13 AEPW ARSENAL HILL 69KV 75 0, 36077 AEPW NORTHEASTERN STATION 34KV 95 0,00394 0,35683 13 AEPW ARSENAL HILL 69KV 75 0, 36077 AEPW NORTHEASTERN STATION 34KV 95 0,00394 0,35683 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 34KV 95 0,00394 0,35683 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 34KV 95 0,00394 0,35684 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 136KV 96 0,000413 0,35684 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 136KV 96 0,000413 0,35684 13 AEPW ARSENAL HILL 69KV 77 0,36077 AEPW NORTHEASTERN STATION 136KV 96 0,000413 0,35684 13 AEPW ARSENAL HILL 69KV 77 0,36077 AEPW NORTHEASTERN STATION 136KV 96 0,000413 0,35684 13 AEPW ARSENAL HILL 69KV 77 0,36077 AEPW NORTHEASTERN STATION 136KV 110 0,00023 0,35684 13 AEPW ARSENAL HILL 69KV 77 0,36077 AEPW NORTHEASTERN STATION 136KV 110 0,00023 0,35684 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 136KV 110 0,00023 0,35684 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 136KV 150 0,00023 0,35684 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 136KV 150 0,00023 0,37671 14 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 136KV 150 0,00023 0,37671 14 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 136KV 150 0,00023 0,37671 14 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 136KV 150 0,00023 0,37671 14 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 136KV 150 0,00023 0,37671 14 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 136KV 150 0,00023 0,37671 14 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 136KV 150 0,00023 0,30027 14 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 136KV 150 0,00023 0,00023 0,00023 0,00023 0,00023 0,00023 0,00023 0,00023 0,00023 0,00023 0,00023 0,00023 0,00023 0,00023		'ARSENAL HILL 69KV'					30.99999	-0.00243		
AEPW ARSENAL HILL 69KV 75 0, 36077 AEPW NORTHEASTERN STATION 138KV 405 0,00394 0,35683 13 AEPW ARSENAL HILL 69KV 75 0, 36077 AEPW NORTHEASTERN STATION 138KV 96 0,00394 0,35683 13 AEPW ARSENAL HILL 69KV 75 0, 36077 AEPW NORTHEASTERN STATION 345KV 96 0,00394 0,35684 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW NORTHEASTERN STATION 345KV 96 0,00393 0,35684 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW CS 345KV 269 0,00013 0,35664 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW SULFIRSTOR STATION 138KV 96 0,00027 0,3566 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW SULFIRSTOR STATION 138KV 112 0,00027 0,3566 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW SULFIRSTOR STATION 138KV 112 0,00023 0,36564 13 AEPW ARSENAL HILL 69KV 75 0,36077 AEPW SULFIRSTOR STATION 138KV 112 0,00023 0,36654 13 AEPW ARSENAL HILL 69KV 77 0,36077 AEPW SULFIRSTOR STATION 138KV 112 0,00023 0,36664 13 AEPW ARSENAL HILL 69KV 77 0,36077 AEPW SULFIRSTOR STATION 138KV 114 0,00023 0,36664 13 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SULFIRSTOR STATION 138KV 114 0,00023 0,36664 13 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SEASTAN STATION 138KV 115 0,001316 0,34761 14 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SEASTAN STATION 138KV 115 0,001316 0,34761 14 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SEASTAN SAKV 156 0,00326 0,30241 14 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SEASTAN SAKV 90 0,001279 0,33207 14 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SEASTAN SAKV 90 0,001279 0,33207 14 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SEASTAN SAKV 90 0,001279 0,33207 14 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SEASTAN SAKV 90 0,001279 0,33207 14 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SEASTAN SAKV 90 0,001279 0,33207 14 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SEASTAN SAKV 90 0,001279 0,33207 14 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SEASTAN SAKV 90 0,001279 0,33207 14 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SEASTAN SAKV 90 0,001279 0,33207 14 AEPW ARSENAL HILL 69KV 77 10,36077 AEPW SEASTAN SAKV 90 0,000279 0,00028 0,00028 0,00028 0,00028 0,00028 0,00028 0,00028 0,00028 0,00028 0,00028 0,00028 0,0	AEPW		75				420		-0.35723	
AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW NORTHEASTERN STATION 138KV 95 -0.00394 -0.35683 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW NORTHEASTERN STATION 346KV 645 -0.0039 -0.35684 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW OEC 345KV 260 -0.00412 -0.35664 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW OEC 345KV 260 -0.00427 -0.35661 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW SOUTHWESTERN STATION 138KV 355 -0.00661 -0.35616 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW SOUTHWESTERN STATION 138KV 355 -0.00661 -0.35616 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW TULSA POWER STATION 138KV 112 -0.00422 -0.35664 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.35664 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.35664 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW TULSA POWER STATION 138KV 165 -0.01316 -0.35663 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW EASTMAN 138KV 156 -0.01316 -0.35663 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW EASTMAN 136KV 156 -0.01316 -0.35663 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW EASTMAN 136KV 156 -0.01316 -0.35663 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW EASTMAN 136KV 156 -0.01316 -0.34761 14 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW EASTMAN 136KV 156 -0.01316 -0.34761 14 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WELKES AESW PRINCE GENERATION 136KV 156 -0.01316 -0.34761 14 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WELKES 136KV 156 -0.01316 -0.34761 14 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WELKES 136KV 156 -0.0016 -0.35663 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WELKES 136KV 156 -0.0016 -0.35663 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WELKES 136KV 156 -0.0016 -0.35663 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WELKES 136KV 156 -0.0016 -0.3566 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WELKES 136KV 156 -0.0016 -0.3566 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WELKES 136KV 156 -0.0016 -0.3566 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WELKES 136KV 156 -0.0016 -0.3066 -0.3066 -0.3066 -0.3066 -0.3066 -0.3066 -0.3066 -0.3066 -0.3	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW	'KNOXLEE 138KV'	280.2402	-0.00927	-0.3515	
AEPW 'ARSENAL HILL 69KV' 75 -0.36077 AEPW' NORTHEASTERN STATION 346KV' 649 -0.0093 -0.35684 13 AEPW 'ARSENAL HILL 69KV' 75 -0.36077 AEPW' RV 269 -0.0041 -0.36661 13 AEPW 'ARSENAL HILL 69KV' 75 -0.36077 AEPW' RV 335 -0.0061 -0.3661 13 AEPW 'ARSENAL HILL 69KV' 75 -0.36077 AEPW' TULSA POWER STATION 138KV' 112 -0.0042 -0.36664 13 AEPW 'ARSENAL HILL 69KV' 75 -0.36077 AEPW' TULSA POWER STATION 138KV' 112 -0.0042 -0.36664 13 AEPW 'ARSENAL HILL 69KV' 75 -0.36077 AEPW' WELEETKA 138KV' 70 -0.00614 -0.35663 13 AEPW 'ARSENAL HILL 69KV' 75 -0.36077 AEPW' WELEETKA 138KV' 70 -0.0014 -0.35663 13 AEPW 'ARSENAL HILL 69KV' 75 -0.36077 AEPW' WELEETKA 138KV' 515 -0.01036 -0.34241 14 <td>AEPW</td> <td>'ARSENAL HILL 69KV'</td> <td>75</td> <td>-0.36077</td> <td>AEPW</td> <td>'NORTHEASTERN STATION 138KV'</td> <td>405</td> <td>-0.00394</td> <td>-0.35683</td> <td></td>	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW	'NORTHEASTERN STATION 138KV'	405	-0.00394	-0.35683	
AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW RYERSIDE STATION 138KV 289 -0.00413 -0.36666 13 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW RYERSIDE STATION 138KV 335 -0.00561 -0.35516 13 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW SQUTHWESTERN STATION 138KV 315 -0.00561 -0.35516 13 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW SQUTHWESTERN STATION 138KV 112 -0.00423 -0.35654 13 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.35654 13 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.35655 133 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.35655 133 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.35653 133 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW TELETRA 138KV 155 -0.01316 -0.34761 14 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW TELETRA 138KV 155 -0.01316 -0.34761 14 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW TELETRA 138KV 55 -0.01316 -0.34761 14 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW TELETRA 138KV 97 -0.0007,AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW TELETRA 138KV 990 -0.01279 -0.34799 14 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW WILKES 135KV 366,8935 -0.0287 -0.33207 14 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW WILKES 135KV 366,8935 -0.0287 -0.33207 14 AEPW ARSENAL-HILL 69KV 75 -0.36077,AEPW WILKES 135KV 366,8935 -0.0287 -0.33207 14 AEPW TELETRA 138KV 366,8935 -0.0287 -0.33207 14 AEPW TELETRA 138KV 90 -0.000000000000000000000000000000000	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW	'NORTHEASTERN STATION 138KV'	95	-0.00394	-0.35683	13
AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW RIVERSIDE STATION 138KV 335 -0.00661 -0.3565 13 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW TULSA POWER STATION 138KV 112 -0.00423 -0.36654 13 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.36654 13 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.36654 13 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW WELETKA 138KV 70 -0.00514 -0.35653 13 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW WELETKA 138KV 70 -0.00514 -0.35653 13 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW WELETKA 138KV 50 -0.00514 -0.35651 13 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW LEETKA 138KV 50 -0.00514 -0.35651 13 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW LEETKA 138KV 50 -0.00514 -0.34761 144 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW WELETKA 138KV 50 -0.00514 -0.34761 144 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW WELSH 345KV 50 -0.34077, AEPW AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW WELSH 345KV 96 -0.007279 -0.33761 144 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW WELSH 345KV 96 -0.007279 -0.33767 144 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW WELSH 345KV 96 -0.007279 -0.33707 144 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW WELSH 345KV 364, 8935 -0.02677 -0.3476 144 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW WILKES 138KV 364, 8935 -0.02677 -0.3476 144 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW WILKES 138KV 364, 8935 -0.00277 -0.2476 144 AEPW ARSENAL HILL 69KV 75 -0.36077, AEPW WILKES 138KV 364, 8935 -0.00367 -0.2077 -0.2	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW	'NORTHEASTERN STATION 345KV'	645	-0.00393	-0.35684	13
AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW SOUTHWESTERN STATION 138KV 335 -0.00561 0.35516 13 AEPW ARSENAL HILL 69KV 77 -0.36077 AEPW TULSA POWER STATION 138KV 112 -0.00422 0.35654 13 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW TULSA POWER STATION 138KV 147 -0.00422 0.35654 13 AEPW ARSENAL HILL 69KV 77 -0.36077 AEPW TULSA POWER STATION 138KV 170 -0.00514 0.35656 13 AEPW ARSENAL HILL 69KV 77 -0.36077 AEPW ELETKA 138KV 155 -0.01316 0.34761 14 AEPW ARSENAL HILL 69KV 77 -0.36077 AEPW EASTMAN 138KV 515 -0.01316 0.34761 14 AEPW ARSENAL HILL 69KV 77 -0.36077 AEPW EASTMAN 138KV 515 -0.01316 0.34761 14 AEPW ARSENAL HILL 69KV 77 -0.36077 AEPW FIRKEY GENERATION 138KV 475 -0.04244 0.33613 14 AEPW ARSENAL HILL 69KV 77 -0.36077 AEPW FIRKEY GENERATION 138KV 475 -0.04244 0.33613 14 AEPW ARSENAL HILL 69KV 77 -0.36077 AEPW WILKES 134KV 990 -0.01279 0.32793 14 AEPW ARSENAL HILL 69KV 77 -0.36077 AEPW WILKES 134KV 346.6935 -0.0227 0.33207 14 AEPW ARSENAL HILL 69KV 77 -0.36077 AEPW WILKES 134KV 346.6935 -0.0227 0.33207 14 AEPW ARSENAL HILL 69KV 77 -0.36077 AEPW WILKES 134KV 346.6935 -0.0227 0.33207 14 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WILKES 34KV 34KV 200 -0.00426 -0.2077 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW COGENTRIX 345KV 200 -0.00426 -0.2077 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW COMANCHE 69KV 63 -0.00666 0.20629 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FIRTHURSTERN STATION 138KV 90.00937 0.00436 0.20629 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FIRTHURSTERN STATION 138KV 90.00937 0.00437 0.20629 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FIRTHURSTERN STATION 138KV 90.00937 0.00437 0.20639 2.33 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FIRTHURSTERN STATION 138KV 90.00937 0.20692 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 90.00937 0.20692 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 90.00939 0.20609 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 90.00937 0.20692 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 90.00937 0.20692 23 AEPW LI	AEPW	'ARSENAL HILL 69KV'					269	-0.00413		
AEPW ARSENAL-HILL 69KV 75 -0.36077/AEPW TULSA POWER STATION 138KV 112 -0.00423 -0.36654 13 AEPW ARSENAL-HILL 69KV 75 -0.36077/AEPW WELEETRA 138KV 77 -0.00521 -0.00521 -0.00526 13 AEPW ARSENAL-HILL 69KV 75 -0.36077/AEPW WELEETRA 138KV 77 -0.00514 -0.35563 13 AEPW ARSENAL-HILL 69KV 75 -0.36077/AEPW WELEETRA 138KV 77 -0.00514 -0.35563 13 AEPW ARSENAL-HILL 69KV 75 -0.36077/AEPW LEBROAK 345KV 156 -0.01316 -0.01316 -0.03561 13 AEPW ARSENAL-HILL 69KV 75 -0.36077/AEPW LEBROAK 345KV 515 -0.01316 -0.01316 -0.034761 14 AEPW ARSENAL-HILL 69KV 75 -0.36077/AEPW LEBROAK 345KV 515 -0.01316 -0.03471 14 AEPW ARSENAL-HILL 69KV 75 -0.36077/AEPW WELSH 345KV 475 -0.02444 -0.3441 14 AEPW ARSENAL-HILL 69KV 75 -0.36077/AEPW WELSH 345KV 990 -0.01279 -0.34739 14 AEPW ARSENAL-HILL 69KV 75 -0.36077/AEPW WELSH 345KV 990 -0.01279 -0.34739 14 AEPW ARSENAL-HILL 69KV 75 -0.36077/AEPW WELSH 345KV 346.8935 -0.0287 -0.0287 -0.32907 14 AEPW ARSENAL-HILL 69KV 75 -0.36077/AEPW WILKES 138KV 346.8935 -0.0287	AEPW		75							
AEPW ARSENAL HILL 68KV 75 - 0.36077 AEPW YELEETKA 138KV 77 0.000514 - 0.35654 13 AEPW ARSENAL HILL 68KV 75 - 0.36077 AEPW YELEETKA 138KV 77 0.000514 0.35563 13 AEPW ARSENAL HILL 68KV 75 - 0.36077 AEPW EASTMAN 138KV 155 - 0.01316 - 0.34761 14 AEPW ARSENAL HILL 68KV 75 - 0.36077 AEPW EASTMAN 138KV 55 - 0.01316 - 0.34761 14 AEPW ARSENAL HILL 68KV 75 - 0.36077 AEPW YELEETKA 34KKV 55 - 0.0136 - 0.34761 14 AEPW ARSENAL HILL 68KV 75 - 0.36077 AEPW PIRKEY GENERATION 138KV 475 - 0.02464 - 0.33513 14 AEPW ARSENAL HILL 68KV 75 - 0.36077 AEPW YELESH 345KV 990 - 0.01279 - 0.34738 14 AEPW ARSENAL HILL 69KV 75 - 0.36077 AEPW WILKES 136KV 346.8935 - 0.0287 - 0.33207 AEPW AEPW ARSENAL HILL 69KV 75 - 0.36077 AEPW WILKES 136KV 346.8935 - 0.0287 - 0.33207 AEPW AEPW ARSENAL HILL 69KV 75 - 0.36077 AEPW WILKES 346KV 346.8935 - 0.0287 - 0.33207 AEPW AEPW ARSENAL HILL 69KV 75 - 0.36077 AEPW WILKES 346KV 346.8935 - 0.0287 - 0.33207 AEPW WILKES 346KV 346.8935 - 0.0287 - 0.34073 AEPW ULEBERMAN 138KV 137 - 0.21199 AEPW WILKES 346KV 200 - 0.00426 - 0.2077 AEPW WILKES 346KV 346.900 - 0.00426 - 0.2078 AEPW WILKES 346KV 346.900 - 0.00426 - 0.2078 AEPW WILKES 346KV 346.900 - 0.00426 - 0.2078 AEPW WILKES 346KV 346.900 - 0.20842 - 0.20842 - 0.20842 - 0.20842 - 0.20842 - 0.20842 - 0.20842 - 0.	AEPW									
AREPW	AEPW									
AFPW	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW	'TULSA POWER STATION 138KV'	147	-0.00423	-0.35654	13
AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW LEBROCK 345KV 515 -0.01836 -0.04241 14 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW PIRKEY GNERATION 138KV 990 -0.01279 -0.34788 14 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW WELSH 345KV 990 -0.01279 -0.34788 14 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW WILKES 138KV' 346.8935 -0.0287 -0.33207 14 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW WILKES 345KV 346.8935 -0.0287 -0.33207 14 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW WILKES 345KV' 346.8935 -0.0287 -0.33207 14 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW WILKES 345KV' 340.6935 -0.0287 -0.33207 14 AEPW LIEBERMAN 136KV 137 -0.21196 AEPW COMANCHE 136KV' 200 -0.00426 -0.2077 23 AEPW LIEBERMAN 136KV 137 -0.21196 AEPW COMANCHE 136KV' 160 -0.00567 -0.20629 23 AEPW LIEBERMAN 136KV 137 -0.21196 AEPW COMANCHE 69KV' 63 -0.00568 -0.20628 23 AEPW LIEBERMAN 136KV 137 -0.21196 AEPW FITZHUGH 161KV' 30.99999 -0.00243 -0.20953 23 AEPW LIEBERMAN 136KV 137 -0.21196 AEPW KNOWLEE 136KV 420 -0.00354 -0.20953 23 AEPW LIEBERMAN 136KV 137 -0.21196 AEPW KNOWLEE 136KV 420 -0.00354 -0.20062 23 AEPW LIEBERMAN 136KV 137 -0.21196 AEPW KNOWLEE 136KV 200.0000 200,00000 200,00000 200,000000 200,00000 200	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW	'WELEETKA 138KV'	70	-0.00514	-0.35563	13
AEPW ARSENAL HILL 69KV 75 0.36077 AEPW PIRKEY GENERATION 138KV 475 -0.02464 -0.33613 144 AEPW ARSENAL HILL 69KV 75 0.36077 AEPW WELSH 345KV 990 -0.01279 -0.34798 144 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WILKES 138KV 346.8935 -0.0287 -0.33207 14 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WILKES 138KV 346.8935 -0.0287 -0.33207 14 AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WILKES 345KV 311 -0.01662 -0.34415 14 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW COMENTIX 345KV 200 -0.0026 -0.2077 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW COMANCHE 138KV 160 -0.00567 -0.20629 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW COMANCHE 69KV 63 -0.00567 -0.20629 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FITZHUGH 161KV 30.99999 -0.00243 -0.20632 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FITZHUGH 161KV 30.99999 -0.00243 -0.20632 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FITZHUGH 161KV 420 -0.00354 -0.20642 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FITZHUGH 161KV 420 -0.00354 -0.20642 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FITZHUGH 161KV 420 -0.00354 -0.20642 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FITZHUGH 161KV 420 -0.00354 -0.20642 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00394 -0.20602 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00394 -0.20602 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 645 -0.00393 -0.20603 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 646 -0.00427 -0.20669 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 646 -0.00427 -0.20769 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 646 -0.00427 -0.20769 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 646 -0.00427 -0.20769 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 646 -0.00427 -0.20769 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 646 -0.00427 -0.20769 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 147 -0.00423 -0.20773 23 AEPW LIEBER	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW		155	-0.01316	-0.34761	14
AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW WELSH 345KV' 990 -0.01279 -0.34798 14 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW WILKES 138KV' 346.8395 -0.0287 -0.33207 144 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW WILKES 345KV' 311 -0.01662 -0.34415 14 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW COGENTRIX 345KV' 200 -0.00426 -0.2077 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW COMANCHE 138KV' 160 -0.0056 -0.20625 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW COMANCHE 69KV 63 -0.00668 -0.20628 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW COMANCHE 69KV 63 -0.00668 -0.20628 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FLINT CREEK 161KV 30.9999 -0.00247 -0.20269 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FLINT CREEK 161KV 420 -0.00354 -0.20842 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FLINT CREEK 161KV 420 -0.00354 -0.20842 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV' 405 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00393 -0.20803 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00393 -0.20803 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00393 -0.20803 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 50 -0.00393 -0.20803 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 50 -0.00393 -0.20803 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 50 -0.00393 -0.20803 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 50 -0.00393 -0.20803 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 50 -0.00413 -0.20773 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW	'LEBROCK 345KV'	515	-0.01836	-0.34241	14
AEPW 'ARSENAL HILL 68KV' 75 -0.36077 AEPW WILKES 138KV' 346.8935 -0.0287 -0.33207 14 AEPW 'ARSENAL HILL 68KV' 75 -0.36077 AEPW WILKES 348KV' 311 -0.01662 -0.34415 14 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW COGENTRIX 345KV' 200 -0.00426 -0.2077 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW COMANCHE 138KV' 160 -0.00567 -0.20629 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW COMANCHE 69KV 63 -0.00568 -0.20629 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW FITZHUGH 161KV' 30.99999 -0.00243 -0.20953 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW FITZHUGH 161KV' 420 -0.00544 -0.20953 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW KINCKLEE 138KV 280.2402 -0.00957 -0.2069 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW KINCKLEE 138KV 280.2402 -0.00927 -0.2069 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW KINCKLEE 138KV' 280.2402 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW NORTHEASTERN STATION 138KV' 405 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW NORTHEASTERN STATION 138KV' 646 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW NORTHEASTERN STATION 138KV' 646 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW NORTHEASTERN STATION 138KV' 646 -0.00437 -0.20802 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW NORTHEASTERN STATION 138KV' 646 -0.00437 -0.20769 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW RIVERSIDE STATION 138KV' 646 -0.00437 -0.20769 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW RIVERSIDE STATION 138KV' 646 -0.00437 -0.20769 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW RIVERSIDE STATION 138KV' 646 -0.00437 -0.20632 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW RIVERSIDE STATION 138KV' 147 -0.00423 -0.20773 23 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW RIVE	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW	'PIRKEY GENERATION 138KV'	475	-0.02464	-0.33613	14
AEPW ARSENAL HILL 69KV 75 -0.36077 AEPW WILKES 345KV 311 -0.01662 -0.344.15 14 14 14 14 14 14 14	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW	'WELSH 345KV'	990	-0.01279	-0.34798	14
AEPW	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW		346.8935	-0.0287	-0.33207	14
AEPW	AEPW		75	-0.36077	AEPW		311	-0.01662	-0.34415	14
AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FITZHUGH 161KV 30.99999 -0.00268 -0.20628 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FITZHUGH 161KV 30.99999 -0.00243 -0.20953 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FITZHUGH 161KV 420 -0.0034 -0.20952 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW KNOXLEE 138KV 280.2402 -0.00927 -0.20269 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 280.2402 -0.00927 -0.20269 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 95 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 95 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 95 -0.00394 -0.20803 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 95 -0.00394 -0.20803 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 269 -0.00413 -0.2083 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW OEC 345KV 269 -0.00413 -0.20783 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW SOUTHWESTERN STATION 138KV 355 -0.00561 -0.20635 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW SOUTHWESTERN STATION 138KV 112 -0.00423 -0.20773 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 112 -0.00423 -0.20773 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.20773 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.20773 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELETKA 138KV 155 -0.01316 -0.1988 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELETKA 138KV 155 -0.01316 -0.1988 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELETKA 138KV 155 -0.01316 -0.1988 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELETKA 138KV 155 -0.01316 -0.1988 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELETKA 138KV 155 -0.01316 -0.1988 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELETKA 138KV 155 -0.01316 -0.1988 24 AEPW LIEBERMAN 138KV 157 -0.01966 -0.01326 26 AEPW LIEBERMAN 138KV 157 -0.01966 -0.01326 26	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'COGENTRIX 345KV'	200	-0.00426	-0.2077	23
AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FITZHUGH 161KV 30.99999 -0.00243 -0.20933 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW FITZHUGH 161KV 420 -0.00354 -0.20842 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW KNOXLEE 138KV 280.4002 -0.00927 -0.00927 -0.00927 -0.20269 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00934 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 595 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 645 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 645 -0.00394 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 646 -0.00393 -0.20803 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 646 -0.00427 -0.20769 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW SUPTHWESTERN STATION 138KV 335 -0.00561 -0.20769 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW SUPTHWESTERN STATION 138KV 335 -0.00561 -0.2073 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 112 -0.00423 -0.20773 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.20773 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 147 -0.00423 -0.20773 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 70 -0.00514 -0.20662 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 50 -0.01316 -0.1988 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 50 -0.01316 -0.1988 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 50 -0.01316 -0.1989 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 50 -0.01316 -0.1989 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 50 -0.01316 -0.01836 -0.1936 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 50 -0.01316 -0.01836 -0.1936 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 50 -0.01860 -0.01856 -0.01856 26 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 1	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'COMANCHE 138KV'	160	-0.00567	-0.20629	23
AEPW	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'COMANCHE 69KV'	63	-0.00568	-0.20628	23
AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00394 -0.20802 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00394 -0.20802 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 405 -0.00394 -0.20802 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 465 -0.00393 -0.20803 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 345KV 645 -0.00393 -0.20803 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 345KV 646 -0.00427 -0.20783 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW RIVERSIDE STATION 138KV 646 -0.00427 -0.20789 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW RIVERSIDE STATION 138KV 335 -0.00561 -0.00635 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 112 -0.00423 -0.20773 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 112 -0.00423 -0.20773 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.20773 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.20773 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 117 -0.00423 -0.20773 23 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 155 -0.01316 -0.1986 24 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 155 -0.01316 -0.1986 24 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 155 -0.01316 -0.1986 24 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 155 -0.01316 -0.1986 24 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 155 -0.01316 -0.1986 24 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 155 -0.01316 -0.1986 24 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 155 -0.01336 -0.1986 24 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 155 -0.01336 -0.1986 24 AEPW 1LEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 155 -0.01336 -0.1986 24 AEPW 1LEBERMAN 138KV 157 -0.01396 AEPW WELEETKA 138KV 157 -0.01896 -0.1987 24 AEPW 1LEBERMAN 138KV 157 -0.01896 AEPW WELEETKA 138KV 159 -0.01896 -0.01897 -0.1987 24 AEPW 1LEBERMAN 138	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'FITZHUGH 161KV'	30.99999	-0.00243	-0.20953	23
AEPW	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'FLINT CREEK 161KV'	420	-0.00354	-0.20842	23
AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 138KV 95 -0.00349 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 345KV 645 -0.00349 -0.20802 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW OEC 345KV 269 -0.00413 -0.20783 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW RIVERSIDE STATION 138KV 646 -0.00427 -0.20789 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW RIVERSIDE STATION 138KV 335 -0.00561 -0.00635 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 112 -0.00423 -0.2073 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 112 -0.00423 -0.20773 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 117 -0.00423 -0.20773 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 170 -0.00514 -0.0052 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 70 -0.00514 -0.0052 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 50 -0.00514 -0.0052 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 50 -0.00514 -0.0052 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 50 -0.00514 -0.0052 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 50 -0.00514 -0.0052 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 50 -0.00514 -0.0052 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELSEN SAKV 515 -0.01316 -0.1936 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELSEN 345KV 515 -0.0136 -0.1936 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELSEN 345KV 515 -0.01836 -0.1936 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELSEN 345KV 515 -0.01836 -0.01836 -0.1936 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELSEN 345KV 515 -0.01836 -0.01836 -0.1936 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELSEN 345KV 515 -0.01836 -0.01836 -0.1936 24 AEPW LIEBERMAN 138KV 513 -0.01196 AEPW WELSEN 345KV 515 -0.01836 -0.018	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'KNOXLEE 138KV'	280.2402	-0.00927	-0.20269	23
AEPW LIEBERMAN 138KV 137 -0.21196 AEPW NORTHEASTERN STATION 345KV 645 -0.00333 -0.20803 23 23 24 24 24 24 24 2	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'NORTHEASTERN STATION 138KV'	405	-0.00394	-0.20802	23
AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW RIVERSIDE STATION 138KV' 269 -0.00413 -0.20769 23 23 24 24 25 25 25 25 25 25						'NORTHEASTERN STATION 138KV'	95	-0.00394		
AEPW LIEBERMAN 138KV 137 -0.21196 AEPW RIVERSIDE STATION 138KV 6.46 -0.00427 -0.20769 23 23 24 24 24 24 24 24	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'NORTHEASTERN STATION 345KV'	645	-0.00393	-0.20803	23
AEPW LIEBERMAN 138KV 137 -0.21196 AEPW SOUTHWESTERN STATION 138KV 335 -0.00561 -0.20635 23 23 24 24 24 24 24 24	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW		269	-0.00413	-0.20783	23
AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 112 -0.00423 -0.20773 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 147 -0.00423 -0.20773 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 138KV 70 -0.00514 -0.20682 23 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW EASTMAN 138KV 155 -0.01316 -0.1988 24 AEPW LIEBERMAN 138KV 157 -0.21196 AEPW LIEBERMAN 138KV 155 -0.01316 -0.1986 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEETKA 136KV 555 -0.01336 -0.1936 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WELEB ASTMAN 136KV 990 -0.01279 -0.19971 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WILKES 345KV 990 -0.01279 -0.19514 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WILKES 345KV 311 -0.01662 -0.19534 24 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW PIRKEY GENERATION 138KV 475 -0.02464 -0.18732 25 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW PIRKEY GENERATION 138KV 475 -0.02464 -0.18732 25 AEPW LIEBERMAN 138KV 137 -0.21196 AEPW WILKES 345KV 346.8935 -0.0287 -0.18326 26 AEPW LIEBERMAN 136KV 75 -0.0276PW WILKES 138KV 346.8935 -0.0287 -0.18326 26 AEPW LIEBERMAN 136KV 175 -0.02716PW WILKES 138KV 91 -0.21196 -0.14861 32 MAXIMUM Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified. Factor = Source GSF - Sink GSF	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'RIVERSIDE STATION 138KV'	646	-0.00427	-0.20769	23
AEPW LIEBERMAN 138KV 137 -0.21196 AEPW TULSA POWER STATION 138KV 147 -0.00423 -0.20773 23 23 24 24 24 24 24 2	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'SOUTHWESTERN STATION 138KV'	335	-0.00561	-0.20635	23
AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WELEETKA 138KV' 70 -0.00514 -0.20682 23 AEPW LIEBERMAN 138KV' 155 -0.01316 -0.1988 24 AEPW LIEBERMAN 138KV' 155 -0.01316 -0.1988 24 AEPW LIEBERMAN 138KV' 157 -0.21196 AEPW LIEBERMAN 138KV' 515 -0.01836 -0.1936 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WELSH 345KV' 990 -0.01279 -0.19917 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 345KV' 990 -0.01279 -0.19917 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 345KV' 311 -0.01662 -0.19534 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW PIRKEY GENERATION 138KV' 475 -0.02464 -0.18732 25 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 345KV' 346.8935 -0.0287 -0.18326 26 AEPW LIEBERMAN 138KV' 75 -0.36077 AEPW LIEBERMAN 138KV' 346.8935 -0.0287 -0.18326 26 AEPW ASSENAL HILL 69KV' 75 -0.36077 AEPW LIEBERMAN 138KV' 91 -0.21196 -0.14881 32 Maximum Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified.	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'TULSA POWER STATION 138KV'	112	-0.00423	-0.20773	23
AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW EASTMAN 138KV' 155 -0.01316 -0.1988 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW LEBROCK 345KV' 515 -0.01836 -0.1936 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WELSH 345KV' 990 -0.01279 -0.01971 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 345KV' 311 -0.01662 -0.19574 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 345KV' 311 -0.01662 -0.19574 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW PIRKEY GENERATION 138KV' 475 -0.02464 -0.18732 25 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 138KV' 346.8935 -0.0287 -0.18326 26 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW LIEBERMAN 138KV' 91 -0.21196 -0.14881 32 Maximum Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified. Factor = Source GSF - Sink GSF	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'TULSA POWER STATION 138KV'	147	-0.00423	-0.20773	23
AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW LEBROCK 345KV' 515 -0.01836 -0.1936 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WELSH 345KV' 990 -0.01279 -0.19917 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 345KV' 311 -0.01662 -0.19534 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW PIRKEY GENERATION 138KV' 311 -0.01662 -0.19534 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW PIRKEY GENERATION 138KV' 475 -0.02464 -0.18732 25 AEPW LIEBERMAN 138KV' 138 -0.21196 AEPW WILKES 138KV' 346.8935 -0.0287 -0.18326 26 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW LIEBERMAN 138KV' 91 -0.21196 -0.14881 32 Maximum Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified. Factor = Source GSF - Sink GSF	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'WELEETKA 138KV'	70	-0.00514	-0.20682	23
AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WELSH 345KV' 990 -0.01279 -0.19917 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 345KV' 311 -0.01662 -0.19534 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW PIRKEY GENERATION 138KV' 315 -0.02464 -0.18732 25 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 138KV' 346.8935 -0.0287 -0.18732 25 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW WILKES 138KV' 346.8935 -0.0287 -0.18326 26 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW LIEBERMAN 138KV' 91 -0.21196 -0.14881 32 Maximum Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified. Factor = Source GSF - Sink GSF	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'EASTMAN 138KV'	155	-0.01316	-0.1988	24
AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 345KV' 311 -0.01662 -0.19534 24 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW PIRKEY GENERATION 138KV' 475 -0.0246 -0.18732 25 AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 138KV' 346.8935 -0.0287 -0.0287 -0.18326 26 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW LIEBERMAN 138KV' 91 -0.21196 -0.14881 32 Maximum Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified. Factor = Source GSF - Sink GSF	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'LEBROCK 345KV'	515	-0.01836	-0.1936	24
AEPW **LIEBERMAN 138KV* 137 -0.21196 AEPW *PIRKEY GENERATION 138KV* 475 -0.02464 -0.18732 25 AEPW **LIEBERMAN 138KV* 137 -0.21196 AEPW **WILKES 138KV* 346.8935 -0.0287 -0.18326 26 AEPW **ARSENAL HILL 69KV* 75 -0.36077 AEPW **LIEBERMAN 138KV* 91 -0.21196 -0.14881 32 Maximum Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified. **BRANCE AND TO A STATE AND	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'WELSH 345KV'	990	-0.01279	-0.19917	24
AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 138KV' 346.8935 -0.0287 -0.18326 26 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW LIEBERMAN 138KV' 91 -0.21196 -0.14881 32 Maximum Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified. Factor = Source GSF - Sink GSF	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'WILKES 345KV'	311	-0.01662	-0.19534	24
AEPW LIEBERMAN 138KV' 137 -0.21196 AEPW WILKES 138KV' 346.8935 -0.0287 -0.18326 26 AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW LIEBERMAN 138KV' 91 -0.21196 -0.14881 32 Maximum Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified. Factor = Source GSF - Sink GSF	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW	'PIRKEY GENERATION 138KV'	475	-0.02464	-0.18732	
AEPW ARSENAL HILL 69KV' 75 -0.36077 AEPW LIEBERMAN 138KV' 91 -0.21196 -0.14881 32 Maximum Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified. Factor = Source GSF - Sink GSF	AEPW	'LIEBERMAN 138KV'	137	-0.21196	AEPW		346.8935	-0.0287	-0.18326	26
Factor = Source GSF - Sink GSF	AEPW	'ARSENAL HILL 69KV'	75	-0.36077	AEPW	'LIEBERMAN 138KV'	91	-0.21196	-0.14881	32
Factor = Source GSF - Sink GSF	Maximum Decrement and N	Maximum Increment were determine from the Souce	and Sink Operating	Points in th	e study mod	dels where limiting facility was identified.				
Redispatch Amount = Relief Amount / Factor					,	•				
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	readopator randunt = rene	, , unount , i dotoi								

MUSTANG STATION 230/115KV TRANSFORMER CKT 1
MUSTANG STATION 230/115KV TRANSFORMER CKT 1
From->To
YOAKUM COUNTY INTERCHANGE 230/115KV TRANSFORMER CKT 1
51966519691518915189011107SP
6/1/07 - 10/1/07
2007 Summer Peak Upgrade: Limiting Facility: Direction: Line Outage:

Flowgate: Date Redispatch Needed:

Season Flowgate Identified:

		Aggregate Relief							
Reservation	Relief Amount	Amount							
1090487	42.2	42.2							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
	'MADOX 115KV'	75	-0.12508	SPS	'MUSTG5 118.0 230KV'	360		-0.36944	114
SPS	'CUNNINGHAM 115KV'	50,00977	-0.1221	SPS	'MUSTG5 118.0 230KV'	360	0.24436	-0.36646	115

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

Upgrade: Limiting Facility: Direction: MUSTANG STATION 230/115KV TRANSFORMER CKT 1 MUSTANG STATION 230/115KV TRANSFORMER CKT 1 From->To

YOAKUM COUNTY INTERCHANGE 230/115KV TRANSFORMER CKT 1

Line Outage:
Flowgate:
Date Redispatch Needed: 51966519691518915189011407AP Starting 2007 4/1 - 6/1 Until EOC of Upgrade 2007 April Minimum

Season Flowgate Identified:	2007 April Minimum								
		Aggregate Relief	1						
Reservation	Relief Amount	Amount							
1090487	24.7	24.7	1						
									Aggregate
	_	Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source		GSF	Area	Sink		GSF		Amount (MW)
SPS	'MUSTANG 115KV'	150			'MUSTG5 118.0 230KV'	125			36
SPS	'MUSTANG 115KV'	150			'TOLK 230KV'	1014.384			54
SPS	'MUSTANG 115KV'	150			'BLACKHAWK 115KV'	220			55
SPS	'MUSTANG 115KV'	150			'CZ 69KV'	35		-0.44748	55
SPS	'MUSTANG 115KV'	150			'HARRINGTON 230KV'	706			55
SPS	'MUSTANG 115KV'	150			'SAN JUAN 230KV'	54		-0.44566	55 55
SPS	'MUSTANG 115KV'	150			'STEER WATER 115KV'	36		-0.44767	
SPS	'MUSTANG 115KV'	150			'WILWIND 230KV'	72		-0.45007	55
SPS	'MUSTANG 115KV'	150			'JONES 230KV'	104	-0.01198	-0.43061	57
SPS	'MUSTANG 115KV'	150			'LP-BRND2 69KV'	49.53857	-0.01318	-0.42941	58
SPS	'MUSTANG 115KV'	150			'CUNNINGHAM 230KV'	56		-0.41691	59
SPS	'CUNNINGHAM 115KV'	71			'MUSTG5 118.0 230KV'	125		-0.36646	67
SPS	'CUNNINGHAM 115KV'	110	-0.1221	SPS	'MUSTG5 118.0 230KV'	125	0.24436	-0.36646	67
SPS	'MADOX 115KV'	193	-0.12508	SPS	'MUSTG5 118.0 230KV'	125	0.24436	-0.36944	67
SPS	'CUNNINGHAM 230KV'	250			'MUSTG5 118.0 230KV'	125		-0.27004	92 96
SPS	'JONES 230KV'	382			'MUSTG5 118.0 230KV'	125		-0.25634	
SPS	'LP-BRND2 69KV'	182.4614	-0.01318	SPS	'MUSTG5 118.0 230KV'	125	0.24436	-0.25754	96
SPS	'PLANTX 115KV'	253	0.00765	SPS	'MUSTG5 118.0 230KV'	125	0.24436	-0.23671	104
SPS	'PLANTX 230KV'	189	0.01616	SPS	'MUSTG5 118.0 230KV'	125	0.24436	-0.2282	108
SPS	'TOLK 230KV'	65.61575	0.01795	SPS	'MUSTG5 118.0 230KV'	125	0.24436	-0.22641	109
SPS	'MADOX 115KV'	193	-0.12508	SPS	'TOLK 230KV'	1014.384	0.01795	-0.14303	173
SPS	'CUNNINGHAM 115KV'	71	-0.1221	SPS	'TOLK 230KV'	1014.384	0.01795	-0.14005	177
SPS	'CUNNINGHAM 115KV'	110			'TOLK 230KV'	1014.384	0.01795	-0.14005	177
SPS	'MADOX 115KV'	193	-0.12508	SPS	'WILWIND 230KV'	72	0.00748	-0.13256	187
SPS	'MADOX 115KV'	193	-0.12508	SPS	'HARRINGTON 230KV'	706	0.00545	-0.13053	189
SPS	'MADOX 115KV'	193	-0.12508	SPS	'BLACKHAWK 115KV'	220	0.00538	-0.13046	190
SPS	'CUNNINGHAM 115KV'	71	-0.1221	SPS	'WILWIND 230KV'	72	0.00748	-0.12958	191

SPS	'CUNNINGHAM 115KV'	110	-0.1221	SPS	'WILWIND 230KV'	72	0.00748	-0.12958	191
SPS	'CUNNINGHAM 115KV'	71	-0.1221	SPS	'BLACKHAWK 115KV'	220	0.00538	-0.12748	194
SPS	'CUNNINGHAM 115KV'	110	-0.1221		'BLACKHAWK 115KV'	220	0.00538	-0.12748	194
SPS	'CUNNINGHAM 115KV'	71	-0.1221	SPS	'HARRINGTON 230KV'	706	0.00545	-0.12755	194
SPS	'CUNNINGHAM 115KV'	110	-0.1221	SPS	'HARRINGTON 230KV'	706	0.00545	-0.12755	194
SPS	'MADOX 115KV'	193	-0.12508	SPS	'JONES 230KV'	104	-0.01198	-0.1131	219
SPS	'CUNNINGHAM 115KV'	110	-0.1221	SPS	'JONES 230KV'	104	-0.01198	-0.11012	225
SPS	'CUNNINGHAM 230KV'	250	-0.02568	SPS	'TOLK 230KV'	1014.384	0.01795	-0.04363	567

Upgrade: Limiting Facility: Direction: MUSTANG STATION 230/115KV TRANSFORMER CKT 1 MUSTANG STATION 230/115KV TRANSFORMER CKT 1

From->TO
YOAKUM COUNTY INTERCHANGE 230/115KV TRANSFORMER CKT 1
51966519691518915189014107G
Starting 2007 4/1 - 6/1 Until EOC of Upgrade

Line Outage:
Flowgate:
Date Redispatch Needed:

Season Flowgate Identified: 2007 Spring Peak

		Aggregate Relief							
Reservation	Relief Amount	Amount							
1090487	2.2	2.2							
									Aggregate
0 0 1 14		Maximum	005	Sink Control	9: 1	Maximum	005		Redispatch
Source Control Area	Source		GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
SPS	'CUNNINGHAM 115KV'	71	-0.1221	SPS	'MUSTG5 118.0 230KV'	210		-0.36646	(
SPS	'MADOX 115KV'	75	-0.12508		'MUSTG5 118.0 230KV'	210		-0.36944	6
SPS	'CARLSBAD 69KV'	18	-0.03923		'MUSTG5 118.0 230KV'	210	0.24436	-0.28359	8
SPS	'CZ 69KV'	4			'MUSTG5 118.0 230KV'	210		-0.23947	9
SPS	'HARRINGTON 230KV'	360	0.00544		'MUSTG5 118.0 230KV'	210	0.24436	-0.23892	9
SPS	'HUBRCO2 69KV'	6			'MUSTG5 118.0 230KV'	210		-0.23898	9
SPS	'LP-BRND2 69KV'	152	-0.01318		'MUSTG5 118.0 230KV'	210		-0.25754	ę
SPS	'MOORE COUNTY 115KV'	48	0.00567		'MUSTG5 118.0 230KV'	210	0.24436	-0.23869	ę
	'NICHOLS 115KV'	107	0.00525		'MUSTG5 118.0 230KV'	210		-0.23911	ę
SPS	'NICHOLS 230KV'	113.3726	0.00538		'MUSTG5 118.0 230KV'	210	0.24436	-0.23898	ę
SPS	'PLANTX 115KV'	48	0.00765		'MUSTG5 118.0 230KV'	210		-0.23671	ę
SPS	'RIVERVIEW 69KV'	23	0.00538		'MUSTG5 118.0 230KV'	210	0.24436	-0.23898	ę
SPS	'SIDRCH 69KV'	6	0.00538		'MUSTG5 118.0 230KV'	210		-0.23898	9
SPS	'TOLK 230KV'	65.29117	0.01795		'MUSTG5 118.0 230KV'	210	0.24436	-0.22641	10
SPS	'TUCUMCARI 115KV'	15	0.0126		'MUSTG5 118.0 230KV'	210	0.24436	-0.23176	10
SPS	'MADOX 115KV'	75	-0.12508		'TOLK 230KV'	1014.709		-0.14303	15
SPS	'CUNNINGHAM 115KV'	71	-0.1221		'CAPROCK 115KV'	79.99996	0.0126	-0.1347	16
SPS	'CUNNINGHAM 115KV'	71	-0.1221		'PLANTX 230KV'	189		-0.13825	16
SPS	'CUNNINGHAM 115KV'	71	-0.1221		'TOLK 230KV'	1014.709	0.01795	-0.14005	16
SPS	'MADOX 115KV'	75	-0.12508	SPS	'CAPROCK 115KV'	79.99996	0.0126	-0.13768	16
SPS	'MADOX 115KV'	75	-0.12508	SPS	'PLANTX 230KV'	189	0.01615	-0.14123	16
SPS	'CUNNINGHAM 115KV'	71	-0.1221		'HARRINGTON 230KV'	706	0.00544	-0.12754	17
SPS	'CUNNINGHAM 115KV'	71	-0.1221	SPS	'NICHOLS 230KV'	130.6274	0.00538	-0.12748	17
SPS	'CUNNINGHAM 115KV'	71	-0.1221		'PLANTX 115KV'	205	0.00765	-0.12975	17
SPS	'CUNNINGHAM 115KV'	71	-0.1221		'WILWIND 230KV'	159.9999	0.00748	-0.12958	17
SPS	'MADOX 115KV'	75	-0.12508	SPS	'HARRINGTON 230KV'	706	0.00544	-0.13052	17
SPS	'MADOX 115KV'	75		SPS	'NICHOLS 230KV'	130.6274	0.00538	-0.13046	17
SPS	'MADOX 115KV'	75			'PLANTX 115KV'	205	0.00765	-0.13273	17
SPS	'MADOX 115KV'	75	-0.12508	SPS	'SAN JUAN 230KV'	119.9999	0.00307	-0.12815	17
SPS	'MADOX 115KV'	75	-0.12508	SPS	'WILWIND 230KV'	159.9999	0.00748	-0.13256	17
SPS	'CUNNINGHAM 115KV'	71	-0.1221		'SAN JUAN 230KV'	119.9999	0.00307	-0.12517	18
SPS	'CUNNINGHAM 115KV'	71	-0.1221		'JONES 230KV'	486	-0.01198	-0.11012	20
SPS	'CUNNINGHAM 115KV'	71	-0.1221	SPS	'LP-BRND2 69KV'	80	-0.01318	-0.10892	20
SPS	'MADOX 115KV'	75	-0.12508	SPS	'JONES 230KV'	486	-0.01198	-0.1131	20
SPS	'MADOX 115KV'	75	-0.12508	SPS	'LP-BRND2 69KV'	80	-0.01318	-0.1119	20
SPS	'MADOX 115KV'	75	-0.12508	SPS	'CUNNINGHAM 230KV'	306	-0.02568	-0.0994	22
SPS	'CUNNINGHAM 115KV'	71	-0.1221	SPS	'CUNNINGHAM 230KV'	306	-0.02568	-0.09642	23
SPS	'CARLSBAD 69KV'	18	-0.03923	SPS	'TOLK 230KV'	1014.709	0.01795	-0.05718	39
SPS	'CARLSBAD 69KV'	18	-0.03923	SPS	'PLANTX 230KV'	189	0.01615	-0.05538	40
SPS	'CARLSBAD 69KV'	18	-0.03923	SPS	'CAPROCK 115KV'	79.99996	0.0126	-0.05183	43
SPS	'CARLSBAD 69KV'	18	-0.03923		'PLANTX 115KV'	205	0.00765	-0.04688	47
SPS	'CARLSBAD 69KV'	18	-0.03923		'WILWIND 230KV'	159.9999	0.00748	-0.04671	47
SPS	'CARLSBAD 69KV'	18	-0.03923		'HARRINGTON 230KV'	706	0.00544	-0.04467	49
SPS	'CARLSBAD 69KV'	18	-0.03923		'NICHOLS 230KV'	130.6274	0.00538	-0.04461	50
SPS	'CARLSBAD 69KV'	18	-0.03923	SPS	'SAN JUAN 230KV'	119.9999	0.00307	-0.0423	52
SPS	'LP-BRND2 69KV'	152	-0.01318		'TOLK 230KV'	1014.709		-0.03113	71

ILP-BKND2 69KV' | 152 -0.01318 SPS TOLK 230KV'

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

Redispatch Amount = Relief Amount / Factor

Upgrade: Limiting Facility: Direction: Line Outage: Flowgate: Date Redispatch Needed: Season Flowgate Identified:

MUSTANG STATION 230/115KV TRANSFORMER CKT 1
MUSTANG STATION 230/115KV TRANSFORMER CKT 1
From->To
LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
51966519691522055189111107FA
S1007 Fail Point - 12/1 Until EOC of Upgrade
2007 Fail Point

Season Flowgate Identified:									
Reservation	Relief Amount	Aggregate Relief Amount							
1090487	42.2	42.2			1				
		Maximum		Sink Control		Maximum			Aggregate Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
SPS	'CUNNINGHAM 115KV'	71	-0.21032	SPS	'MUSTG5 118.0 230KV'	210	0.25702	-0.46734	90
	'CUNNINGHAM 115KV'	110			'MUSTG5 118.0 230KV'	210			
	'MADOX 115KV'	102.3579	-0.21294	SPS	'MUSTG5 118.0 230KV'	210		-0.46996	
SPS	'CUNNINGHAM 230KV'	306			'MUSTG5 118.0 230KV'	210			
	'NICHOLS 115KV'	213	0.00271	SPS	'MUSTG5 118.0 230KV'	210	0.25702		
SPS	'NICHOLS 230KV'	244			'MUSTG5 118.0 230KV'	210	0.25702		
SPS	'PLANTX 115KV'	253	0.0048	SPS	'MUSTG5 118.0 230KV'	210	0.25702	-0.25222	
SPS	'TOLK 230KV'	60.2673			'MUSTG5 118.0 230KV'	210			
	'PLANTX 230KV'	189			'MUSTG5 118.0 230KV'	210		-0.24752	
	'MADOX 115KV'	102.3579			'TOLK 230KV'	1019.733	0.00822		
SPS	'CUNNINGHAM 115KV'	71	-0.21032		'TOLK 230KV'	1019.733	0.00822		
SPS	'CUNNINGHAM 115KV'	110	-0.21032	SPS	'TOLK 230KV'	1019.733	0.00822	-0.21854	
SPS	'MADOX 115KV'	102.3579	-0.21294	SPS	'BLACKHAWK 115KV'	220	0.0028	-0.21574	
	'MADOX 115KV'	102.3579			'HARRINGTON 230KV'	1066			
SPS	'MADOX 115KV'	102.3579			'WILWIND 230KV'	160		-0.21681	
	'MADOX 115KV'	102.3579			'STEER WATER 115KV'	79.94999	0.00262	-0.21556	
SPS	'CUNNINGHAM 115KV'	71	-0.21032	SPS	'WILWIND 230KV'	160	0.00387	-0.21419	197

SPS	'CUNNINGHAM 115KV'	110	-0.21032	SPS	'WILWIND 230KV'	160	0.00387	-0.21419	197
SPS	'CUNNINGHAM 115KV'	71	-0.21032	SPS	'BLACKHAWK 115KV'	220	0.0028	-0.21312	198
SPS	'CUNNINGHAM 115KV'	110	-0.21032	SPS	'BLACKHAWK 115KV'	220	0.0028	-0.21312	198
SPS	'CUNNINGHAM 115KV'	71	-0.21032	SPS	'HARRINGTON 230KV'	1066	0.00284	-0.21316	198
SPS	'CUNNINGHAM 115KV'	110	-0.21032	SPS	'HARRINGTON 230KV'	1066	0.00284	-0.21316	198
SPS	'CUNNINGHAM 115KV'	71	-0.21032	SPS	'STEER WATER 115KV'	79.94999	0.00262	-0.21294	198
SPS	'CUNNINGHAM 115KV'	110	-0.21032	SPS	'STEER WATER 115KV'	79.94999	0.00262	-0.21294	198
SPS	'MADOX 115KV'	102.3579	-0.21294	SPS	'CAPROCK 115KV'	79.94999	-0.00487	-0.20807	203
SPS	'MADOX 115KV'	102.3579	-0.21294	SPS	'JONES 230KV'	486	-0.00528	-0.20766	203
SPS	'CUNNINGHAM 115KV'	71	-0.21032	SPS	'CAPROCK 115KV'	79.94999	-0.00487	-0.20545	205
SPS	'CUNNINGHAM 115KV'	110	-0.21032	SPS	'CAPROCK 115KV'	79.94999	-0.00487	-0.20545	205
SPS	'CUNNINGHAM 115KV'	71	-0.21032	SPS	'JONES 230KV'	486	-0.00528	-0.20504	206
SPS	'CUNNINGHAM 115KV'	110	-0.21032	SPS	'JONES 230KV'	486	-0.00528	-0.20504	206
SPS	'CUNNINGHAM 230KV'	306	-0.16698	SPS	'TOLK 230KV'	1019.733	0.00822	-0.1752	241
SPS	'MADOX 115KV'	102.3579	-0.21294	SPS	'SAN JUAN 230KV'	120	-0.03776	-0.17518	241
SPS	'CUNNINGHAM 115KV'	110	-0.21032	SPS	'SAN JUAN 230KV'	120	-0.03776	-0.17256	244
SPS	'CUNNINGHAM 230KV'	306	-0.16698	SPS	'WILWIND 230KV'	160	0.00387	-0.17085	247
SPS	'CUNNINGHAM 230KV'	306	-0.16698	SPS	'HARRINGTON 230KV'	1066	0.00284	-0.16982	248
SPS	'CUNNINGHAM 230KV'	306			'JONES 230KV'	486	-0.00528	-0.1617	261
SPS	'CUNNINGHAM 230KV'	306	-0.16698	SPS	'SAN JUAN 230KV'	120	-0.03776	-0.12922	326

MUSTANG STATION 230/115KV TRANSFORMER CKT 1
MUSTANG STATION 230/115KV TRANSFORMER CKT 1
From->To
LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
5196619691522055189111107SH
6/1 - 10/1 Until EOC of Upgrade
2007 Summer Shoulder

[Agoregate Relief] Upgrade: Limiting Facility: Direction: Line Outage:

Flowgate: Date Redispatch Needed: Season Flowgate Identified:

Reservation	Relief Amount	Aggregate Relief Amount							
1090487	25.3	25.3							
1030407	20.0	20.0					1		Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
SPS	'CUNNINGHAM 115KV'	71	-0.21033	SPS	'MUSTG5 118.0 230KV'	210	0.257	-0.46733	54
SPS	'CUNNINGHAM 115KV'	110	-0.21033	SPS	'MUSTG5 118.0 230KV'	210	0.257	-0.46733	54
SPS	'MADOX 115KV'	75	-0.21295	SPS	'MUSTG5 118.0 230KV'	210	0.257	-0.46995	54
SPS	'CUNNINGHAM 230KV'	110	-0.16699		'MUSTG5 118.0 230KV'	210		-0.42399	60
SPS	'LP-BRND2 69KV'	152	-0.00604		'MUSTG5 118.0 230KV'	210		-0.26304	96
SPS	'MOORE COUNTY 115KV'	48			'MUSTG5 118.0 230KV'	210		-0.25395	100
SPS	'NICHOLS 115KV'	131	0.0028		'MUSTG5 118.0 230KV'	210		-0.2542	100
SPS	'NICHOLS 230KV'	244	0.00289		'MUSTG5 118.0 230KV'	210		-0.25411	100
SPS	'PLANTX 115KV'	89.47412	0.00502	SPS	'MUSTG5 118.0 230KV'	210		-0.25198	100
SPS	'TOLK 230KV'	52.01129	0.00826		'MUSTG5 118.0 230KV'	210		-0.24874	102
SPS	'MADOX 115KV'	75			'PLANTX 230KV'	189		-0.22251	114
SPS	'MADOX 115KV'	75			'TOLK 230KV'	1027.989		-0.22121	114
SPS	'CUNNINGHAM 115KV'	71	-0.21033		'PLANTX 230KV'	189		-0.21989	115
SPS	'CUNNINGHAM 115KV'	110	-0.21033		'PLANTX 230KV'	189		-0.21989	115
SPS	'CUNNINGHAM 115KV'	71	-0.21033		'TOLK 230KV'	1027.989		-0.21859	116
SPS	'CUNNINGHAM 115KV'	110	-0.21033		'TOLK 230KV'	1027.989		-0.21859	116
SPS	'MADOX 115KV'	75			'PLANTX 115KV'	163.5259		-0.21797	116
SPS	'MADOX 115KV'	75			'BLACKHAWK 115KV'	220		-0.21583	117
SPS	'MADOX 115KV'	75			'HARRINGTON 230KV'	1066		-0.21587	117
SPS	'MADOX 115KV'	75	-0.21295		'NICHOLS 115KV'	82		-0.21575	117
SPS	'MADOX 115KV'	75			'STEER WATER 115KV'	79.98182		-0.21566	117
SPS	'MADOX 115KV'	75			'WILWIND 230KV'	159.9636		-0.2169	117
SPS	'CUNNINGHAM 115KV'	71	-0.21033		'PLANTX 115KV'	163.5259		-0.21535	118
SPS	'CUNNINGHAM 115KV'	110	-0.21033		'PLANTX 115KV'	163.5259		-0.21535	118
SPS	'CUNNINGHAM 115KV'	71	-0.21033		'WILWIND 230KV'	159.9636		-0.21428	118
SPS	'CUNNINGHAM 115KV'	110	-0.21033		'WILWIND 230KV'	159.9636		-0.21428	118
SPS	'CUNNINGHAM 115KV'	71	-0.21033		'BLACKHAWK 115KV'	220		-0.21321	119
SPS	'CUNNINGHAM 115KV'	110	-0.21033		'BLACKHAWK 115KV'	220		-0.21321	119
SPS	'CUNNINGHAM 115KV'	71	-0.21033		'HARRINGTON 230KV'	1066		-0.21325	119
SPS	'CUNNINGHAM 115KV'	110			'HARRINGTON 230KV'	1066		-0.21325	119
SPS	'CUNNINGHAM 115KV'	71	-0.21033		'NICHOLS 115KV'	82		-0.21313	119
SPS	'CUNNINGHAM 115KV'	110	-0.21033		'NICHOLS 115KV'	82		-0.21313	119
SPS	'CUNNINGHAM 115KV'	71	-0.21033		'STEER WATER 115KV'	79.98182		-0.21304	119
SPS	'CUNNINGHAM 115KV'	110	-0.21033		'STEER WATER 115KV'	79.98182		-0.21304	119
SPS	'MADOX 115KV'	75			'CAPROCK 115KV'	79.98182		-0.20814	122
SPS	'MADOX 115KV'	75			'JONES 230KV'	486		-0.20751	122
SPS	'MADOX 115KV'	75			'LP-BRND2 69KV'	80		-0.20691	122
SPS	'CUNNINGHAM 115KV'	71	-0.21033		'CAPROCK 115KV'	79.98182		-0.20552	123
SPS	'CUNNINGHAM 115KV'	110	-0.21033		'CAPROCK 115KV'	79.98182		-0.20552	123
SPS	'CUNNINGHAM 115KV'	71	-0.21033		'JONES 230KV'	486		-0.20489	124
SPS	'CUNNINGHAM 115KV'	110			'JONES 230KV'	486		-0.20489	124
SPS	'CUNNINGHAM 230KV'	110			'PLANTX 230KV'	189		-0.17655	143
SPS	'CUNNINGHAM 230KV'	110	-0.16699		TOLK 230KV'	1027.989		-0.17525	144
SPS	'MADOX 115KV'	75	-0.21295		'SAN JUAN 230KV'	119.9727		-0.17523	144
SPS	'CUNNINGHAM 115KV'	71	-0.21033	SPS	'SAN JUAN 230KV'	119.9727		-0.17261	147
SPS	'CUNNINGHAM 115KV'	110	-0.21033		'SAN JUAN 230KV'	119.9727	-0.03772	-0.17261	147
SPS	'CUNNINGHAM 230KV'	110			'PLANTX 115KV'	163.5259		-0.17201	147
SPS	'CUNNINGHAM 230KV'	110	-0.16699		'WILWIND 230KV'	159.9636		-0.17094	148
SPS	'CUNNINGHAM 230KV'	110	-0.16699		'BLACKHAWK 115KV'	220		-0.16987	149
SPS	'CUNNINGHAM 230KV'	110	-0.16699		'HARRINGTON 230KV'	1066		-0.16991	149
SPS	'CUNNINGHAM 230KV'	110			'NICHOLS 115KV'	82		-0.16979	149
SPS	'CUNNINGHAM 230KV'	110	-0.16699		'STEER WATER 115KV'	79.98182		-0.1697	149
SPS	'CUNNINGHAM 230KV'	110	-0.16699		'CAPROCK 115KV'	79.98182		-0.16218	156
SPS	'CUNNINGHAM 230KV'	110			'JONES 230KV'	486		-0.16155	157
SPS	'CUNNINGHAM 230KV'	110			'SAN JUAN 230KV'	119.9727	-0.03772	-0.12927	196

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

Factor = Source GSF - Sink GSF

Redispatch Amount = Relief Amount / Factor

MUSTANG STATION 230/115KV TRANSFORMER CKT 1
MUSTANG STATION 230/115KV TRANSFORMER CKT 1
From->To
LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
51966519691522055198111407AP
Starting 2007 4/1 - 6/1 Until EOC of Upgrade
2007 April Minimum Upgrade:

Limiting Facility: Direction: Line Outage:

Flowgate:

Date Redispatch Needed: Season Flowgate Identified:

Aggregate Relief Amount Relief Amount Reservation

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

1090 Source Control Area	1487 41. Source	Maximum		Sink Control Area	Sink	Maximum Decrement(MW)	GSF	Factor	Aggregate Redispatch Amount (MW)
SPS	'MUSTANG 115KV'	150		SPS	'MUSTG5 118.0 230KV'	125		-0.64601	
SPS	'CUNNINGHAM 115KV'	71			'MUSTG5 118.0 230KV'	125			
SPS	'CUNNINGHAM 115KV'	110			'MUSTG5 118.0 230KV'	125		-0.46733	
SPS	'MADOX 115KV'	193			'MUSTG5 118.0 230KV'	125			
SPS	'CUNNINGHAM 230KV'	250	-0.16699	SPS	'MUSTG5 118.0 230KV'	125	0.257	-0.42399	
SPS	'MUSTANG 115KV'	150			'TOLK 230KV'	1014.384		-0.39728	
SPS	'MUSTANG 115KV'	150			'WILWIND 230KV'	72			
SPS	'MUSTANG 115KV'	150	-0.38901	SPS	'BLACKHAWK 115KV'	220	0.00288	-0.39189	10
SPS	'MUSTANG 115KV'	150	-0.38901	SPS	'HARRINGTON 230KV'	706	0.00292	-0.39193	
SPS	'MUSTANG 115KV'	150	-0.38901	SPS	'STEER WATER 115KV'	36	0.00271	-0.39172	2 107
SPS	'MUSTANG 115KV'	150	-0.38901	SPS	'JONES 230KV'	104	-0.00544	-0.38357	7 109
SPS	'MUSTANG 115KV'	150	-0.38901	SPS	'LP-BRND2 69KV'	49.53857	-0.00604	-0.38297	7 109
SPS	'MUSTANG 115KV'	150	-0.38901	SPS	'SAN JUAN 230KV'	54	-0.03772	-0.35129	119
SPS	'JONES 230KV'	382	-0.00544	SPS	'MUSTG5 118.0 230KV'	125	0.257	-0.26244	159
SPS	'LP-BRND2 69KV'	182.4614	-0.00604	SPS	'MUSTG5 118.0 230KV'	125	0.257	-0.26304	159
SPS	'PLANTX 115KV'	253	0.00502	SPS	'MUSTG5 118.0 230KV'	125	0.257	-0.25198	166
SPS	'TOLK 230KV'	65.61575	0.00827	SPS	'MUSTG5 118.0 230KV'	125	0.257	-0.24873	168
SPS	'PLANTX 230KV'	189	0.00957	SPS	'MUSTG5 118.0 230KV'	125	0.257	-0.24743	169
SPS	'MADOX 115KV'	193	-0.21295	SPS	'TOLK 230KV'	1014.384	0.00827	-0.22122	189
SPS	'CUNNINGHAM 115KV'	71	-0.21033	SPS	'TOLK 230KV'	1014.384	0.00827	-0.2186	191
SPS	'CUNNINGHAM 115KV'	110	-0.21033	SPS	'TOLK 230KV'	1014.384	0.00827	-0.2186	191
SPS	'MADOX 115KV'	193	-0.21295	SPS	'WILWIND 230KV'	72	0.00396	-0.21691	193
SPS	'MADOX 115KV'	193	-0.21295	SPS	'HARRINGTON 230KV'	706	0.00292	-0.21587	7 194
SPS	'CUNNINGHAM 115KV'	71	-0.21033	SPS	'WILWIND 230KV'	72	0.00396	-0.21429	
SPS	'CUNNINGHAM 115KV'	110	-0.21033	SPS	'WILWIND 230KV'	72	0.00396	-0.21429	195
SPS	'CUNNINGHAM 115KV'	71	-0.21033	SPS	'BLACKHAWK 115KV'	220	0.00288	-0.21321	196
SPS	'CUNNINGHAM 115KV'	110	-0.21033	SPS	'BLACKHAWK 115KV'	220	0.00288	-0.21321	196
SPS	'CUNNINGHAM 115KV'	71	-0.21033	SPS	'HARRINGTON 230KV'	706	0.00292	-0.21325	196
SPS	'CUNNINGHAM 115KV'	110	-0.21033	SPS	'HARRINGTON 230KV'	706	0.00292	-0.21325	196
SPS	'MADOX 115KV'	193			'JONES 230KV'	104	-0.00544		
SPS	'CUNNINGHAM 115KV'	71			'JONES 230KV'	104	-0.00544	-0.20489	
SPS	'CUNNINGHAM 115KV'	110			'JONES 230KV'	104	-0.00544	-0.20489	
SPS	'CUNNINGHAM 230KV'	250	-0.16699	SPS	'TOLK 230KV'	1014.384	0.00827	-0.17526	
SPS	'CUNNINGHAM 230KV'	250		SPS	'HARRINGTON 230KV'	706	0.00292	-0.16991	
SPS	'CUNNINGHAM 230KV'	250			'JONES 230KV'	104	-0.00544	-0.16155	259
Maximum Decrement and Factor = Source GSF - Si Redispatch Amount = Rel		e and Sink Operatin	g Points in th	ne study mode	els where limiting facility was identified.				

 Upgrade:
 MUSTANG STATION 230/115KV TRANSFORMER CKT 1

 Limiting Facility:
 MUSTANG STATION 230/115KV TRANSFORMER CKT 1

 Direction:
 From->To

 Line Outage:
 LEA COUNTY INTERCHANGE - YOAKUM COUNTY INTERCHANGE 230KV CKT 1

 Flowgate:
 51986519691522055189111407WP

 Data Redispatch Needed:
 12/1/107 - 4/1/08

 Season Flowgate Identified:
 2007 Winter Peak

	2007 Willer Feak	Aggregate Relief	1						
Reservation	Relief Amount	Amount	_						
1090487	15.2	15.2							
									Aggregate
		Maximum		Sink Control	a	Maximum		L .	Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
SPS	'MUSTANG 115KV'	29			'MUSTG5 118.0 230KV'	210		-0.64601	2
SPS	'MADOX 115KV'	88.39449			'MUSTG5 118.0 230KV'	210		-0.46997	3
SPS	'CUNNINGHAM 115KV'	71			'MUSTG5 118.0 230KV'	210		-0.46735	3
SPS	'CUNNINGHAM 115KV'	110			MUSTG5 118.0 230KV'	210	0.25703	-0.46735	3
SPS SPS	'CUNNINGHAM 230KV'	110 29		SPS	'MUSTG5 118.0 230KV' 'TOLK 230KV'	210 1019.563	0.25703	-0.42401 -0.3972	3
SPS	'MUSTANG 115KV' CARLSBAD 69KV'	18			MUSTG5 118.0 230KV'	210		-0.3972	3 3
SPS	'MUSTANG 115KV'	29		SPS	BLACKHAWK 115KV'	220	0.23703	-0.39243	3
SPS	MUSTANG 115KV	29			'CZ 69KV'	35		-0.39170	3
SPS	MUSTANG 115KV	29			'HARRINGTON 230KV'	1066	0.00284	-0.39182	3
SPS	MUSTANG 115KV	29		SPS	'SIDRCH 69KV'	14		-0.39162	3
SPS	'MUSTANG 115KV'	29		SPS	STEER WATER 115KV	24		-0.3916	
SPS	MUSTANG 115KV	29			'WILWIND 230KV'	48		-0.39285	3
SPS	MUSTANG 115KV	29			'CAPROCK 115KV'	24		-0.39263	
SPS	'MUSTANG 115KV'	29			'JONES 230KV'	243		-0.3837	4
SPS	'MUSTANG 115KV'	29		SPS	'LP-BRND2 69KV'	60		-0.3831	4
SPS	'MUSTANG 115KV'	29			'SAN JUAN 230KV'	36		-0.35122	4:
SPS	'JONES 230KV'	243			'MUSTG5 118.0 230KV'	210		-0.26231	5
SPS	'LP-BRND2 69KV'	172		SPS	'MUSTG5 118.0 230KV'	210		-0.26291	5
SPS	'MOORE COUNTY 115KV'	48			'MUSTG5 118.0 230KV'	210	0.25703	-0.25407	6
SPS	'NICHOLS 115KV'	213			'MUSTG5 118.0 230KV'	210	0.25703	-0.25432	6
SPS	'NICHOLS 230KV'	244			'MUSTG5 118.0 230KV'	210		-0.25423	6
SPS	'PLANTX 115KV'	253			'MUSTG5 118.0 230KV'	210	0.25703	-0.25223	6
SPS	'RIVERVIEW 69KV'	23		SPS	'MUSTG5 118.0 230KV'	210	0.25703	-0.25423	6
SPS	'PLANTX 230KV'	189		SPS	'MUSTG5 118.0 230KV'	210	0.25703	-0.24753	6
SPS	'TOLK 230KV'	60.43671	0.00822	SPS	'MUSTG5 118.0 230KV'	210	0.25703	-0.24881	6
SPS	'MADOX 115KV'	88.39449	-0.21294	SPS	TOLK 230KV'	1019.563	0.00822	-0.22116	6
SPS	'MUSTANG 115KV'	29	-0.38898	SPS	'CUNNINGHAM 230KV'	196	-0.16698	-0.222	6
SPS	'CUNNINGHAM 115KV'	71	-0.21032	SPS	'TOLK 230KV'	1019.563	0.00822	-0.21854	7
SPS	'CUNNINGHAM 115KV'	110	-0.21032	SPS	'TOLK 230KV'	1019.563	0.00822	-0.21854	70
SPS	'MADOX 115KV'	88.39449	-0.21294	SPS	'BLACKHAWK 115KV'	220	0.0028	-0.21574	70
SPS	'MADOX 115KV'	88.39449			'HARRINGTON 230KV'	1066	0.00284	-0.21578	70
SPS	'MADOX 115KV'	88.39449			'WILWIND 230KV'	48	0.00387	-0.21681	70
SPS	'CUNNINGHAM 115KV'	71			'BLACKHAWK 115KV'	220	0.0028	-0.21312	7
SPS	'CUNNINGHAM 115KV'	110			'BLACKHAWK 115KV'	220	0.0028	-0.21312	
SPS	'CUNNINGHAM 115KV'	71			'CZ 69KV'	35		-0.21285	7
SPS	'CUNNINGHAM 115KV'	110			'CZ 69KV'	35		-0.21285	7
SPS	'CUNNINGHAM 115KV'	71			'HARRINGTON 230KV'	1066	0.00284	-0.21316	
SPS	'CUNNINGHAM 115KV'	110			'HARRINGTON 230KV'	1066	0.00284	-0.21316	
SPS	'CUNNINGHAM 115KV'	71		SPS	'STEER WATER 115KV'	24		-0.21294	7
SPS	'CUNNINGHAM 115KV'	110			'STEER WATER 115KV'	24		-0.21294	7
SPS	'CUNNINGHAM 115KV'	71			'WILWIND 230KV'	48		-0.21419	
SPS	'CUNNINGHAM 115KV'	110			'WILWIND 230KV'	48		-0.21419	
SPS	'MADOX 115KV'	88.39449			'CZ 69KV'	35		-0.21547	7
SPS	'MADOX 115KV'	88.39449			STEER WATER 115KV'	24		-0.21556	7
SPS	'MADOX 115KV'	88.39449			'JONES 230KV'	243	-0.00528	-0.20766	7
SPS	'MADOX 115KV'	88.39449			'LP-BRND2 69KV'	60		-0.20706	7
SPS	'CUNNINGHAM 115KV'	71			JONES 230KV'	243		-0.20504	
SPS	'CUNNINGHAM 115KV'	110	0.2.00		'JONES 230KV'	243		-0.20504	7
SPS	'CUNNINGHAM 115KV'	71	-0.21032	37S	'LP-BRND2 69KV'	60	-0.00588	-0.20444	7

SPS	'CUNNINGHAM 115KV'	110	-0.21032	SPS	'LP-BRND2 69KV'	60	-0.00588	-0.20444	74
SPS	'MUSTANG 115KV'	29	-0.38898	SPS	'MADOX 115KV'	104.6055	-0.21294	-0.17604	86
SPS	'CUNNINGHAM 230KV'	110	-0.16698		'TOLK 230KV'	1019.563	0.00822	-0.1752	87
SPS	'MADOX 115KV'	88.39449			'SAN JUAN 230KV'	36	-0.03776	-0.17518	87
SPS	'CUNNINGHAM 115KV'	71	-0.21032	SPS	'SAN JUAN 230KV'	36	-0.03776	-0.17256	88
SPS	'CUNNINGHAM 115KV'	110	-0.21032	SPS	'SAN JUAN 230KV'	36	-0.03776	-0.17256	88
SPS	'CUNNINGHAM 230KV'	110	-0.16698	SPS	'WILWIND 230KV'	48	0.00387	-0.17085	89
SPS	'CUNNINGHAM 230KV'	110	-0.16698	SPS	'BLACKHAWK 115KV'	220	0.0028	-0.16978	90
SPS	'CUNNINGHAM 230KV'	110	-0.16698	SPS	'CZ 69KV'	35	0.00253	-0.16951	90
SPS	'CUNNINGHAM 230KV'	110	-0.16698	SPS	'HARRINGTON 230KV'	1066	0.00284	-0.16982	90
SPS	'CUNNINGHAM 230KV'	110	-0.16698		'JONES 230KV'	243	-0.00528	-0.1617	94
SPS	'CUNNINGHAM 230KV'	110	-0.16698	SPS	'LP-BRND2 69KV'	60	-0.00588	-0.1611	94

Reservation	Relief Amount	Amount							
1090487	15.2	15.2							
		Maximum		Sink Control		Maximum			Aggregate Redispatch
Source Control Area	Source		GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW
SPS	'MUSTANG 115KV'	114.3489	-0.39792		'MUSTG5 118.0 230KV'	125	0.21119	-0.60911	Amount (WW
SPS	'MUSTANG 115KV'	114.3489	-0.39792		TOLK 230KV'	1020.232		-0.40951	
SPS	'MUSTANG 115KV'	114.3489	-0.39792		'BLACKHAWK 115KV'	220		-0.40151	
SPS	'MUSTANG 115KV'	114.3489	-0.39792		'CAPROCK 115KV'	79.98182		-0.40457	
SPS	'MUSTANG 115KV'	114.3489	-0.39792		'CZ 69KV'	35		-0.40118	
SPS	'MUSTANG 115KV'	114.3489	-0.39792		'HARRINGTON 230KV'	706		-0.40155	
SPS	'MUSTANG 115KV'	114.3489	-0.39792		'SIDRCH 69KV'	14		-0.4015	
SPS	'MUSTANG 115KV'	114.3489	-0.39792		'STEER WATER 115KV'	79.98182	0.00338	-0.4013	
SPS	'MUSTANG 115KV'	114.3489	-0.39792		'WILWIND 230KV'	159.9636		-0.40289	
SPS	'MUSTANG 115KV'	114.3489	-0.39792		'JONES 230KV'	104		-0.39022	
SPS	'MUSTANG 115KV'	114.3489	-0.39792		'LP-BRND2 69KV'	60		-0.38939	
SPS	'MUSTANG 115KV'	114.3489	-0.39792		'SAN JUAN 230KV'	119.9727	-0.00356	-0.39436	
SPS	'MUSTANG 115KV'	114.3489	-0.39792		'CUNNINGHAM 230KV'	56		-0.36185	
SPS	'MADOX 115KV'	193	-0.11872		'MUSTG5 118.0 230KV'	125		-0.32991	4
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'MUSTG5 118.0 230KV'	125		-0.32733	
SPS	'CUNNINGHAM 115KV'	110	-0.11614		'MUSTG5 118.0 230KV'	125		-0.32733	
SPS	'CUNNINGHAM 230KV'	250	-0.03607		'MUSTG5 118.0 230KV'	125		-0.24726	
SPS	'LP-BRND2 69KV'	172	-0.00853		'MUSTG5 118.0 230KV'	125	0.21119	-0.21972	
SPS	'JONES 230KV'	382	-0.0077		'MUSTG5 118.0 230KV'	125		-0.21889	
SPS	'MOORE COUNTY 115KV'	48	0.00378		'MUSTG5 118.0 230KV'	125		-0.20741	
SPS	'PLANTX 115KV'	253	0.00555		'MUSTG5 118.0 230KV'	125		-0.20564	
SPS	'PLANTX 230KV'	189	0.01083		'MUSTG5 118.0 230KV'	125		-0.20036	
SPS	'TOLK 230KV'	59.76834	0.01159		'MUSTG5 118.0 230KV'	125		-0.1996	
SPS	'MADOX 115KV'	193	-0.11872		TOLK 230KV'	1020.232	0.01159	-0.13031	1
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'TOLK 230KV'	1020,232		-0.12773	
SPS	'CUNNINGHAM 115KV'	110	-0.11614		'TOLK 230KV'	1020,232		-0.12773	1
SPS	'MADOX 115KV'	193	-0.11872		'CAPROCK 115KV'	79.98182	0.00665	-0.12537	1:
SPS	'MADOX 115KV'	193	-0.11872		'WILWIND 230KV'	159.9636	0.00497	-0.12369	1:
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'CAPROCK 115KV'	79.98182		-0.12279	1:
SPS	'CUNNINGHAM 115KV'	110	-0.11614		'CAPROCK 115KV'	79,98182		-0.12279	
SPS	'MADOX 115KV'	193	-0.11872		'BLACKHAWK 115KV'	220	0.00359	-0.12231	12
SPS	'MADOX 115KV'	193	-0.11872		'HARRINGTON 230KV'	706	0.00363	-0.12235	12
SPS	'MADOX 115KV'	193	-0.11872		'STEER WATER 115KV'	79.98182	0.00338	-0.1221	1:
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'WILWIND 230KV'	159.9636		-0.12111	12
SPS	'CUNNINGHAM 115KV'	110	-0.11614		'WILWIND 230KV'	159.9636		-0.12111	12
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'BLACKHAWK 115KV'	220		-0.11973	
SPS	'CUNNINGHAM 115KV'	110	-0.11614		'BLACKHAWK 115KV'	220		-0.11973	
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'HARRINGTON 230KV'	706	0.00363	-0.11977	12
SPS	'CUNNINGHAM 115KV'	110	-0.11614		'HARRINGTON 230KV'	706	0.00363	-0.11977	12
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'STEER WATER 115KV'	79.98182	0.00338	-0.11952	1:
SPS	'CUNNINGHAM 115KV'	110	-0.11614		'STEER WATER 115KV'	79.98182	0.00338	-0.11952	1:
SPS	'MADOX 115KV'	193	-0.11872		'SAN JUAN 230KV'	119.9727	-0.00356	-0.11516	10
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'SAN JUAN 230KV'	119.9727	-0.00356	-0.11258	1:
SPS	'CUNNINGHAM 115KV'	110	-0.11614		'SAN JUAN 230KV'	119.9727		-0.11258	
SPS	'MADOX 115KV'	193	-0.11872		'JONES 230KV'	104	-0.0077	-0.11102	1
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'JONES 230KV'	104		-0.10844	1
SPS	'CUNNINGHAM 115KV'	110	-0.11614		'JONES 230KV'	104	-0.0077	-0.10844	1
SPS	'CUNNINGHAM 230KV'	250	-0.03607		TOLK 230KV'	1020.232		-0.04766	
SPS	'CUNNINGHAM 230KV'	250	-0.03607		'WILWIND 230KV'	159.9636		-0.04104	3
SPS	'CUNNINGHAM 230KV'	250			'HARRINGTON 230KV'	706		-0.0397	3

Maximum Decrement and Maximum Increment Factor = Source GSF - Sink GSF Redispatch Amount = Relief Amount / Factor

Upgrade: Limiting Facility: Direction: MUSTANG STATION 230/115KV TRANSFORMER CKT 1 MUSTANG STATION 230/115KV TRANSFORMER CKT 1 From->To GEN:51971 1

51966519691GEN5197111107FA Starting 2007 10/1 - 12/1 Until EOC of Upgrade 2007 Fall Peak

Line Outage:
Flowgate:
Date Redispatch Needed:
Season Flowgate Identified:

Season Flowgate Identified:									
Reservation		Aggregate Relief Amount							
1090487	32.5	32.5	Ì						
Source Control Area		Maximum Increment(MW)	GSF	Sink Control Area	Sink	Maximum Decrement(MW)	GSF		Aggregate Redispatch Amount (MW)
SPS	'CUNNINGHAM 115KV'	71	-0.11612	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.32733	99
SPS	'CUNNINGHAM 115KV'	110	-0.11612	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.32733	99
SPS	'MADOX 115KV'	102.3579			'MUSTG5 118.0 230KV'	210	0.21121	-0.32991	99
SPS	'CUNNINGHAM 230KV'	306			'MUSTG5 118.0 230KV'	210	0.21121	-0.24727	131
SPS	'NICHOLS 115KV'	213	0.00339	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.20782	156
SPS	'NICHOLS 230KV'	244			'MUSTG5 118.0 230KV'	210	0.21121	-0.20773	156
SPS	'PLANTX 115KV'	253	0.00527	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.20594	158
SPS	'PLANTX 230KV'	189	0.01075	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.20046	162
SPS	'TOLK 230KV'	60.2673	0.01153	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.19968	163

SPS	'MADOX 115KV'	102.3579	-0.1187	SPS	'TOLK 230KV'	1019.733	0.01153	-0.13023	250
SPS	'CUNNINGHAM 115KV'	110	-0.11612	SPS	'TOLK 230KV'	1019.733	0.01153	-0.12765	255
SPS	'MADOX 115KV'	102.3579	-0.1187		'WILWIND 230KV'	160	0.00487	-0.12357	263
SPS	'MADOX 115KV'	102.3579	-0.1187	SPS	'BLACKHAWK 115KV'	220	0.00348	-0.12218	
SPS	'MADOX 115KV'	102.3579	-0.1187		'HARRINGTON 230KV'	1066	0.00352	-0.12222	266
SPS	'CUNNINGHAM 115KV'	110	-0.11612		'WILWIND 230KV'	160	0.00487	-0.12099	269
SPS	'CUNNINGHAM 115KV'	110	-0.11612		'BLACKHAWK 115KV'	220	0.00348	-0.1196	272
SPS	'CUNNINGHAM 115KV'	110	-0.11612		'HARRINGTON 230KV'	1066	0.00352	-0.11964	272
SPS	'MADOX 115KV'	102.3579	-0.1187		'SAN JUAN 230KV'	120	-0.0036	-0.1151	282
SPS	'CUNNINGHAM 115KV'	110	-0.11612		'SAN JUAN 230KV'	120	-0.0036	-0.11252	289
SPS	'MADOX 115KV'	102.3579	-0.1187	SPS	'JONES 230KV'	486	-0.00751	-0.11119	292
SPS	'CUNNINGHAM 115KV'	110	-0.11612		'JONES 230KV'	486	-0.00751	-0.10861	299
SPS	'CUNNINGHAM 230KV'	306	-0.03606	SPS	'TOLK 230KV'	1019.733	0.01153	-0.04759	683

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

Redispatch Amount = Relief Amount / Factor

MUSTANG STATION 230/115KV TRANSFORMER CKT 1 Upgrade: MUSTANG STATION 230/115KV TRANSFORMER CKT 1 From->To GEN:51971 1

Limiting Facility: Direction: Line Outage:

Flowgate: Date Redispatch Needed: Season Flowgate Identified: 51966519691GEN5197111107SH 6/1 - 10/1 Until EOC of Upgrade 2007 Summer Shoulder

		Aggregate Relief							
Reservation	Relief Amount	Amount							
1090487	29.2	29.2							
		Maximum		Sink Control		Maximum			Aggregate Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
SPS	'MADOX 115KV'	75			'MUSTG5 118.0 230KV'	210	0.21119		
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'MUSTG5 118.0 230KV'	210			
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.32733	89
SPS	'CUNNINGHAM 230KV'	110	-0.03607	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.24726	118
SPS	'NICHOLS 115KV'	131	0.0035	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20769	140
SPS	'MOORE COUNTY 115KV'	48	0.00378	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20741	141
SPS	'NICHOLS 230KV'	244	0.00359	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.2076	141
SPS	'PLANTX 115KV'	89.47412	0.00555	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20564	142
SPS	'TOLK 230KV'	52.01129	0.01159	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.1996	146
SPS	'MADOX 115KV'	75	-0.11872	SPS	'TOLK 230KV'	1027.989	0.01159	-0.13031	
SPS	'MADOX 115KV'	75	-0.11872	SPS	'PLANTX 230KV'	189	0.01083	-0.12955	225
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'TOLK 230KV'	1027.989	0.01159	-0.12773	228
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'PLANTX 230KV'	189	0.01083	-0.12697	
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'WILWIND 230KV'	159.9636	0.00497	-0.12111	
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'BLACKHAWK 115KV'	220	0.00358	-0.11972	
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'HARRINGTON 230KV'	1066	0.00363	-0.11977	244
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'NICHOLS 115KV'	82	0.0035	-0.11964	
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'SAN JUAN 230KV'	119.9727	-0.00356	-0.11258	259
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'JONES 230KV'	486	-0.0077	-0.10844	269

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

Redispatch Amount = Relief Amount / Factor

Upgrade: Limiting Facility: Direction: MUSTANG STATION 230/115KV TRANSFORMER CKT 1 MUSTANG STATION 230/115KV TRANSFORMER CKT 1
From:>To
GEN:51971 1

Line Outage:
Flowgate:
Date Redispatch Needed:
Season Flowgate Identified: 51966519691GEN5197111107SP 6/1/07 - 10/1/07 2007 Summer Peak

Season i lowgate identilied.									
		Aggregate Relief	1						
Reservation	Relief Amount	Amount							
1090487	7 35.6	35.6							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
SPS	'MADOX 115KV'	75	-0.11872	SPS	'MUSTG5 118.0 230KV'	360	0.21119	-0.32991	108
SPS	'CUNNINGHAM 115KV'	50.00977	-0.11614	SPS	'MUSTG5 118.0 230KV'	360	0.21119	-0.32733	109

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

MUSTANG STATION 230/115KV TRANSFORMER CKT 1 MUSTANG STATION 230/115KV TRANSFORMER CKT 1 Upgrade: Limiting Facility:

Direction: From->To

GEN:51971 1 51966519691GEN5197111107WP 12/1/07 - 4/1/08 2007 Winter Peak Line Outage: Flowgate:

Date Redispatch Needed:

Source Control Area Source Maximum Sink Control Sink Decrement(MW) GSF Area Sink Decrement(MW) GSF Area Sink Decrement(MW) GSF Factor Amount (No. 15 No. 15 N	Season Flowgate Identified:	2007 Winter Peak								
Source Control Area Source Maximum Sef Area Sink Si				1						
Source Control Area Source Source	Reservation	Relief Amount		1						
Source Maximum Sink Control Source Increment(MW) GSF Area Sink Decrement(MW) GSF GAPROCK Sink Si	1090487	22.4	22.4							
Source Increment(MW) GSF Area Sink Decrement(MW) GSF Factor Amount (No. SPS MUSTANG 115KV' 29 -0.39789 SPS MUSTANG 115KV' 29 -0.39789 SPS CAPROCK 115KV' 79.98182 0.00659 -0.40448 SPS MUSTANG 115KV' 29 -0.39789 SPS CAPROCK 115KV' 79.98182 0.00659 -0.40448 SPS MUSTANG 115KV' 29 -0.39789 SPS TOLK 230KV' 1019.542 0.01154 -0.40943 SPS MUSTANG 115KV' 29 -0.39789 SPS BLACKHANK 115KV' 220 0.00348 -0.40137 SPS MUSTANG 115KV' 29 -0.39789 SPS CZ 69KV' 35 0.00316 -0.40105 SPS MUSTANG 115KV' 29 -0.39789 SPS HARRINGTON 230KV' 1066 0.00353 -0.40142 SPS MUSTANG 115KV' 29 -0.39789 SPS HARRINGTON 230KV' 1066 0.00353 -0.40142 SPS MUSTANG 115KV' 29 -0.39789 SPS STEER WATER 115KV' 79.98182 0.00328 -0.40117 SPS MUSTANG 115KV' 29 -0.39789 SPS WILWIND 230KV' 159.9636 0.00487 -0.40276 SPS MUSTANG 115KV' 29 -0.39789 SPS WILWIND 230KV' 159.9636 0.00487 -0.40276 SPS MUSTANG 115KV' 29 -0.39789 SPS UNIS 230KV' 169.9636 0.00487 -0.40276 SPS MUSTANG 115KV' 29 -0.39789 SPS UNIS 230KV' 169.9636 0.00487 -0.40276 SPS MUSTANG 115KV' 29 -0.39789 SPS UNIS 230KV' 169.9636 0.00487 -0.40276 SPS MUSTANG 115KV' 29 -0.39789 SPS UNIS 230KV' 19.00361 -0.39038 SPS MUSTANG 115KV' 29 -0.39789 SPS SAN JUAN 230KV' 119.9727 -0.0366 -0.39429 SPS MUSTANG 115KV' 29 -0.39789 SPS CUNNINGHAM 230KV' 119.9727 -0.0366 -0.39429 SPS MUSTANG 115KV' 29 -0.39789 SPS SAN JUAN 230KV' 119.9727 -0.0366 -0.39429 SPS CUNNINGHAM 115KV' 29 -0.39789 SPS SAN JUAN 230KV' 210 0.21121 -0.32732 SPS MUSTANG 115KV' 10.00889 -0.1187 SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32732 SPS MUSTANG 115KV' 29 -0.39789 SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32732 SPS MUSTANG 115KV' 29 -0.39789 SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32732 SPS MUSTANG 115KV' 29 -0.39789 SPS MUSTG5 118.0 230K										Aggregate
SPS MUSTANG 115KV 29 0.39789 SPS MUSTGS 118.0 230KV 210 0.21121 0.6091					Sink Control					Redispatch
SPS	Source Control Area		Increment(MW)				Decrement(MW)	GSF	Factor	Amount (MW)
SPS MUSTANG 115KV 29 -0.39789 [SPS TOLK 230KV 1019.542 0.01154 -0.40943 SPS MUSTANG 115KV 29 -0.39789 [SPS BLACKHAWK 115KV 220 0.00348 -0.40105 SPS MUSTANG 115KV 29 -0.39789 [SPS CZ 68KV 35 0.00316 -0.40105 SPS MUSTANG 115KV 29 -0.39789 [SPS HARRINGTON 230KV 1066 0.00353 -0.40142 SPS MUSTANG 115KV 29 -0.39789 [SPS STEER WATER 115KV 79.98182 0.00328 -0.40117 SPS MUSTANG 115KV 29 -0.39789 [SPS WILWIND 230KV 159.9636 0.00476 -0.40276 SPS MUSTANG 115KV 29 -0.39789 [SPS WILWIND 230KV 159.9636 0.00471 -0.40276 SPS MUSTANG 115KV 29 -0.39789 [SPS WILWIND 230KV 60 -0.00751 -0.39038 SPS MUSTANG 115KV 29 -0.39789 [SPS SAN JUAN 230KV 119.9727 -0.00364 -0.39429										
GPS MUSTANG 115KV 29 -0.39789 [SPS BLACKHAWK 115KV' 220 0.00348 -0.40107 SPS MUSTANG 115KV' 29 -0.39789 [SPS CZ 69KV' 35 0.00316 -0.40105 SPS MUSTANG 115KV' 29 -0.39789 [SPS HARRINGTON 230KV' 1066 0.00353 -0.40110 SPS MUSTANG 115KV' 29 -0.39789 [SPS STEER WATER 115KV' 79.98182 0.00328 -0.40117 SPS MUSTANG 115KV' 29 -0.39789 [SPS WILWIND 230KV' 159.9636 0.00487 -0.40276 SPS MUSTANG 115KV' 29 -0.39789 [SPS JONES 230KV' 243 -0.00761 -0.39038 SPS MUSTANG 115KV' 29 -0.39789 [SPS T.P.BRND2 69KV' 60 -0.00834 -0.39039 SPS T.P.BRND2 69KV' 60 -0.00834 -0.39059 SPS MUSTANG 115KV' 29 -0.39789 [SPS CUNNINGHAM 230KV' 119.9727' -0.0036 -0.39429 SPS SAN JUAN 230KV' 119.9727' -0.00360		'MUSTANG 115KV'	29			'CAPROCK 115KV'	79.98182			
SPS MUSTANG 115KV' 29 0.39789 SPS CZ 69KV' 35 0.00316 -0.40105 SPS MUSTANG 115KV' 29 -0.39789 SPS HARRINGTON 230KV' 1066 0.00333 -0.40142 SPS MUSTANG 115KV' 29 -0.39789 SPS STEER WATER 115KV 79.98182 0.00328 -0.40117 SPS MUSTANG 115KV' 29 -0.39789 SPS WILWIND 230KV' 159.9636 0.00487 -0.40276 SPS MUSTANG 115KV' 29 -0.39789 SPS JONES 230KV' 243 -0.00751 -0.39038 SPS MUSTANG 115KV' 29 -0.39789 SPS LP.BRND2 69KV' 60 -0.00834 -0.39955 SPS MUSTANG 115KV' 29 -0.39789 SPS LP.BRND2 69KV' 60 -0.00834 -0.39955 SPS MUSTANG 115KV' 29 -0.39789 SPS CUNNINGHAM 230KV' 119.727 -0.0060 -0.03429 SPS MUSTANG 115KV' 29 -0.39789 SPS CUNNINGHAM 230KV' 119.00.03606 -0.36183		'MUSTANG 115KV'				'TOLK 230KV'	1019.542	0.01154		
SPS MUSTANG 115KV 29 0.39789 SPS HARRINGTON 230KV 1066 0.00353 0.40142	SPS	'MUSTANG 115KV'	29	-0.39789	SPS	'BLACKHAWK 115KV'	220	0.00348	-0.40137	
SPS MUSTANG 115KV 29 -0.39789 SPS STEER WATER 115KV 79.98182 0.00328 -0.40177	SPS	'MUSTANG 115KV'	29	-0.39789	SPS	'CZ 69KV'	35	0.00316	-0.40105	
SPS MUSTANG 115KV 29 -0.39789 [SPS WILWIND 230KV 159.9636 0.0487 -0.40276 SPS MUSTANG 115KV 29 -0.39789 [SPS JONES 230KV 243 -0.00375 -0.39038 SPS MUSTANG 115KV 29 -0.39789 [SPS LP.BRND2 69KV 60 -0.00834 -0.00834 SPS MUSTANG 115KV 29 -0.39789 [SPS SAN JUAN 230KV 119.9727 -0.0366 -0.39429 SPS MUSTANG 115KV 29 -0.39789 [SPS CUNNINGHAM 230KV 196 -0.36183 SPS CUNNINGHAM 115KV 71 -0.01611 [SPS MUSTG5 118.0 230KV 210 0.21121 -0.32732 SPS CUNNINGHAM 115KV 110 -0.01611 [SPS MUSTG5 118.0 230KV 210 0.21121 -0.32732 SPS MADOX 115KV 100.0889 -0.1187 [SPS MUSTG5 118.0 230KV 210 0.21121 -0.32991 SPS MUSTANG 115KV 29 -0.39789 [SPS MADOX 115KV 92.91113 -0.1187 -0.27919	SPS	'MUSTANG 115KV'	29	-0.39789	SPS	'HARRINGTON 230KV'	1066	0.00353	-0.40142	
GPS IMUSTANG 115KV' 29 -0.39789 [SPS JONES 230KV' 243 -0.00751 -0.39038 SPS IMUSTANG 115KV' 29 -0.39789 [SPS LP.BRND2 69KV' 60 -0.00834 -0.38955 SPS IMUSTANG 115KV' 29 -0.39789 [SPS SAN JUAN 230KV' 119.9727 -0.0366 -0.39429 SPS IMUSTANG 115KV' 29 -0.39789 [SPS CUNNINGHAM 230KV' 196 -0.03606 -0.38183 SPS ICUNNINGHAM 115KV' 71 -0.11611 [SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32732 SPS CUNNINGHAM 115KV' 10 -0.11611 [SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32732 SPS IMADOX 115KV' 100.0889 -0.1187 [SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32732 SPS IMUSTANG 115KV' 29 -0.39789 [SPS MADOX 115KV' 92.91113 -0.1187 -0.27919 SPS CUNNINGHAM 230KV' 110 -0.03606 [SPS MUSTG	SPS	'MUSTANG 115KV'	29	-0.39789	SPS	'STEER WATER 115KV'	79.98182	0.00328	-0.40117	56
SPS MUSTANG 115KV 29 -0.39769 [SPS LP.BRND2 69KV 60 -0.0834 -0.38955 SPS "MUSTANG 115KV" 29 -0.39789 [SPS SAN JUAN 230KV 119,9727 -0.0036 -0.39429 SPS MUSTANG 115KV 29 -0.39789 [SPS CUNNINGHAM 230KV 196 -0.03606 -0.36183 SPS CUNNINGHAM 115KV 71 -0.11611 [SPS MUSTG5 118.0 230KV 210 0.21121 -0.32732 SPS (CUNNINGHAM 115KV 110 -0.11611 [SPS MUSTG5 118.0 230KV 210 0.21121 -0.32732 SPS "MADOX 115KV 100.0889 -0.1187 [SPS MUSTG5 118.0 230KV 210 0.21121 -0.32991 SPS MUSTANG 115KV 29 -0.39789 [SPS MADOX 115KV 92.91113 -0.1187 -0.27919 SPS (CUNNINGHAM 230KV) 110 -0.03606 [SPS MUSTG5 118.0 230KV 210 0.21121 -0.32791 SPS (CUNNINGHAM 230KV) 110 -0.03606 [SPS MUSTG5 118.0 230KV 20 0.2112	SPS	'MUSTANG 115KV'	29	-0.39789	SPS	'WILWIND 230KV'	159.9636	0.00487	-0.40276	
SPS MUSTANG 115KV 29 -0.39789 SPS SAN JUAN 230KV 119.9727 -0.0036 -0.39429	SPS	'MUSTANG 115KV'	29	-0.39789	SPS	'JONES 230KV'	243	-0.00751	-0.39038	
SPS MUSTANG 115KV' 29 -0.39789 [SPS CUNNINGHAM 230KV' 196 -0.03606 -0.38183 SPS CUNNINGHAM 115KV' 71 -0.11611 [SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32732 SPS CUNNINGHAM 115KV' 110 -0.11611 [SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32732 SPS MADOX 115KV' 100.0889 -0.1187 [SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32931 SPS MUSTANG 115KV' 29 -0.39789 [SPS MADOX 115KV' 92.91113 -0.1187 -0.27919 SPS CUNNINGHAM 230KV' 110 -0.03606 [SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32732	SPS	'MUSTANG 115KV'	29	-0.39789	SPS	'LP-BRND2 69KV'	60	-0.00834	-0.38955	
SPS CUNNINGHAM 115KV' 71 -0.11611 SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32732 SPS 'CUNNINGHAM 115KV' 110 -0.11611 SPS MUSTG5 118.0 230KV' 220 0.21121 -0.32732 SPS MADOX 115KV' 100.0889 -0.1187 SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32391 SPS MUSTANG 115KV' 29 -0.39789 SPS MADOX 115KV' 92.91113 -0.1187 -0.27919 SPS CUNNINGHAM 230KV' 110 -0.03060 SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32991	SPS	'MUSTANG 115KV'	29	-0.39789	SPS	'SAN JUAN 230KV'	119.9727	-0.0036	-0.39429	
SPS CUNNINGHAM 115KV' 110 -0.11611 SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32732 SPS MADOX 115KV' 100.0889 -0.1187 SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32991 SPS MUSTANG 115KV' 29 -0.37993 SPS MADOX 115KV' 92.91113 -0.1187 -0.27919 SPS CUNNINGHAM 230KV' 110 -0.03606 SPS MUSTG5 118.0 230KV' 210 0.21121 -0.24727	SPS	'MUSTANG 115KV'	29	-0.39789	SPS	'CUNNINGHAM 230KV'	196	-0.03606	-0.36183	
SPS 1MADOX 115KV' 100.0889 -0.1187 [SPS MUSTG5 118.0 230KV' 210 0.21121 -0.32991 SPS 1MUSTANG 115KV' 29 -0.39789 [SPS MADOX 115KV' 92.91113 -0.1187 -0.27919 SPS 1CUNNINGHAM 230KV' 110 -0.03606 [SPS MUSTG5 118.0 230KV' 210 0.21121 -0.24727	SPS	'CUNNINGHAM 115KV'	71	-0.11611	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.32732	
SPS "MUSTANG 115KV" 29 -0.39789 SPS MADOX 115KV" 92.91113 -0.1187 -0.27919 SPS "CUNNINGHAM 230KV" 110 -0.03606 SPS MUSTG5 118.0 230KV" 210 0.21121 -0.24727	SPS	'CUNNINGHAM 115KV'	110	-0.11611	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.32732	
SPS CUNNINGHAM 230KV' 110 -0.03606 SPS MUSTG5 118.0 230KV' 210 0.21121 -0.24727	SPS	'MADOX 115KV'	100.0889	-0.1187	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.32991	
	SPS	'MUSTANG 115KV'	29	-0.39789	SPS	'MADOX 115KV'	92.91113	-0.1187	-0.27919	80
000 0000000	SPS	'CUNNINGHAM 230KV'	110	-0.03606	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.24727	
SPS JONES 230KV' 243 -0.00751 SPS MUSTG5 118.0 230KV' 210 0.21121 -0.21872	SPS	'JONES 230KV'	243	-0.00751	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.21872	
SPS 'LP-BRND2 69KV'	SPS	'LP-BRND2 69KV'	172	-0.00834	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.21955	102

210 210		1 -0.20753	3 108
210	0.21121	1 -0.20782	
	0.21121	1 -0.20772	2 108
210	0.21121	1 -0.20593	3 109
210	0.21121	1 -0.2004	5 112
210	0.21121	1 -0.19967	7 112
1019.542	0.01154	4 -0.13024	
1019.542	0.01154	4 -0.1276	
1019.542	0.01154	4 -0.1276	
79.98182	0.00659	-0.12529	
159.9636	0.00487	-0.1235	
79.98182	0.00659	-0.1227	
79.98182	0.00659	-0.1227	
220	0.00348	-0.12218	
1066	0.00353	-0.12223	
79.98182	0.00328	-0.12198	183
159.9636	0.00487	7 -0.12098	8 185
159.9636	0.00487	7 -0.12098	
220	0.00348		
220	0.00348	-0.11959	
1066	0.00353	-0.1196	
1066	0.00353	-0.1196	
79.98182	0.00328	-0.11939	
79.98182	0.00328	-0.11939	
119.9727	-0.0036	-0.115°	
119.9727	-0.0036	-0.1125°	
119.9727	-0.0036	-0.1125°	
243	-0.00751	-0.11119	9 201 6 206
243	-0.00751	-0.1086	3 206
243	-0.00751	-0.1086	
196	-0.03606	-0.0826	
196	-0.03606	-0.0800	5 279
	243 243 243 196	243 -0.0075 243 -0.0075 243 -0.0075 196 -0.0360	243 -0.00751 -0.11115 243 -0.00751 -0.1086 243 -0.00751 -0.1086 196 -0.03606 -0.08264

MUSTANG STATION 230/115KV TRANSFORMER CKT 1 MUSTANG STATION 230/115KV TRANSFORMER CKT 1 From->TO GEN:51971 1 Upgrade: Limiting Facility: Direction:

Reservation	Relief Amount	Aggregate Relief Amount							
1090487			ł						
1090467	17.0	17.0	1	1	I		1	1	Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink		GSF	Factor	Amount (MW)
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'MUSTG5 118.0 230KV'	210			
SPS	'MADOX 115KV'	75			'MUSTG5 118.0 230KV'	210			
SPS	'LP-BRND2 69KV'	152			'MUSTG5 118.0 230KV'	210			
SPS	'HARRINGTON 230KV'	360	0.00363	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20756	
SPS	'MOORE COUNTY 115KV'	48	0.00378	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20741	
SPS	'NICHOLS 115KV'	107	0.0035	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20769	
SPS	'NICHOLS 230KV'	113.3726	0.00359	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.2076	82
SPS	'PLANTX 115KV'	48	0.00555	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20564	. 83
SPS	'TOLK 230KV'	65.29117	0.01159	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.1996	85
SPS	'MADOX 115KV'	75	-0.11872	SPS	'TOLK 230KV'	1014.709	0.01159	-0.13031	13
SPS	'MADOX 115KV'	75	-0.11872	SPS	'PLANTX 230KV'	189	0.01083		
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'TOLK 230KV'	1014.709	0.01159	-0.12773	
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'PLANTX 230KV'	189	0.01083	-0.12697	
SPS	'MADOX 115KV'	75	-0.11872	SPS	'CAPROCK 115KV'	79.99996	0.00665	-0.12537	
SPS	'MADOX 115KV'	75	-0.11872	SPS	'PLANTX 115KV'	205	0.00555	-0.12427	
SPS	'MADOX 115KV'	75	-0.11872	SPS	'WILWIND 230KV'	159.9999	0.00497	-0.12369	
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'CAPROCK 115KV'	79.99996		-0.12279	
SPS	'MADOX 115KV'	75			'HARRINGTON 230KV'	706			
SPS	'MADOX 115KV'	75			'NICHOLS 230KV'	130.6274			
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'PLANTX 115KV'	205			
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'WILWIND 230KV'	159.9999			
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'HARRINGTON 230KV'	706			
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'NICHOLS 230KV'	130.6274			
SPS	'MADOX 115KV'	75			'SAN JUAN 230KV'	119.9999			
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'SAN JUAN 230KV'	119.9999	-0.00356	-0.11258	
SPS	'MADOX 115KV'	75			'JONES 230KV'	486		-0.11102	
SPS	'CUNNINGHAM 115KV'	71	-0.11614		'JONES 230KV'	486		-0.10844	
SPS	'MADOX 115KV'	75			'CUNNINGHAM 230KV'	306		-0.08265	
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'CUNNINGHAM 230KV'	306	-0.03607	-0.08007	213

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

Redispatch Amount = Relief Amount / Factor

MUSTANG STATION 230/115KV TRANSFORMER CKT 1 MUSTANG STATION 230/115KV TRANSFORMER CKT 1 From->To GEN:51972 1 Upgrade: Upgrade:
Limiting Facility:
Direction:
Line Outage:
Flowgate:
Date Redispatch Needed:

Flowgate: 5196619991GEN5197211107FA
Date Redispatch Needed: Starting 2007 10/1 - 12/1 Until EOC of Upgrade
Season Flowgate Identified: 2007 Fall Peak

		Aggregate Relief							
Reservation	Relief Amount	Amount							
1090487	31.8	31.8							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
SPS	'MADOX 115KV'	102.3579	-0.1187	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.32991	96
SPS	'CUNNINGHAM 115KV'	71	-0.11612	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.32733	97
SPS	'CUNNINGHAM 115KV'	110	-0.11612	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.32733	97
SPS	'CUNNINGHAM 230KV'	306			'MUSTG5 118.0 230KV'	210	0.21121	-0.24727	129
SPS	'NICHOLS 115KV'	213			'MUSTG5 118.0 230KV'	210	0.21121	-0.20782	153
SPS	'NICHOLS 230KV'	244			'MUSTG5 118.0 230KV'	210	0.21121	-0.20773	
	'PLANTX 115KV'	253			'MUSTG5 118.0 230KV'	210	0.21121	-0.20594	
SPS	'PLANTX 230KV'	189			'MUSTG5 118.0 230KV'	210	0.21121	-0.20046	
SPS	'TOLK 230KV'	60.2673	0.01153	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.19968	
SPS	'MADOX 115KV'	102.3579	-0.1187	SPS	'TOLK 230KV'	1019.733	0.01153	-0.13023	244

SPS	'CUNNINGHAM 115KV'	110	-0.11612		'TOLK 230KV'	1019.733	0.01153	-0.12765	249
SPS	'MADOX 115KV'	102.3579	-0.1187		'WILWIND 230KV'	160	0.00487	-0.12357	257
SPS	'MADOX 115KV'	102.3579	-0.1187	SPS	'BLACKHAWK 115KV'	220	0.00348	-0.12218	260
SPS	'MADOX 115KV'	102.3579	-0.1187	SPS	'HARRINGTON 230KV'	1066	0.00352	-0.12222	260
SPS	'CUNNINGHAM 115KV'	110	-0.11612		'WILWIND 230KV'	160	0.00487	-0.12099	263
SPS	'CUNNINGHAM 115KV'	110			'BLACKHAWK 115KV'	220	0.00348	-0.1196	266
SPS	'CUNNINGHAM 115KV'	110	-0.11612		'HARRINGTON 230KV'	1066	0.00352	-0.11964	266
SPS	'MADOX 115KV'	102.3579			'SAN JUAN 230KV'	120	-0.0036	-0.1151	276
SPS	'CUNNINGHAM 115KV'	110	-0.11612		'SAN JUAN 230KV'	120	-0.0036	-0.11252	283
SPS	'MADOX 115KV'	102.3579	-0.1187		'JONES 230KV'	486	-0.00751	-0.11119	286
SPS	'CUNNINGHAM 115KV'	110	-0.11612	SPS	'JONES 230KV'	486	-0.00751	-0.10861	293
SPS	'CUNNINGHAM 230KV'	306	-0.03606	SPS	'TOLK 230KV'	1019.733	0.01153	-0.04759	668

MUSTANG STATION 230/115KV TRANSFORMER CKT 1 MUSTANG STATION 230/115KV TRANSFORMER CKT 1 Upgrade: Limiting Facility:

 Limiting Facility:
 MUSTANG STATION 230/115KV I

 Direction:
 From->To

 Line Outage:
 GEN:51972 1

 Flowgate:
 51966519691GEN5197211107SH

 Date Redispatch Needed:
 6/1 - 10/1 Until EOC of Upgrade

 Season Flowgate Identified:
 2007 Summer Shoulder

Season Flowgate Identilied.	2007 Sulfiller Silouluer								
		Aggregate Relief							
Reservation	Relief Amount	Amount							
1090487	28.5	28.5							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF		Amount (MW)
SPS	'MADOX 115KV'	75			'MUSTG5 118.0 230KV'	210	0.21119	-0.32991	
SPS	'CUNNINGHAM 115KV'	71			'MUSTG5 118.0 230KV'	210	0.21119		
SPS	'CUNNINGHAM 115KV'	110			'MUSTG5 118.0 230KV'	210			
SPS	'CUNNINGHAM 230KV'	110	-0.03607	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.24726	115
SPS	'MOORE COUNTY 115KV'	48	0.00378	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20741	
SPS	'NICHOLS 115KV'	131	0.0035	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20769	
SPS	'NICHOLS 230KV'	244	0.00359	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.2076	
SPS	'PLANTX 115KV'	89.47412	0.00555	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20564	
SPS	'TOLK 230KV'	52.01129	0.01159	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.1996	
SPS	'MADOX 115KV'	75	-0.11872	SPS	'TOLK 230KV'	1027.989	0.01159	-0.13031	218
SPS	'MADOX 115KV'	75	-0.11872	SPS	'PLANTX 230KV'	189	0.01083	-0.12955	
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'TOLK 230KV'	1027.989	0.01159	-0.12773	223 224
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'PLANTX 230KV'	189	0.01083	-0.12697	224
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'PLANTX 115KV'	163.5259	0.00555	-0.12169	
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'WILWIND 230KV'	159.9636	0.00497	-0.12111	235
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'BLACKHAWK 115KV'	220	0.00358	-0.11972	
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'HARRINGTON 230KV'	1066	0.00363	-0.11977	238
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'NICHOLS 115KV'	82	0.0035	-0.11964	238
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'STEER WATER 115KV'	79.98182	0.00338	-0.11952	
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'SAN JUAN 230KV'	119.9727	-0.00356	-0.11258	
SPS	'CUNNINGHAM 115KV'	110	-0.11614	SPS	'JONES 230KV'	486	-0.0077	-0.10844	263

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

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

Upgrade: Limiting Facility: Direction: MUSTANG STATION 230/115KV TRANSFORMER CKT 1 MUSTANG STATION 230/115KV TRANSFORMER CKT 1

From->To GEN:51972 1

Line Outage: Flowgate: Date Redispatch Needed: 51966519691GEN5197211107SP 6/1/07 - 10/1/07

Season Flowgate Identified: 2007 Summer Peak

Reservation	Relief Amount	Amount							
1090487	35.6	35.6	ì						
		Maximum		Sink Control		Maximum			Aggregate Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
SPS	'MADOX 115KV'	75	-0.11872	SPS	'MUSTG5 118.0 230KV'	360	0.21119	-0.32991	108
SPS	'CUNNINGHAM 115KV'	50.00977	-0.11614	SPS	'MUSTG5 118.0 230KV'	360	0.21119	-0.32733	109

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

Factor = Source GSF - Sink GSF

Redispatch Amount = Relief Amount / Factor

Aggregate Relief

MUSTANG STATION 230/115KV TRANSFORMER CKT 1 MUSTANG STATION 230/115KV TRANSFORMER CKT 1 Upgrade: Limiting Facility: Direction:

Line Outage:

From->To GEN:51972 1 51966519691GEN5197211107WP 12/1/07 - 4/1/08 2007 Winter Peak

Date Redispatch Needed:

Season Flowgate Identified:									
		Aggregate Relief	1						
Reservation	Relief Amount	Amount	1						
1090487	21.9	21.9							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
SPS	'MUSTANG 115KV'	29	-0.39789	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.6091	36
SPS	'MUSTANG 115KV'	29			'TOLK 230KV'	1019.542	0.01154	-0.40943	
SPS	'MUSTANG 115KV'	29			'CAPROCK 115KV'	79.98182	0.00659	-0.40448	
SPS	'MUSTANG 115KV'	29			'WILWIND 230KV'	159.9636	0.00487		
SPS	'MUSTANG 115KV'	29			'BLACKHAWK 115KV'	220	0.00348	-0.40137	
SPS	'MUSTANG 115KV'	29			'CZ 69KV'	35			
SPS	'MUSTANG 115KV'	29			'HARRINGTON 230KV'	1066	0.00353	-0.40142	
SPS	'MUSTANG 115KV'	29			'STEER WATER 115KV'	79.98182			
SPS	'MUSTANG 115KV'	29			'JONES 230KV'	243	-0.00751	-0.39038	
SPS	'MUSTANG 115KV'	29			'LP-BRND2 69KV'	60			
SPS	'MUSTANG 115KV'	29			'SAN JUAN 230KV'	119.9727			
SPS	'MUSTANG 115KV'	29			'CUNNINGHAM 230KV'	196			
SPS	'MADOX 115KV'	100.0889	-0.1187	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.32991	
SPS	'CUNNINGHAM 115KV'	71	-0.11611		'MUSTG5 118.0 230KV'	210			
SPS	'CUNNINGHAM 115KV'	110			'MUSTG5 118.0 230KV'	210		-0.32732	
SPS	'MUSTANG 115KV'	29			'MADOX 115KV'	92.91113	-0.1187		
SPS	'CUNNINGHAM 230KV'	110			'MUSTG5 118.0 230KV'	210	0.21121	-0.24727	
SPS	'JONES 230KV'	243	-0.00751	SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.21872	100

SPS	'LP-BRND2 69KV'	172	-0.0083		'MUSTG5 118.0 230KV'	210	0.21121	-0.21955	
SPS	'MOORE COUNTY 115KV'	48	0.00368		'MUSTG5 118.0 230KV'	210	0.21121	-0.20753	
SPS	'NICHOLS 115KV'	213	0.00339	9 SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.20782	
SPS	'NICHOLS 230KV'	244	0.00349	9 SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.20772	105
SPS	'PLANTX 115KV'	253	0.00528	8 SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.20593	
SPS	'PLANTX 230KV'	189	0.01076	6 SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.20045	109
SPS	'TOLK 230KV'	60.45752	0.0115	4 SPS	'MUSTG5 118.0 230KV'	210	0.21121	-0.19967	110
SPS	'MADOX 115KV'	100.0889	-0.1187	7 SPS	'TOLK 230KV'	1019.542	0.01154	-0.13024	168
SPS	'CUNNINGHAM 115KV'	71	-0.1161	1 SPS	'TOLK 230KV'	1019.542	0.01154	-0.12765	171
SPS	'CUNNINGHAM 115KV'	110	-0.1161	1 SPS	'TOLK 230KV'	1019.542	0.01154	-0.12765	171
SPS	'MADOX 115KV'	100.0889	-0.1187	7 SPS	'CAPROCK 115KV'	79.98182	0.00659	-0.12529	175
SPS	'MADOX 115KV'	100.0889	-0.1187	7 SPS	'WILWIND 230KV'	159.9636	0.00487	-0.12357	177
SPS	'CUNNINGHAM 115KV'	71	-0.1161	1 SPS	'CAPROCK 115KV'	79.98182	0.00659	-0.1227	178
SPS	'CUNNINGHAM 115KV'	110	-0.1161	1 SPS	'CAPROCK 115KV'	79.98182	0.00659	-0.1227	178
SPS	'MADOX 115KV'	100.0889	-0.1187	7 SPS	'BLACKHAWK 115KV'	220	0.00348	-0.12218	179
SPS	'MADOX 115KV'	100.0889	-0.1187	7 SPS	'HARRINGTON 230KV'	1066	0.00353	-0.12223	179
SPS	'MADOX 115KV'	100.0889	-0.1187	7 SPS	'STEER WATER 115KV'	79.98182	0.00328	-0.12198	179
SPS	'CUNNINGHAM 115KV'	71	-0.1161	1 SPS	'WILWIND 230KV'	159.9636	0.00487	-0.12098	181
SPS	'CUNNINGHAM 115KV'	110	-0.1161	1 SPS	'WILWIND 230KV'	159.9636	0.00487	-0.12098	181
SPS	'CUNNINGHAM 115KV'	71	-0.1161	1 SPS	'BLACKHAWK 115KV'	220	0.00348	-0.11959	183
SPS	'CUNNINGHAM 115KV'	110	-0.1161	1 SPS	'BLACKHAWK 115KV'	220	0.00348	-0.11959	
SPS	'CUNNINGHAM 115KV'	71	-0.1161	1 SPS	'HARRINGTON 230KV'	1066	0.00353	-0.11964	183
SPS	'CUNNINGHAM 115KV'	110	-0.1161	1 SPS	'HARRINGTON 230KV'	1066	0.00353	-0.11964	183
SPS	'CUNNINGHAM 115KV'	71	-0.1161	1 SPS	'STEER WATER 115KV'	79.98182	0.00328	-0.11939	183
SPS	'CUNNINGHAM 115KV'	110	-0.1161	1 SPS	'STEER WATER 115KV'	79.98182	0.00328	-0.11939	183
SPS	'MADOX 115KV'	100.0889	-0.1187	7 SPS	'SAN JUAN 230KV'	119.9727	-0.0036	-0.1151	190
SPS	'CUNNINGHAM 115KV'	71	-0.1161	1 SPS	'SAN JUAN 230KV'	119.9727	-0.0036	-0.11251	195
SPS	'CUNNINGHAM 115KV'	110	-0.1161	1 SPS	'SAN JUAN 230KV'	119.9727	-0.0036	-0.11251	195
SPS	'MADOX 115KV'	100.0889	-0.1187	7 SPS	'JONES 230KV'	243	-0.00751	-0.11119	
SPS	'CUNNINGHAM 115KV'	71	-0.1161	1 SPS	'JONES 230KV'	243	-0.00751	-0.1086	202
SPS	'CUNNINGHAM 115KV'	110	-0.1161	1 SPS	'JONES 230KV'	243	-0.00751	-0.1086	202
SPS	'MADOX 115KV'	100.0889	-0.1187	7 SPS	'CUNNINGHAM 230KV'	196	-0.03606	-0.08264	265
SPS	'CUNNINGHAM 115KV'	110	-0.1161	1 SPS	'CUNNINGHAM 230KV'	196	-0.03606	-0.08005	273
Maximum Docromont and I	Assimum Increment were determine from the Source	and Sink Operating			ala whara limiting facility was identified				

_		Aggregate Relief	ì						
Reservation	Relief Amount	Amount							
109048	7 16.1	16.1	1						
		Maximum		Sink Control		Maximum			Aggregate Redispatch
Source Control Area	Source		GSF	Area	Sink		GSF		Amount (MW)
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.32733	49
SPS	'MADOX 115KV'	75	-0.11872	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.32991	49
SPS	'LP-BRND2 69KV'	152	-0.00854	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.21973	73
SPS	'HARRINGTON 230KV'	360	0.00363	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20756	
SPS	'MOORE COUNTY 115KV'	48	0.00378	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20741	78
SPS	'NICHOLS 115KV'	107	0.0035	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20769	
SPS	'NICHOLS 230KV'	113.3726	0.00359	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.2076	78
SPS	'PLANTX 115KV'	48	0.00555	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.20564	78
SPS	'TOLK 230KV'	65.29117	0.01159	SPS	'MUSTG5 118.0 230KV'	210	0.21119	-0.1996	
SPS	'MADOX 115KV'	75	-0.11872	SPS	'PLANTX 230KV'	189	0.01083	-0.12955	
SPS	'MADOX 115KV'	75	-0.11872	SPS	'TOLK 230KV'	1014.709	0.01159		124
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'TOLK 230KV'	1014.709	0.01159	-0.12773	126
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'PLANTX 230KV'	189	0.01083	-0.12697	127
SPS	'MADOX 115KV'	75	-0.11872	SPS	'CAPROCK 115KV'	79.99996	0.00665	-0.12537	128
SPS	'MADOX 115KV'	75	-0.11872	SPS	'PLANTX 115KV'	205	0.00555	-0.12427	130
SPS	'MADOX 115KV'	75	-0.11872	SPS	'WILWIND 230KV'	159.9999	0.00497	-0.12369	
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'CAPROCK 115KV'	79.99996	0.00665	-0.12279	131
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'PLANTX 115KV'	205	0.00555	-0.12169	
SPS	'MADOX 115KV'	75	-0.11872	SPS	'HARRINGTON 230KV'	706	0.00363	-0.12235	132
SPS	'MADOX 115KV'	75	-0.11872	SPS	'NICHOLS 230KV'	130.6274	0.00359	-0.12231	132
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'WILWIND 230KV'	159.9999	0.00497	-0.12111	133
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'HARRINGTON 230KV'	706	0.00363	-0.11977	134
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'NICHOLS 230KV'	130.6274	0.00359	-0.11973	134
SPS	'MADOX 115KV'	75			'SAN JUAN 230KV'	119.9999		-0.11516	
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'SAN JUAN 230KV'	119.9999	-0.00356	-0.11258	
SPS	'MADOX 115KV'	75			'JONES 230KV'	486		-0.11102	145
SPS	'CUNNINGHAM 115KV'	71			'JONES 230KV'	486		-0.10844	148
SPS	'MADOX 115KV'	75			'CUNNINGHAM 230KV'	306		-0.08265	195
SPS	'CUNNINGHAM 115KV'	71	-0.11614	SPS	'CUNNINGHAM 230KV'	306	-0.03607	-0.08007	201

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

Upgrade: Limiting Facility: Direction:

Mustang-San Andr-Amerada Hess 115KV Displacement
DENVER CITY INTERCHANGE N - MUSTANG STATION 115KV CKT 1
To->From
DENVER CITY INTERCHANGE S - MUSTANG STATION 115KV CKT 1
51960519661519625196811107SH
6/1 - 10/1 Until EOC of Upgrade
2007 Summer Shoulder

Line Outage: Flowgate: Date Redispatch Needed: Season Flowgate Identified:

Season Flowgate Identified:									
Reservation		Aggregate Relief Amount							
1090487	13.3	13.3	Ì						
Source Control Area		Maximum Increment(MW)	GSF	Sink Control	Sink	Maximum Decrement(MW)	GSF		Aggregate Redispatch
		,							Amount (MW)
SPS	'MADOX 115KV'	75	011010		'MUSTG5 118.0 230KV'	210			
SPS	'CUNNINGHAM 115KV'	71	-0.16155	SPS	'MUSTG5 118.0 230KV'	210	0.15058	-0.31213	43
SPS	'CUNNINGHAM 115KV'	110	-0.16155		'MUSTG5 118.0 230KV'	210	0.15058	-0.31213	43
SPS	'CUNNINGHAM 230KV'	110			'MUSTG5 118.0 230KV'	210	0.15058	-0.22359	60
SPS	'MADOX 115KV'	75	-0.16452	SPS	'PLANTX 230KV'	189	0.00438	-0.1689	79
SPS	'MADOX 115KV'	75			'TOLK 230KV'	1027.989	0.00375	-0.16827	79
SPS	'CUNNINGHAM 115KV'	71	-0.16155	SPS	'PLANTX 230KV'	189	0.00438	-0.16593	80
SPS	'CUNNINGHAM 115KV'	110	-0.16155	SPS	'PLANTX 230KV'	189	0.00438	-0.16593	80
SPS	'MADOX 115KV'	75	-0.16452	SPS	'BLACKHAWK 115KV'	220	0.0013	-0.16582	80

SPS	'MADOX 115KV'	75	-0.16452 SPS	'HARRINGTON 230KV'	1066	0.00132	-0.16584	80
SPS	'MADOX 115KV'	75	-0.16452 SPS	'NICHOLS 115KV'	82	0.00126	-0.16578	80
SPS	'MADOX 115KV'	75	-0.16452 SPS	'PLANTX 115KV'	163.5259	0.0022	-0.16672	80
SPS	'MADOX 115KV'	75	-0.16452 SPS	'STEER WATER 115KV'	79.98182	0.00122	-0.16574	80
SPS	'MADOX 115KV'	75	-0.16452 SPS	'WILWIND 230KV'	159.9636	0.00178	-0.1663	80
SPS	'CUNNINGHAM 115KV'	71	-0.16155 SPS	'PLANTX 115KV'	163.5259	0.0022	-0.16375	81
SPS	'CUNNINGHAM 115KV'	110	-0.16155 SPS	'PLANTX 115KV'	163.5259	0.0022	-0.16375	81
SPS	'CUNNINGHAM 115KV'	71	-0.16155 SPS	'TOLK 230KV'	1027.989	0.00375	-0.1653	81
SPS	'CUNNINGHAM 115KV'	110	-0.16155 SPS	'TOLK 230KV'	1027.989	0.00375	-0.1653	81
SPS	'CUNNINGHAM 115KV'	71	-0.16155 SPS	'BLACKHAWK 115KV'	220	0.0013	-0.16285	82
SPS	'CUNNINGHAM 115KV'	110	-0.16155 SPS	'BLACKHAWK 115KV'	220	0.0013	-0.16285	82
SPS	'CUNNINGHAM 115KV'	71	-0.16155 SPS	'HARRINGTON 230KV'	1066	0.00132	-0.16287	82
SPS	'CUNNINGHAM 115KV'	110	-0.16155 SPS	'HARRINGTON 230KV'	1066	0.00132	-0.16287	82
SPS	'CUNNINGHAM 115KV'	71	-0.16155 SPS	'NICHOLS 115KV'	82	0.00126	-0.16281	82
SPS	'CUNNINGHAM 115KV'	110	-0.16155 SPS	'NICHOLS 115KV'	82	0.00126	-0.16281	82
SPS	'CUNNINGHAM 115KV'	71	-0.16155 SPS	'STEER WATER 115KV'	79.98182	0.00122	-0.16277	82
SPS	'CUNNINGHAM 115KV'	110	-0.16155 SPS	'STEER WATER 115KV'	79.98182	0.00122	-0.16277	82
SPS	'CUNNINGHAM 115KV'	71	-0.16155 SPS	'WILWIND 230KV'	159.9636	0.00178	-0.16333	82
SPS	'CUNNINGHAM 115KV'	110	-0.16155 SPS	'WILWIND 230KV'	159.9636	0.00178	-0.16333	82
SPS	'MADOX 115KV'	75	-0.16452 SPS	'CAPROCK 115KV'	79.98182	-0.00267	-0.16185	82
SPS	'MADOX 115KV'	75	-0.16452 SPS	'JONES 230KV'	486	-0.00223	-0.16229	82
SPS	'MADOX 115KV'	75	-0.16452 SPS	'LP-BRND2 69KV'	80	-0.00258	-0.16194	82
SPS	'CUNNINGHAM 115KV'	71	-0.16155 SPS	'CAPROCK 115KV'	79.98182	-0.00267	-0.15888	84
SPS	'CUNNINGHAM 115KV'	110	-0.16155 SPS	'CAPROCK 115KV'	79.98182	-0.00267	-0.15888	84
SPS	'CUNNINGHAM 115KV'	71	-0.16155 SPS	'JONES 230KV'	486	-0.00223	-0.15932	84
SPS	'CUNNINGHAM 115KV'	110	-0.16155 SPS	'JONES 230KV'	486	-0.00223	-0.15932	84
SPS	'CUNNINGHAM 115KV'	71	-0.16155 SPS	'LP-BRND2 69KV'	80	-0.00258	-0.15897	84
SPS	'LP-BRND2 69KV'	152	-0.00258 SPS	'MUSTG5 118.0 230KV'	210	0.15058	-0.15316	87
SPS	'MOORE COUNTY 115KV'	48	0.00138 SPS	'MUSTG5 118.0 230KV'	210	0.15058	-0.1492	89
SPS	'NICHOLS 115KV'	131	0.00126 SPS	'MUSTG5 118.0 230KV'	210	0.15058	-0.14932	89
SPS	'NICHOLS 230KV'	244	0.0013 SPS	'MUSTG5 118.0 230KV'	210	0.15058	-0.14928	89
SPS	'PLANTX 115KV'	89.47412	0.0022 SPS	'MUSTG5 118.0 230KV'	210	0.15058	-0.14838	90
SPS	TOLK 230KV'	52.01129	0.00375 SPS	'MUSTG5 118.0 230KV'	210	0.15058	-0.14683	91
SPS	'MADOX 115KV'	75	-0.16452 SPS	'SAN JUAN 230KV'	119.9727	-0.01887	-0.14565	92
SPS	'CUNNINGHAM 115KV'	71	-0.16155 SPS	'SAN JUAN 230KV'	119.9727	-0.01887	-0.14268	93
SPS	'CUNNINGHAM 115KV'	110	-0.16155 SPS	'SAN JUAN 230KV'	119.9727	-0.01887	-0.14268	93
SPS	'MADOX 115KV'	75	-0.16452 SPS	'CUNNINGHAM 230KV'	196	-0.07301	-0.09151	146
SPS	'CUNNINGHAM 115KV'	71	-0.16155 SPS	'CUNNINGHAM 230KV'	196	-0.07301	-0.08854	151
SPS	'CUNNINGHAM 115KV'	110	-0.16155 SPS	'CUNNINGHAM 230KV'	196	-0.07301	-0.08854	151
SPS	'CUNNINGHAM 230KV'	110	-0.07301 SPS	'PLANTX 230KV'	189	0.00438	-0.07739	172
SPS	'CUNNINGHAM 230KV'	110	-0.07301 SPS	'TOLK 230KV'	1027.989	0.00375	-0.07676	174
SPS	'CUNNINGHAM 230KV'	110	-0.07301 SPS	'PLANTX 115KV'	163.5259	0.0022	-0.07521	177
SPS	'CUNNINGHAM 230KV'	110	-0.07301 SPS	'WILWIND 230KV'	159.9636	0.00178	-0.07479	178
SPS	'CUNNINGHAM 230KV'	110	-0.07301 SPS	'HARRINGTON 230KV'	1066	0.00132	-0.07433	179
SPS	'CUNNINGHAM 230KV'	110	-0.07301 SPS	'BLACKHAWK 115KV'	220	0.0013	-0.07431	180
SPS	'CUNNINGHAM 230KV'	110	-0.07301 SPS	'NICHOLS 115KV'	82	0.00126	-0.07427	180
SPS	'CUNNINGHAM 230KV'	110	-0.07301 SPS	'STEER WATER 115KV'	79.98182	0.00122	-0.07423	180
SPS	'CUNNINGHAM 230KV'	110	-0.07301 SPS	'JONES 230KV'	486	-0.00223	-0.07078	188
SPS	'CUNNINGHAM 230KV'	110	-0.07301 SPS	'CAPROCK 115KV'	79.98182	-0.00267	-0.07034	190
SPS	CUNNINGHAM 230KV'	110		'SAN JUAN 230KV'	119.9727	-0.01887	-0.05414	246

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

Redispatch Amount = Relief Amount / Factor

Upgrade: Mustang-San Andr-Amerada Hess 115KV Displacement
Limiting Facility: DENVER CITY INTERCHANGE N - MUSTANG STATION 115KV CKT 1
Direction: To->From
Line Outage: DENVER CITY INTERCHANGE S - MUSTANG STATION 115KV CKT 1
Flowgate: D19661519625196811107SP
Date Redispatch Needed: 6/1/07 - 10/1/07
Season Flowgate Identified: 2007 Summer Peak

Reservation	Relief Amount	Aggregate Relief Amount							
1090487	23.8		1						
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)			Sink	Decrement(MW)		Factor	Amount (MW)
SPS	'CUNNINGHAM 115KV'	50.00977			'MUSTG5 118.0 230KV'	360	0.15058	-0.31213	
SPS	'MADOX 115KV'	75			'MUSTG5 118.0 230KV'	360	0.15058	-0.3151	7
SPS	'MADOX 115KV'	75			'PLANTX 230KV'	189	0.00438	-0.1689	
SPS	'MADOX 115KV'	75	-0.16452	SPS	'TOLK 230KV'	1024.722	0.00375	-0.16827	14
SPS	'MADOX 115KV'	75	-0.16452	SPS	'PLANTX 115KV'	205	0.0022	-0.16672	14
SPS	'MADOX 115KV'	75	-0.16452	SPS	'WILWIND 230KV'	159.9636	0.00178	-0.1663	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16155	SPS	'PLANTX 230KV'	189	0.00438	-0.16593	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16155	SPS	'TOLK 230KV'	1024.722	0.00375	-0.1653	
SPS	'MADOX 115KV'	75	-0.16452	SPS	'BLACKHAWK 115KV'	220	0.0013	-0.16582	14
SPS	'MADOX 115KV'	75	-0.16452	SPS	'HARRINGTON 230KV'	1066	0.00132	-0.16584	
SPS	'MADOX 115KV'	75	-0.16452	SPS	'NICHOLS 115KV'	147	0.00126	-0.16578	
SPS	'MADOX 115KV'	75	-0.16452	SPS	'NICHOLS 230KV'	147	0.0013	-0.16582	
SPS	'MADOX 115KV'	75			'STEER WATER 115KV'	79.98182	0.00122	-0.16574	14
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16155	SPS	'PLANTX 115KV'	205	0.0022	-0.16375	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16155	SPS	'BLACKHAWK 115KV'	220	0.0013	-0.16285	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16155	SPS	'HARRINGTON 230KV'	1066	0.00132	-0.16287	14
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16155	SPS	'NICHOLS 115KV'	147	0.00126	-0.16281	14
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16155	SPS	'NICHOLS 230KV'	147	0.0013	-0.16285	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16155	SPS	'STEER WATER 115KV'	79.98182	0.00122	-0.16277	14
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16155	SPS	'WILWIND 230KV'	159.9636	0.00178	-0.16333	14
SPS	'MADOX 115KV'	75	-0.16452	SPS	'CAPROCK 115KV'	79.98182	-0.00267	-0.16185	
SPS	'MADOX 115KV'	75	-0.16452	SPS	'JONES 230KV'	486	-0.00223	-0.16229	14
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16155	SPS	'CAPROCK 115KV'	79.98182	-0.00267	-0.15888	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16155	SPS	'JONES 230KV'	486	-0.00223	-0.15932	15
SPS	'TOLK 230KV'	55.27795	0.00375	SPS	'MUSTG5 118.0 230KV'	360	0.15058	-0.14683	16
SPS	'MADOX 115KV'	75	-0.16452	SPS	'SAN JUAN 230KV'	119.9727	-0.01887	-0.14565	16

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

Redispatch Amount = Relief Amount / Factor

Upgrade: Mustang-San Andr-Amerada Hess 115KV Displacement
Limiting Facility: DENVER CITY INTERCHANGE N - MUSTANG STATION 115KV CKT 1
Direction: To->From
Line Outage: DENVER CITY INTERCHANGE S - MUSTANG STATION 115KV CKT 1
5190xg19: 5190x6159625196811407G
Date Redispatch Needed: Starting 2007 4/1 - 6/1 Until EOC of Upgrade
Season Flowgate Identified: 2007 Spring Peak

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

		Aggregate Relie	f							
Reservation	Relief Amount	Amount								
109048	7 1.9	1.	.9							
					0.10.1					Aggregate
		Maximum	005		Sink Control	9: 1	Maximum	005		Redispatch
Source Control Area	Source	Increment(MW)	GSF		Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
SPS	'CUNNINGHAM 115KV'			.16155		'MUSTG5 118.0 230KV'	210		-0.31213	6
SPS	'MADOX 115KV'			.16452		'MUSTG5 118.0 230KV'	210		-0.3151	6
SPS	'CARLSBAD 69KV'			.07652		'MUSTG5 118.0 230KV'	210		-0.2271	8
SPS	'CUNNINGHAM 115KV'	7		.16155		'PLANTX 230KV'	189		-0.16593	11
SPS	'CUNNINGHAM 115KV'	7		.16155		'TOLK 230KV'	1012.904		-0.16529	11
SPS	'MADOX 115KV'			.16452		'HARRINGTON 230KV'	706		-0.16584	11
SPS	'MADOX 115KV'					'PLANTX 115KV'	205		-0.16672	11
SPS	'MADOX 115KV'					'PLANTX 230KV'	189		-0.1689	11
SPS	'MADOX 115KV'			.16452		'TOLK 230KV'	1012.904		-0.16826	11
SPS	'MADOX 115KV'			.16452		'WILWIND 230KV'	72		-0.1663	11
SPS	'CUNNINGHAM 115KV'	7		.16155		'CAPROCK 115KV'	36		-0.15888	12
SPS	'CUNNINGHAM 115KV'	7		.16155		'HARRINGTON 230KV'	706		-0.16287	12
SPS	'CUNNINGHAM 115KV'	7		.16155		'JONES 230KV'	486		-0.15932	12
SPS	'CUNNINGHAM 115KV'	7		.16155		'LP-BRND2 69KV'	80		-0.15897	12
SPS	'CUNNINGHAM 115KV'	7		.16155		'PLANTX 115KV'	205		-0.16375	12
SPS	'CUNNINGHAM 115KV'	7		.16155		'WILWIND 230KV'	72		-0.16333	12
SPS	'LP-BRND2 69KV'	15		.00258		'MUSTG5 118.0 230KV'	210		-0.15316	12
SPS	'MADOX 115KV'			.16452	SPS	'CAPROCK 115KV'	36		-0.16185	12
SPS	'MADOX 115KV'					'JONES 230KV'	486		-0.16229	12
SPS	'MADOX 115KV'			.16452		'LP-BRND2 69KV'	80		-0.16194	12
SPS	'TUCUMCARI 115KV'					'MUSTG5 118.0 230KV'	210		-0.15325	12
SPS	'CUNNINGHAM 115KV'	7				'SAN JUAN 230KV'	54		-0.14268	13
SPS	'HARRINGTON 230KV'	36				'MUSTG5 118.0 230KV'	210		-0.14926	13
SPS	'HUBRCO2 69KV'					'MUSTG5 118.0 230KV'	210		-0.14928	13
SPS	'MADOX 115KV'	7	5 -0	.16452		'SAN JUAN 230KV'	54		-0.14565	13
SPS	'MOORE COUNTY 115KV'	4				'MUSTG5 118.0 230KV'	210		-0.1492	13
SPS	'NICHOLS 115KV'	132.224		.00126		'MUSTG5 118.0 230KV'	210	0.15058	-0.14932	13
SPS	'NICHOLS 230KV'	24				'MUSTG5 118.0 230KV'	210		-0.14928	13
SPS	'PLANTX 115KV'			0.0022		'MUSTG5 118.0 230KV'	210		-0.14838	13
SPS	'RIVERVIEW 69KV'	2		0.0013		'MUSTG5 118.0 230KV'	210		-0.14928	13
SPS	'SIDRCH 69KV'		6	0.0013		'MUSTG5 118.0 230KV'	210	0.15058	-0.14928	13
SPS	'TOLK 230KV'	67.0958			SPS	'MUSTG5 118.0 230KV'	210		-0.14684	13
SPS	'CUNNINGHAM 115KV'			.16155	SPS	'CUNNINGHAM 230KV'	306	-0.07301	-0.08854	21
SPS	'MADOX 115KV'			.16452		'CUNNINGHAM 230KV'	306		-0.09151	21
SPS	'CARLSBAD 69KV'	1		.07652		'PLANTX 230KV'	189	0.00438	-0.0809	23
SPS	'CARLSBAD 69KV'	1	8 -0	.07652	SPS	'HARRINGTON 230KV'	706	0.00132	-0.07784	24
SPS	'CARLSBAD 69KV'	1		.07652		'PLANTX 115KV'	205	0.0022	-0.07872	24
SPS	'CARLSBAD 69KV'	1	8 -0	.07652	SPS	'TOLK 230KV'	1012.904	0.00374	-0.08026	24
SPS	'CARLSBAD 69KV'	1	8 -0.	.07652	SPS	'WILWIND 230KV'	72	0.00178	-0.0783	24
SPS	'CARLSBAD 69KV'	1	8 -0.	.07652	SPS	'JONES 230KV'	486	-0.00223	-0.07429	25
SPS	'CARLSBAD 69KV'	1	8 -0.	.07652	SPS	'CAPROCK 115KV'	36	-0.00267	-0.07385	26
SPS	'CARLSBAD 69KV'	1	8 -0.	.07652	SPS	'LP-BRND2 69KV'	80	-0.00258	-0.07394	26
SPS	'CARLSBAD 69KV'	1	8 -0.	.07652	SPS	'SAN JUAN 230KV'	54	-0.01887	-0.05765	33

Upgrade: Mustang-San Andr-Amerada Hess 115KV Displacement
Limiting Facility: DENVER CITY INTERCHANGE S - MUSTANG STATION 115KV CKT 1
Direction: To->From
Line Outage: DENVER CITY INTERCHANGE N - MUSTANG STATION 115KV CKT 1
Flowgate: 51962519681519605196611107SH
Date Redispatch Needed: 61-10/1 Unit ECC of Upgrade
Season Flowgate Identified: 2007 Summer Shoulder

Season Flowgate Identified:	2007 Summer Shoulder								
	D 5 44	Aggregate Relief							
Reservation	Relief Amount	Amount							
1090487	9.5	9.5							
				Sink Control					Aggregate
		Maximum	005		9: 1	Maximum	005	- .	Redispatch
Source Control Area	Source	,	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
SPS	'MADOX 115KV'	75			'MUSTG5 118.0 230KV'	210		-0.31136	
SPS	'CUNNINGHAM 115KV'	71	-0.16067		'MUSTG5 118.0 230KV'	210		-0.3082	
SPS	'CUNNINGHAM 115KV'	110	-0.16067		'MUSTG5 118.0 230KV'	210		-0.3082	
SPS	'CARLSBAD 69KV'	18	-0.07637		'MUSTG5 118.0 230KV'	210		-0.2239	
SPS	'CUNNINGHAM 230KV'	110	-0.07304		'MUSTG5 118.0 230KV'	210		-0.22057	
SPS	'MADOX 115KV'	75	-0.16383		'PLANTX 230KV'	189	0.00419	-0.16802	
SPS	'MADOX 115KV'	75	-0.16383		'BLACKHAWK 115KV'	220	0.00124	-0.16507	
SPS	'MADOX 115KV'	75			'HARRINGTON 230KV'	1066	0.00125	-0.16508	
SPS	'MADOX 115KV'	75	-0.16383		'NICHOLS 115KV'	82		-0.16503	
SPS	'MADOX 115KV'	75	-0.16383		'PLANTX 115KV'	163.5259	0.0021	-0.16593	
SPS	'MADOX 115KV'	75			'STEER WATER 115KV'	79.98182	0.00116	-0.16499	
SPS	'MADOX 115KV'	75	-0.16383		'TOLK 230KV'	1027.989	0.00353	-0.16736	
SPS	'MADOX 115KV'	75	-0.16383		'WILWIND 230KV'	159.9636	0.00169	-0.16552	
SPS	'CUNNINGHAM 115KV'	71	-0.16067		'PLANTX 115KV'	163.5259	0.0021	-0.16277	
SPS	'CUNNINGHAM 115KV'	110	-0.16067		'PLANTX 115KV'	163.5259	0.0021	-0.16277	58
SPS	'CUNNINGHAM 115KV'	71	-0.16067		'PLANTX 230KV'	189	0.00419	-0.16486	
SPS	'CUNNINGHAM 115KV'	110	-0.16067		'PLANTX 230KV'	189	0.00419	-0.16486	
SPS	'CUNNINGHAM 115KV'	71	-0.16067	SPS	'TOLK 230KV'	1027.989	0.00353	-0.1642	
SPS	'CUNNINGHAM 115KV'	110	-0.16067	SPS	'TOLK 230KV'	1027.989	0.00353	-0.1642	58
SPS	'CUNNINGHAM 115KV'	71	-0.16067	SPS	'WILWIND 230KV'	159.9636	0.00169	-0.16236	58
SPS	'CUNNINGHAM 115KV'	110	-0.16067	SPS	'WILWIND 230KV'	159.9636	0.00169	-0.16236	
SPS	'CUNNINGHAM 115KV'	71	-0.16067	SPS	'BLACKHAWK 115KV'	220	0.00124	-0.16191	59
SPS	'CUNNINGHAM 115KV'	110	-0.16067	SPS	'BLACKHAWK 115KV'	220	0.00124	-0.16191	59
SPS	'CUNNINGHAM 115KV'	71	-0.16067	SPS	'HARRINGTON 230KV'	1066	0.00125	-0.16192	
SPS	'CUNNINGHAM 115KV'	110	-0.16067	SPS	'HARRINGTON 230KV'	1066	0.00125	-0.16192	59
SPS	'CUNNINGHAM 115KV'	71	-0.16067	SPS	'NICHOLS 115KV'	82	0.0012	-0.16187	59
SPS	'CUNNINGHAM 115KV'	110	-0.16067	SPS	'NICHOLS 115KV'	82	0.0012	-0.16187	59
SPS	'CUNNINGHAM 115KV'	71	-0.16067	SPS	'STEER WATER 115KV'	79.98182	0.00116	-0.16183	59
SPS	'CUNNINGHAM 115KV'	110	-0.16067	SPS	'STEER WATER 115KV'	79.98182	0.00116	-0.16183	59
SPS	'MADOX 115KV'	75	-0.16383	SPS	'CAPROCK 115KV'	79.98182	-0.00285	-0.16098	59
SPS	'MADOX 115KV'	75	-0.16383		'JONES 230KV'	486	-0.00208	-0.16175	
SPS	'MADOX 115KV'	75	-0.16383	SPS	'LP-BRND2 69KV'	80	-0.00242	-0.16141	
SPS	'CUNNINGHAM 115KV'	71	-0.16067	SPS	'CAPROCK 115KV'	79.98182	-0.00285	-0.15782	
SPS	'CUNNINGHAM 115KV'	110	-0.16067		'CAPROCK 115KV'	79.98182	-0.00285	-0.15782	60
SPS	'CUNNINGHAM 115KV'	71	-0.16067		'JONES 230KV'	486	-0.00208	-0.15859	
SPS	'CUNNINGHAM 115KV'	110	-0.16067		'JONES 230KV'	486		-0.15859	
SPS	'CUNNINGHAM 115KV'	71	-0.16067		'LP-BRND2 69KV'	80		-0.15825	
SPS	'CUNNINGHAM 115KV'	110	-0.16067		'LP-BRND2 69KV'	80	-0.00242	-0.15825	
SPS	'LP-BRND2 69KV'	152	-0.00242		'MUSTG5 118.0 230KV'	210		-0.14995	
SPS	'MADOX 115KV'	75	-0.16383		'SAN JUAN 230KV'	119,9727	-0.019	-0.14483	

SPS	'MOORE COUNTY 115KV'	48	0.00131	SPS	'MUSTG5 118.0 230KV'	210	0.14753	-0.14622	65
SPS	'NICHOLS 115KV'	131	0.0012	SPS	'MUSTG5 118.0 230KV'	210	0.14753	-0.14633	65
SPS	'NICHOLS 230KV'	244	0.00124	SPS	'MUSTG5 118.0 230KV'	210	0.14753	-0.14629	65
SPS	'PLANTX 115KV'	89.47412	0.0021	SPS	'MUSTG5 118.0 230KV'	210	0.14753	-0.14543	65
SPS	'RIVERVIEW 69KV'	23	0.00123	SPS	'MUSTG5 118.0 230KV'	210	0.14753	-0.1463	65
SPS	'TOLK 230KV'	52.01129	0.00353	SPS	'MUSTG5 118.0 230KV'	210	0.14753	-0.144	66
SPS	'CUNNINGHAM 115KV'	71	-0.16067	SPS	'SAN JUAN 230KV'	119.9727	-0.019	-0.14167	67
SPS	'CUNNINGHAM 115KV'	110	-0.16067	SPS	'SAN JUAN 230KV'	119.9727	-0.019	-0.14167	67
SPS	'MADOX 115KV'	75	-0.16383	SPS	'CUNNINGHAM 230KV'	196	-0.07304	-0.09079	104
SPS	'CUNNINGHAM 115KV'	71	-0.16067	SPS	'CUNNINGHAM 230KV'	196	-0.07304	-0.08763	108
SPS	'CUNNINGHAM 115KV'	110	-0.16067	SPS	'CUNNINGHAM 230KV'	196	-0.07304	-0.08763	108
SPS	'CUNNINGHAM 230KV'	110	-0.07304	SPS	'PLANTX 230KV'	189	0.00419	-0.07723	123
SPS	'CUNNINGHAM 230KV'	110	-0.07304	SPS	'TOLK 230KV'	1027.989	0.00353	-0.07657	124
SPS	'CUNNINGHAM 230KV'	110	-0.07304	SPS	'PLANTX 115KV'	163.5259	0.0021	-0.07514	126
SPS	'CUNNINGHAM 230KV'	110	-0.07304	SPS	'WILWIND 230KV'	159.9636	0.00169	-0.07473	127
SPS	'CUNNINGHAM 230KV'	110	-0.07304	SPS	'BLACKHAWK 115KV'	220	0.00124	-0.07428	128
SPS	'CUNNINGHAM 230KV'	110	-0.07304	SPS	'HARRINGTON 230KV'	1066	0.00125	-0.07429	128
SPS	'CUNNINGHAM 230KV'	110	-0.07304	SPS	'NICHOLS 115KV'	82	0.0012	-0.07424	128
SPS	'CUNNINGHAM 230KV'	110	-0.07304	SPS	'STEER WATER 115KV'	79.98182	0.00116	-0.0742	128
SPS	'CUNNINGHAM 230KV'	110	-0.07304	SPS	'JONES 230KV'	486	-0.00208	-0.07096	
SPS	'CUNNINGHAM 230KV'	110	-0.07304	SPS	'CAPROCK 115KV'	79.98182	-0.00285	-0.07019	135
SPS	'CUNNINGHAM 230KV'	110	-0.07304	SPS	'SAN JUAN 230KV'	119.9727	-0.019	-0.05404	175
Maniana Danasana and I	Assissant and a second	10:10 (:	D : 1 : 1		1 1 2 2 6 22 11 27 1		-		

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

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

Upgrade: Limiting Facility: Direction: Mustang-San Andr-Amerada Hess 115KV Displacement DENVER CITY INTERCHANGE S - MUSTANG STATION 115KV CKT 1 Line Outage: Flowgate: Date Redispatch Needed:

Season Flowgate Identified:

		Aggregate Relief							
	Relief Amount	Amount							
1090487	23.3	23.3							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF		Amount (MW)
SPS	'MADOX 115KV'	75	-0.16383	SPS	'MUSTG5 118.0 230KV'	360	0.14753	-0.31136	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16067		'MUSTG5 118.0 230KV'	360		-0.3082	76
	'MADOX 115KV'	75			'PLANTX 230KV'	189	0.00419	-0.16802	139
	'MADOX 115KV'	75	-0.16383		'TOLK 230KV'	1024.722		-0.16736	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16067		'PLANTX 230KV'	189		-0.16486	141
SPS	'MADOX 115KV'	75			'BLACKHAWK 115KV'	220		-0.16507	141
	'MADOX 115KV'	75			'HARRINGTON 230KV'	1066		-0.16508	141
	'MADOX 115KV'	75			'NICHOLS 115KV'	147	0.0012	-0.16503	141
	'MADOX 115KV'	75			'NICHOLS 230KV'	147	0.00124	-0.16507	141
	'MADOX 115KV'	75	-0.16383		'PLANTX 115KV'	205		-0.16593	
	'MADOX 115KV'	75	-0.16383		'STEER WATER 115KV'	79.98182	0.00116	-0.16499	
	'MADOX 115KV'	75			'WILWIND 230KV'	159.9636		-0.16552	141
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16067		'TOLK 230KV'	1024.722		-0.1642	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16067		'PLANTX 115KV'	205		-0.16277	143
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16067		'BLACKHAWK 115KV'	220		-0.16191	144
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16067		'HARRINGTON 230KV'	1066	0.00125	-0.16192	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16067		'NICHOLS 115KV'	147		-0.16187	144
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16067		'NICHOLS 230KV'	147	0.00124	-0.16191	144
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16067		'STEER WATER 115KV'	79.98182		-0.16183	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16067		'WILWIND 230KV'	159.9636	0.00169	-0.16236	
SPS	'MADOX 115KV'	75			'JONES 230KV'	486		-0.16175	144
SPS	'MADOX 115KV'	75	-0.16383	SPS	'CAPROCK 115KV'	79.98182	-0.00285	-0.16098	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16067		'JONES 230KV'	486	-0.00208	-0.15859	
SPS	'CUNNINGHAM 115KV'	50.00977	-0.16067		'CAPROCK 115KV'	79.98182	-0.00285	-0.15782	148
	'MADOX 115KV'	75	-0.16383		'SAN JUAN 230KV'	119.9727	-0.019	-0.14483	161
SPS	'TOLK 230KV'	55.27795	0.00353	SPS	'MUSTG5 118.0 230KV'	360	0.14753	-0.144	162

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

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

Upgrade: Limiting Facility: Direction: Seven Rivers to Pecos to Potash Junction 230kV CARLSBAD PLANT - POTASH JUNCTION INTERCHANGE 115KV CKT 1

Line Outage: Flowgate: Date Redispatch Needed:

Season Flowgate Identified:

		Aggregate Relief							
Reservation	Relief Amount	Amount							
1090487	3.3	3.3							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
	Source	Increment(MW)	GSF		Sink	Decrement(MW)	GSF	Factor	Amount (MW)
SPS	'CARLSBAD 69KV'	18			'MUSTG5 118.0 230KV'	360	0.0485		
SPS	'CARLSBAD 69KV'	18	-0.26531		'BLACKHAWK 115KV'	220	-0.00367	-0.26164	
SPS	'CARLSBAD 69KV'	18			'CZ 69KV'	39	-0.00335		
SPS	'CARLSBAD 69KV'	18	-0.26531		'HARRINGTON 230KV'	1066	-0.0037	-0.26161	
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'HUBRCO2 69KV'	11	-0.00367		
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'JONES 230KV'	486	0.01395	-0.27926	12
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'LP-BRND2 69KV'	80	0.01302	-0.27833	12
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'MOORE COUNTY 115KV'	48	-0.00385	-0.26146	12
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'NICHOLS 115KV'	147	-0.00362	-0.26169	12
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'NICHOLS 230KV'	147	-0.00366	-0.26165	12
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'SIDRCH 69KV'	20	-0.00367	-0.26164	12
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'STEER WATER 115KV'	8	-0.00349	-0.26182	12
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'PLANTX 115KV'	205	-0.00587	-0.25944	13
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'PLANTX 230KV'	189	-0.00909	-0.25622	13
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'TOLK 230KV'	1018.154	-0.01292	-0.25239	13
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'WILWIND 230KV'	16	-0.00514	-0.26017	13
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'CAPROCK 115KV'	8	-0.02602	-0.23929	14
SPS	'CARLSBAD 69KV'	18	-0.26531	SPS	'SAN JUAN 230KV'	12	-0.06421	-0.2011	16
SPS	'TUCUMCARI 115KV'	15	-0.02602	SPS	'MUSTG5 118.0 230KV'	360	0.0485	-0.07452	44
SPS	'TOLK 230KV'	61.84583	-0.01292	SPS	'MUSTG5 118.0 230KV'	360	0.0485	-0.06142	53
SPS	'PLANTX 115KV'	48	-0.00587	SPS	'MUSTG5 118.0 230KV'	360	0.0485	-0.05437	60
SPS	'RIVERVIEW 69KV'	23	-0.00367	SPS	'MUSTG5 118.0 230KV'	360	0.0485	-0.05217	63
SPS	'LP-BRND2 69KV'	152	0.01302	SPS	'MUSTG5 118.0 230KV'	360	0.0485	-0.03548	92

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

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

WICHITA - RENO 345KV
EXIDE JUNCTION - SUMMIT 115KV CKT 1
To->From
EAST MCPHERSON - SUMMIT 230KV CKT 1
57368573811568725687312206WP
12/1/106 - 4/1/07
2006 Winter Pack

Upgrade: Limiting Facility: Direction: Line Outage: Flowgate: Date Redispatch Needed: Season Flowgate Identified: 2006 Winter Peak Reservation Relief Amount

1086655	1.5	2.6							
1090964	0.8	2.6							
1090965	0.3	2.6							
				0:10.1					Aggregate
S	0	Maximum	005	Sink Control	S:-1-	Maximum	005	F4	Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW) 470		Factor	Amount (MW)
WERE	BPU - CITY OF MCPHERSON 115KV	259	-0.29594	WERE	'JEFFREY ENERGY CENTER 230KV'		0.01746	-0.3134	8
WERE	'BPU - CITY OF MCPHERSON 115KV' 'BPU - CITY OF MCPHERSON 115KV'	259	-0.29594		'JEFFREY ENERGY CENTER 345KV' 'LAWRENCE ENERGY CENTER 230KV'	940 130.0238	0.02327	-0.31921	8
WERE WERE	BPU - CITY OF MCPHERSON 115KV	259 259	-0.29594 -0.29594	WERE WERE	CHANUTE 69KV	35.344	0.00966	-0.3056	
WERE	BPU - CITY OF MCPHERSON 115KV	259	-0.29594	WERE	'CITY OF AUGUSTA 69KV'	17.25201	0.00148 0.00019	-0.29742 -0.29613	
WERE	BPU - CITY OF MCPHERSON 115KV	259	-0.29594	WERE	'CITY OF AUGUSTA 69KV'	4.8	0.00019	-0.29875	
WERE	BPU - CITY OF MCPHERSON 115KV	259	-0.29594	WERE	'CITY OF BORLINGTON 69KV'	13.978	0.00281	-0.29769	
WERE	BPU - CITY OF MCPHERSON 115KV	259	-0.29594	WERE	'CITY OF MULVANE 69KV'	3.694	-0.00173	-0.29492	
WERE	BPU - CITY OF MCPHERSON 115KV	259	-0.29594	WERE	'CITY OF WELLINGTON 69KV'	24	-0.00102	-0.29415	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29594	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00173	-0.29875	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29594	WERE	'EVANS ENERGY CENTER 138KV'	25.88745	0.00201	-0.29596	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29594	WERE	'WACO 138KV'	17.953	-0.003	-0.29294	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29594	WERE	'COLBY 115KV'	6.280901	-0.03582	-0.26012	10
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01746	-0.25598	10
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	JEFFREY ENERGY CENTER 345KV'	940	0.02327	-0.26179	10
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.00966	-0.24818	10
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01746	-0.25587	10
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02327	-0.26168	10
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.00966	-0.24807	10
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	'CHANUTE 69KV'	35.344	0.00300	-0.24	11
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	'CITY OF AUGUSTA 69KV'	17.25201	0.000140	-0.23871	11
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	'CITY OF BURLINGTON 69KV'	4.8	0.00281	-0.24133	11
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	'CITY OF IOLA 69KV'	13.978	0.00201	-0.24027	11
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	'CITY OF MULVANE 69KV'	3.694	-0.00173	-0.2375	1.
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	'CITY OF WELLINGTON 69KV'	24	-0.00179	-0.23673	11
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00281	-0.24133	11
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	'EVANS ENERGY CENTER 138KV'	25.88745	0.00002	-0.23854	11
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	'WACO 138KV'	17.953	-0.003	-0.23552	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'CHANUTE 69KV'	35.344	0.00148	-0.23989	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'CITY OF AUGUSTA 69KV'	17.25201	0.00019	-0.2386	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'CITY OF BURLINGTON 69KV'	4.8	0.00281	-0.24122	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'CITY OF IOLA 69KV'	13.978	0.00175	-0.24016	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'CITY OF MULVANE 69KV'	3.694	-0.00102	-0.23739	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'CITY OF WELLINGTON 69KV'	24	-0.00179	-0.23662	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00281	-0.24122	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'EVANS ENERGY CENTER 138KV'	25.88745	0.00002	-0.23843	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'WACO 138KV'	17.953	-0.003	-0.23541	11
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.23852	WERE	'COLBY 115KV'	6.280901	-0.03582	-0.2027	13
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23841	WERE	'COLBY 115KV'	6.280901	-0.03582	-0.20259	13
WERE	'PAWNEE 115KV'	999	-0.13502	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02327	-0.15829	16
WERE	'RICE 115KV'	999	-0.13502	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02327	-0.15829	16
WERE	'ST JOHN 115KV'	7.5	-0.13502	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02327	-0.15829	16
WERE	'PAWNEE 115KV'	999	-0.13502	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01746	-0.15248	17
WERE	'RICE 115KV'	999	-0.13502	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01746	-0.15248	17
WERE	'ST JOHN 115KV'	7.5	-0.13502	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01746	-0.15248	17
WERE	'PAWNEE 115KV'	999	-0.13502	WERE	'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.00966	-0.14468	18
WERE	'RICE 115KV'	999	-0.13502	WERE	'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.00966	-0.14468	18
WERE	'ST JOHN 115KV'	7.5	-0.13502	WERE	'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.00966	-0.14468	18
WERE	'PAWNEE 115KV'	999	-0.13502	WERE	'CHANUTE 69KV'	35.344	0.00148	-0.1365	19
WERE	'PAWNEE 115KV'	999	-0.13502	WERE	'CITY OF AUGUSTA 69KV'	17.25201	0.00019	-0.13521	19
WERE	'PAWNEE 115KV'	999	-0.13502	WERE	'CITY OF IOLA 69KV'	13.978	0.00175	-0.13677	19
WERE	'PAWNEE 115KV'	999	-0.13502	WERE	'CITY OF WELLINGTON 69KV'	24	-0.00179	-0.13323	19
WERE	'PAWNEE 115KV'	999	-0.13502	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00281	-0.13783	19
WERE	'PAWNEE 115KV'	999	-0.13502	WERE	'EVANS ENERGY CENTER 138KV'	25.88745	0.00002	-0.13504	19
WERE	'RICE 115KV'	999	-0.13502	WERE	'CHANUTE 69KV'	35.344	0.00148	-0.1365	19
WERE	'RICE 115KV'	999	-0.13502	WERE	'CITY OF AUGUSTA 69KV'	17.25201	0.00019	-0.13521	19
WERE	'RICE 115KV'	999	-0.13502	WERE	'CITY OF IOLA 69KV'	13.978	0.00175	-0.13677	19
WERE	'RICE 115KV'	999	-0.13502	WERE	'CITY OF WELLINGTON 69KV'	24	-0.00179	-0.13323	19
WERE	'RICE 115KV'	999	-0.13502	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00281	-0.13783	19
WERE	'RICE 115KV'	999	-0.13502	WERE	'EVANS ENERGY CENTER 138KV'	25.88745	0.00002	-0.13504	19
WERE	'ST JOHN 115KV'	7.5	-0.13502	WERE	'CHANUTE 69KV'	35.344	0.00148	-0.1365	19
WERE	'ST JOHN 115KV'	7.5	-0.13502	WERE	'CITY OF AUGUSTA 69KV'	17.25201	0.00019	-0.13521	19
WERE	'ST JOHN 115KV'	7.5	-0.13502	WERE	'CITY OF IOLA 69KV'	13.978	0.00175	-0.13677	19
WERE	'ST JOHN 115KV'	7.5	-0.13502	WERE	'CITY OF WELLINGTON 69KV'	24	-0.00179	-0.13323	19
WERE	'ST JOHN 115KV'	7.5	-0.13502	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00281	-0.13783	19
WERE	'ST JOHN 115KV'	7.5	-0.13502	WERE	'EVANS ENERGY CENTER 138KV'	25.88745	0.00002	-0.13504	19
WERE	'GREAT BEND PLANT 69KV'	10	-0.10743	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02327	-0.1307	20
WERE	'PAWNEE 115KV'	999	-0.13502		'WACO 138KV'	17.953	-0.003	-0.13202	20
WERE	'RICE 115KV'	999	-0.13502	WERE	'WACO 138KV'	17.953	-0.003	-0.13202	20
WERE	'ST JOHN 115KV'	7.5	-0.13502		'WACO 138KV'	17.953	-0.003	-0.13202	20
WERE	'GREAT BEND PLANT 69KV' 'GREAT BEND PLANT 69KV'	10	-0.10743		JEFFREY ENERGY CENTER 230KV	470	0.01746	-0.12489	21
WERE	GREAT BEND PLANT 69KV	10			'LAWRENCE ENERGY CENTER 230KV' 'COFFEY COUNTY NO. 2 SHARPE 69KV'	130.0238	0.00966	-0.11709	22
WERE	GREAT BEND PLANT 69KV	10				19.97	0.00281	-0.11024	23
WERE		10			CHANUTE 69KV	35.344	0.00148	-0.10891	24
WERE	'GREAT BEND PLANT 69KV'	10			CITY OF AUGUSTA 69KV	17.25201 13.978	0.00019	-0.10762 -0.10918	24
WERE	'GREAT BEND PLANT 69KV' 'GREAT BEND PLANT 69KV'				CITY OF IOLA 69KV'		0.00175		24
		10			'CITY OF WELLINGTON 69KV'	24	-0.00179	-0.10564	24
WERE	CDEAT BEND DI ANT COLLI	40	0.40740						
WERE	'GREAT BEND PLANT 69KV'	10			'EVANS ENERGY CENTER 138KV'	25.88745	0.00002	-0.10745	
	'GREAT BEND PLANT 69KV' 'GREAT BEND PLANT 69KV' 'A. M. MULLERGREN GENERATOR 115KV'	10 10 63	-0.10743	WERE	WACO 138KV' GRAY COUNTY WIND FARM 115KV'	25.88745 17.953 73	-0.0002 -0.003 -0.07564	-0.10745 -0.10443 -0.04477	25

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

Upgrade: Limiting Facility:

WICHITA - RENO 345KV EXIDE JUNCTION - SUMMIT 115KV CKT 1

 Direction:
 To->From

 Line Outage:
 EAST MCPHERSON - SUMMIT 230KV CKT 1

 Flowgate:
 57368573811568725687312207SH

 Date Redispatch Needed:
 6/1 - 10/1 Unit I COC of Upgrade

 Season Flowgate Identified:
 2007 Summer Shoulder

		Aggregate Relief
Reservation	Relief Amount	Amount
1086655	3.0	5.0
1090817	0.7	5.0
1090964	1.0	5.0
1090965	0.3	5.0

1090964	1.0	5.0							
1090965	0.3	5.0	1						
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01718		10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02299	-0.31861	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00919	-0.30481	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	'CHANUTE 69KV'	46.617	0.00149	-0.29711	1
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	'CITY OF ERIE 69KV'	23.258	0.00149	-0.29711	1
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	'CITY OF IOLA 69KV'	19.865	0.00174	-0.29736	1
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	'CITY OF MULVANE 69KV'	6.189	-0.00086	-0.29476	1
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00282	-0.29844	1
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	'EVANS ENERGY CENTER 138KV'	305	0.00013	-0.29575	1
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	'GILL ENERGY CENTER 138KV'	77	-0.00316	-0.29246	1
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.0088	-0.30442	1
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	TECUMSEH ENERGY CENTER 115KV	108	0.00844	-0.30406	1
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562		'WACO 138KV'	17.947	-0.00282	-0.2928	1
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.23794		'JEFFREY ENERGY CENTER 345KV'	940	0.02299	-0.26093	19
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23783	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02299	-0.26082	19
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.23794		JEFFREY ENERGY CENTER 230KV	470	0.02299	-0.25512	2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.23794		'LAWRENCE ENERGY CENTER 230KV	470		-0.25512	2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.23794		'LAWRENCE ENERGY CENTER 115KV	230.2191	0.0088	-0.24674	2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.23794		TECUMSEH ENERGY CENTER 115KV'	230.2191		-0.24713	2
WERE	'HUTCHINSON ENERGY CENTER 115KV	67	-0.23783		JEFFREY ENERGY CENTER 230KV'	470		-0.24636	2
		67	-0.23783		'LAWRENCE ENERGY CENTER 230KV		0.01718		2
WERE WERE	'HUTCHINSON ENERGY CENTER 69KV' 'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23783	WERE WERE	'LAWRENCE ENERGY CENTER 115KV	230,2191	0.0088	-0.24663 -0.24702	2
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23783		TECUMSEH ENERGY CENTER 115KV'	108	0.00844	-0.24627	20
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.23794		'CHANUTE 69KV'	46.617	0.00149	-0.23943	2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.23794		'CITY OF ERIE 69KV'	23.258		-0.23943	2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.23794		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00282	-0.24076	2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.23794		'EVANS ENERGY CENTER 138KV'	305	0.00013	-0.23807	2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.23794		'GILL ENERGY CENTER 138KV'	77	-0.00316	-0.23478	2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.23794	WERE	'WACO 138KV'	17.947	-0.00282	-0.23512	2
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23783	WERE	'CHANUTE 69KV'	46.617	0.00149	-0.23932	2
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67		WERE	'CITY OF ERIE 69KV'	23.258	0.00149	-0.23932	2
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23783		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96		-0.24065	2
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23783	WERE	'EVANS ENERGY CENTER 138KV'	305	0.00013	-0.23796	2
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23783		'GILL ENERGY CENTER 138KV'	77	-0.00316	-0.23467	2
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.23783		'WACO 138KV'	17.947	-0.00282	-0.23501	2
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562	WERE	'CLAY CENTER JUNCTION 115KV'	11.825	-0.09835	-0.19727	2
WERE	'PAWNEE 115KV'	999	-0.13182		'JEFFREY ENERGY CENTER 345KV'	940		-0.15481	3:
WERE	'RICE 115KV'	999	-0.13182		'JEFFREY ENERGY CENTER 345KV'	940		-0.15481	3:
WERE	'PAWNEE 115KV'	999	-0.13182	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01718	-0.149	3-
WERE	'RICE 115KV'	999	-0.13182		'JEFFREY ENERGY CENTER 230KV'	470	0.01718	-0.149	3-
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.29562		'ABILENE ENERGY CENTER 115KV'	18.23438	-0.15727	-0.13835	31
WERE	'PAWNEE 115KV'	999	-0.13182		'LAWRENCE ENERGY CENTER 115KV'	60		-0.14062	31
WERE	'PAWNEE 115KV'	999	-0.13182		'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00919	-0.14101	31
WERE	'PAWNEE 115KV'	999	-0.13182		'TECUMSEH ENERGY CENTER 115KV'	108		-0.14026	31
WERE	'RICE 115KV'	999	-0.13182		'LAWRENCE ENERGY CENTER 115KV'	60		-0.14062	31
WERE	'RICE 115KV'	999	-0.13182		'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00919	-0.14101	31
WERE	'RICE 115KV'	999	-0.13182	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00844	-0.14026	3
WERE	'PAWNEE 115KV'	999	-0.13182		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00282	-0.13464	3
WERE	'RICE 115KV'	999	-0.13182	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00282	-0.13464	3
WERE	'PAWNEE 115KV'	999	-0.13182		'CITY OF ERIE 69KV'	23.258	0.00149	-0.13331	3
WERE	'PAWNEE 115KV'	999	-0.13182	WERE	'EVANS ENERGY CENTER 138KV'	305	0.00013	-0.13195	3
WERE	'RICE 115KV'	999	-0.13182	WERE	'CITY OF ERIE 69KV'	23.258	0.00149	-0.13331	3
WERE	'RICE 115KV'	999	-0.13182		'EVANS ENERGY CENTER 138KV'	305	0.00013	-0.13195	3
WERE	'PAWNEE 115KV'	999	-0.13182	WERE	'GILL ENERGY CENTER 138KV'	77	-0.00316	-0.12866	3:
WERE	'PAWNEE 115KV'	999	-0.13182	WERE	'WACO 138KV'	17.947	-0.00282	-0.129	3:
WERE	'RICE 115KV'	999	-0.13182	WERE	'GILL ENERGY CENTER 138KV'	77	-0.00316	-0.12866	3:
WERE	'RICE 115KV'	999	-0.13182	WERE	'WACO 138KV'	17.947	-0.00282	-0.129	3
	'BPU - CITY OF MCPHERSON 115KV'	259		WERE	'HUTCHINSON ENERGY CENTER 115KV'	80.00001	-0.23794	-0.05768	8'

Maximum Decrement and Maximum Increment Factor = Source GSF - Sink GSF Redispatch Amount = Relief Amount / Factor

Upgrade: Limiting Facility: Direction: Line Outage: Flowgate: Date Redispatch Needed: Season Flowgate Identified:

WICHITA - RENO 345KV
NORTH AMERICAN PHILIPS - NORTH AMERICAN PHILIPS JUNCTION (SOUTH) 115KV CKT 1
From->To
EAST MCPHERSON - SUMMIT 230KV CKT 1
57372573741568725687312206WP
12/1/106 - 4/1/107
2006 Winter Peak

Season Flowgate Identified:	2006 Winter Peak		_						
		Aggregate Relief							
Reservation	Relief Amount	Amount							
1090964	6.9	8.9							
1090965	2.0	8.9							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF		Amount (MW)
WERE	'BPU - CITY OF MCPHERSON 115KV'	259			'JEFFREY ENERGY CENTER 230KV'	470	0.03388	-0.55617	16
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52229	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.0352	-0.55749	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52229	WERE	'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.02211	-0.5444	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52229	WERE	'CHANUTE 69KV'	35.344	0.00308	-0.52537	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52229	WERE	'CITY OF AUGUSTA 69KV'	17.25201	0.00096	-0.52325	17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259			'CITY OF IOLA 69KV'	13.978	0.00357	-0.52586	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259			'CITY OF WELLINGTON 69KV'	24	-0.00277	-0.51952	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259			'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00573	-0.52802	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52229	WERE	'EVANS ENERGY CENTER 138KV'	25.88745	0.00069	-0.52298	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52229	WERE	'WACO 138KV'	17.953	-0.00487	-0.51742	17
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.42301	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.03388	-0.45689	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.42301	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.0352	-0.45821	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42282	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.03388	-0.4567	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42282	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.0352	-0.45802	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423			'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.02211	-0.44512	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42282	WERE	'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.02211	-0.44493	20

WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.42301	WERE	'CHANUTE 69KV'	35,344	0.00308	-0.42609	21
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.42301		'CITY OF AUGUSTA 69KV'	17.25201	0.00308	-0.42397	21
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.42301		'CITY OF IOLA 69KV'	13,978	0.00357	-0.42658	21
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.42301		'CITY OF WELLINGTON 69KV'	24	-0.00277	-0.42024	21
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.42301		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00573	-0.42874	21
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.42301		'EVANS ENERGY CENTER 138KV'	25.88745	0.00069	-0.4237	21
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.42301		'WACO 138KV'	17.953	-0.00487	-0.41814	21
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42282		'CHANUTE 69KV'	35,344	0.00308	-0.4259	21
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42282		'CITY OF AUGUSTA 69KV'	17.25201	0.00096	-0.42378	21
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42282		'CITY OF IOLA 69KV'	13,978	0.00357	-0.42639	21
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42282		'CITY OF WELLINGTON 69KV'	24	-0.00277	-0.42005	21
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42282		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00573	-0.42855	21
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42282		'EVANS ENERGY CENTER 138KV'	25.88745	0.00069	-0.42351	21
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42282		'WACO 138KV'	17.953	-0.00487	-0.41795	21
WERE	'PAWNEE 115KV'	999	-0.24493		'JEFFREY ENERGY CENTER 230KV'	470	0.03388	-0.27881	32
WERE	'PAWNEE 115KV'	999	-0.24493		'JEFFREY ENERGY CENTER 345KV'	940	0.0352	-0.28013	32
WERE	'RICE 115KV'	999	-0.24493		'JEFFREY ENERGY CENTER 230KV'	470	0.03388	-0.27881	32
WERE	'RICE 115KV'	999	-0.24493		'JEFFREY ENERGY CENTER 345KV'	940	0.0352	-0.28013	32
WERE	'PAWNEE 115KV'	999	-0.24493		'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.0332	-0.26704	33
WERE	'RICE 115KV'	999	-0.24493		'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.02211	-0.26704	33
WERE	'PAWNEE 115KV'	999	-0.24493		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00573	-0.25066	35
WERE	'RICE 115KV'	999	-0.24493		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00573	-0.25066	35
WERE	'PAWNEE 115KV'	999	-0.24493		'CITY OF AUGUSTA 69KV'	17.25201	0.00096	-0.24589	36
WERE	'PAWNEE 115KV'	999	-0.24493		'EVANS ENERGY CENTER 138KV'	25.88745	0.00069	-0.24562	36
WERE	'RICE 115KV'	999	-0.24493		'CITY OF AUGUSTA 69KV'	17.25201	0.00096	-0.24589	36
WERE	'RICE 115KV'	999	-0.24493		'EVANS ENERGY CENTER 138KV'	25.88745	0.00069	-0.24562	36
WERE	'PAWNEE 115KV'	999	-0.24493		'CITY OF WELLINGTON 69KV'	24	-0.00277	-0.24216	37
WERE	'PAWNEE 115KV'	999	-0.24493		'WACO 138KV'	17.953	-0.00487	-0.24006	37
WERE	'RICE 115KV'	999	-0.24493		'CITY OF WELLINGTON 69KV'	24	-0.00277	-0.24216	
WERE	'RICE 115KV'	999	-0.24493		'WACO 138KV'	17.953	-0.00487	-0.24006	37
WEPL	'A. M. MULLERGREN GENERATOR 115KV'	63	-0.22151	WEPL	'GRAY COUNTY WIND FARM 115KV'	73	-0.14083	-0.08068	110
WERE	'KNOLL 3 115 115KV'	75	-0.04003	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.0352	-0.07523	118
WERE	'KNOLL 3 115 115KV'	75	-0.04003	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.03388	-0.07391	120
WERE	'KNOLL 3 115 115KV'	75	-0.04003	WERE	'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.02211	-0.06214	143
WERE	'GILL ENERGY CENTER 138KV'	218	-0.0055	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.0352	-0.0407	218
WERE	'GILL ENERGY CENTER 138KV'	218		WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.03388	-0.03938	226
WERE	'GILL ENERGY CENTER 69KV'	118	-0.00393		'JEFFREY ENERGY CENTER 345KV'	940	0.0352	-0.03913	227
WERE	'GILL ENERGY CENTER 69KV'	118	-0.00393		'JEFFREY ENERGY CENTER 230KV'	470	0.03388	-0.03781	235
WERE	'EVANS ENERGY CENTER 138KV'	767.1125	0.00069		'JEFFREY ENERGY CENTER 345KV'	940	0.0352	-0.03451	257
WERE	'EVANS ENERGY CENTER 138KV'	767.1125	0.00069		'JEFFREY ENERGY CENTER 230KV'	470	0.03388	-0.03319	268
WERE	'LATHAM1234.0 345KV'	150	0.00276		'JEFFREY ENERGY CENTER 345KV'	940	0.0352	-0.03244	274
WERE	'LATHAM1234.0 345KV'	150	0.00276		'JEFFREY ENERGY CENTER 230KV'	470	0.03388	-0.03112	286
Maximum Degrament and N	lavimum Increment were determine from the Source	and Cink Operating	Dointo in t		datab 1::::				

Aggregate Reli Amount

WICHITA - RENO 345KV
NORTH AMERICAN PHILIPS - NORTH AMERICAN PHILIPS JUNCTION (SOUTH) 115KV CKT 1
From->To
EAST MCPHERSON - SUMMIT 230KV CKT 1
57372573741568725687312207FA
Starting 2007 10/1 - 12/1 Until EOC of Upgrade
2007 Fall Peak Upgrade: Limiting Facility: Direction: Line Outage: Flowgate: Date Redispatch Needed: Season Flowgate Identified:

Relief Amount

Reservation

1090817									
1090964	2.6								
1090965	0.8	5.3							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	,	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621		'CHANUTE 69KV'	56.296	0.00259	-0.5088	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621		'CITY OF AUGUSTA 69KV'	19.63601	0.00123	-0.50744	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621		'CITY OF BURLINGTON 69KV'	4.8	0.00472	-0.51093	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621		'CITY OF IOLA 69KV'	24.256	0.00297	-0.50918	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621		'CITY OF MULVANE 69KV'	4.891	-0.00107	-0.50514	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621		'CITY OF WELLINGTON 69KV'	20	-0.00235	-0.50386	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00472	-0.51093	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621		'EVANS ENERGY CENTER 138KV'	187.8892	0.0005	-0.50671	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621		'JEFFREY ENERGY CENTER 230KV'	470	0.02831	-0.53452	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621		'JEFFREY ENERGY CENTER 345KV'	940	0.02952	-0.53573	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621		'LAWRENCE ENERGY CENTER 230KV'	230.3248	0.01814	-0.52435	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.01953	-0.52574	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621		'WACO 138KV'	17.946	-0.00425	-0.50196	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621	WERE	'COLBY 115KV'	6.36216	-0.07624	-0.42997	12
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086		'JEFFREY ENERGY CENTER 230KV'	470	0.02831	-0.42917	12
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086		'JEFFREY ENERGY CENTER 345KV'	940		-0.43038	12
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067		'JEFFREY ENERGY CENTER 230KV'	470		-0.42898	12
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02952	-0.43019	12
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086	WERE	'CHANUTE 69KV'	56.296	0.00259	-0.40345	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086	WERE	'CITY OF AUGUSTA 69KV'	19.63601	0.00123	-0.40209	13
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086	WERE	'CITY OF BURLINGTON 69KV'	4.8	0.00472	-0.40558	13
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086	WERE	'CITY OF IOLA 69KV'	24.256	0.00297	-0.40383	13
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086	WERE	'CITY OF MULVANE 69KV'	4.891	-0.00107	-0.39979	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086		'CITY OF WELLINGTON 69KV'	20	-0.00235	-0.39851	13
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00472	-0.40558	13
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086		'EVANS ENERGY CENTER 138KV'	187.8892	0.0005	-0.40136	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086		'LAWRENCE ENERGY CENTER 230KV'	230.3248	0.01814	-0.419	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.01953	-0.42039	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086		'WACO 138KV'	17.946		-0.39661	13
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067	WERE	'CHANUTE 69KV'	56.296	0.00259	-0.40326	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067	WERE	'CITY OF AUGUSTA 69KV'	19.63601	0.00123	-0.4019	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067	WERE	'CITY OF BURLINGTON 69KV'	4.8	0.00472	-0.40539	13
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067		'CITY OF IOLA 69KV'	24.256	0.00297	-0.40364	13
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067	WERE	'CITY OF MULVANE 69KV'	4.891	-0.00107	-0.3996	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067	WERE	'CITY OF WELLINGTON 69KV'	20	-0.00235	-0.39832	13
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00472	-0.40539	13
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067		'EVANS ENERGY CENTER 138KV'	187.8892	0.0005	-0.40117	13
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067		'LAWRENCE ENERGY CENTER 230KV'	230.3248	0.01814	-0.41881	13
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067		'TECUMSEH ENERGY CENTER 115KV'	108	0.01953	-0.4202	13
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067		'WACO 138KV'	17.946	-0.00425	-0.39642	13
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.40086		'COLBY 115KV'	6.36216	-0.07624	-0.32462	16
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40067	WERE	'COLBY 115KV'	6.36216	-0.07624	-0.32443	16
WERE	'PAWNEE 115KV'	999	-0.21561	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.02831	-0.24392	22
WERE	'PAWNEE 115KV'	999	-0.21561		'JEFFREY ENERGY CENTER 345KV'	940	0.02952	-0.24513	
WERE	'PAWNEE 115KV'	999	-0.21561	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.01953	-0.23514	22

WERE	'RICE 115KV'	999	-0.21561 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.02831	-0.24392	22
WERE	'RICE 115KV'	999	-0.21561 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02952	-0.24513	22
WERE	'RICE 115KV'	999	-0.21561 WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.01953	-0.23514	22
WERE	'ST JOHN 115KV'	7.5	-0.21561 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.02831	-0.24392	22
WERE	'ST JOHN 115KV'	7.5	-0.21561 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02952	-0.24513	22
WERE	'ST JOHN 115KV'	7.5	-0.21561 WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.01953	-0.23514	22
WERE	'PAWNEE 115KV'	999	-0.21561 WERE	'LAWRENCE ENERGY CENTER 230KV'	230.3248	0.01814	-0.23375	23
WERE	'RICE 115KV'	999	-0.21561 WERE	'LAWRENCE ENERGY CENTER 230KV'	230.3248	0.01814	-0.23375	23
WERE	'PAWNEE 115KV'	999	-0.21561 WERE	'CHANUTE 69KV'	56.296	0.00259	-0.2182	24
WERE	'PAWNEE 115KV'	999	-0.21561 WERE	'CITY OF AUGUSTA 69KV'	19.63601	0.00123	-0,21684	24
WERE	'PAWNEE 115KV'	999	-0.21561 WERE	'CITY OF IOLA 69KV'	24.256	0.00297	-0.21858	24
WERE	'PAWNEE 115KV'	999	-0.21561 WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00472	-0.22033	24
WERE	'PAWNEE 115KV'	999	-0.21561 WERE	'EVANS ENERGY CENTER 138KV'	187.8892	0.0005	-0.21611	24
WERE	'RICE 115KV'	999	-0.21561 WERE	'CHANUTE 69KV'	56.296	0.00259	-0.2182	24
WERE	'RICE 115KV'	999	-0.21561 WERE	'CITY OF AUGUSTA 69KV'	19.63601	0.00123	-0.21684	24
WERE	'RICE 115KV'	999	-0.21561 WERE	'CITY OF IOLA 69KV'	24.256	0.00297	-0.21858	24
WERE	'RICE 115KV'	999	-0.21561 WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00472	-0.22033	24
WERE	'RICE 115KV'	999	-0.21561 WERE	'EVANS ENERGY CENTER 138KV'	187.8892	0.0005	-0.21611	24
WERE	'GREAT BEND PLANT 69KV'	10	-0.17964 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.02831	-0.20795	25
WERE	'GREAT BEND PLANT 69KV'	10	-0.17964 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02051	-0.20916	25
WERE	'PAWNEE 115KV'	999	-0.21561 WERE	'CITY OF WELLINGTON 69KV'	20	-0.00235	-0.21326	25
WERE	'PAWNEE 115KV'	999	-0.21561 WERE	'WACO 138KV'	17.946	-0.00235	-0.21136	25
WERE	'RICE 115KV'	999	-0.21561 WERE	'CITY OF WELLINGTON 69KV'	20	-0.00235	-0.21326	25
WERE	'RICE 115KV'	999	-0.21561 WERE	'WACO 138KV'	17.946	-0.00235	-0.21136	25
WERE	'GREAT BEND PLANT 69KV'	10	-0.17964 WERE	TECUMSEH ENERGY CENTER 115KV	108	0.00423	-0.19917	26
WERE	'GREAT BEND PLANT 69KV'	10	-0.17964 WERE	'LAWRENCE ENERGY CENTER 230KV'	230.3248	0.01814	-0.19778	27
WERE	'GREAT BEND PLANT 69KV'	10	-0.17964 WERE	'CHANUTE 69KV'	56.296	0.00259	-0.18223	29
WERE	'GREAT BEND PLANT 69KV'	10	-0.17964 WERE	'CITY OF AUGUSTA 69KV'	19.63601	0.00123	-0.18087	29
WERE	'GREAT BEND PLANT 69KV'	10	-0.17964 WERE	'CITY OF IOLA 69KV'	24.256	0.00297	-0.18261	29
WERE	'GREAT BEND PLANT 69KV'	10	-0.17964 WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00472	-0.18436	29
WERE	'GREAT BEND PLANT 69KV'	10	-0.17964 WERE	'EVANS ENERGY CENTER 138KV'	187.8892	0.0005	-0.18014	29
WERE	'GREAT BEND PLANT 69KV'	10	-0.17964 WERE	'CITY OF WELLINGTON 69KV'	20	-0.00235	-0.17729	30
WERE	'GREAT BEND PLANT 69KV'	10	-0.17964 WERE	'WACO 138KV'	17.946	-0.00425	-0.17539	30
WERE	'KNOLL 3 115 115KV'	75	-0.09268 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02952	-0.1222	43
WERE	'KNOLL 3 115 115KV'	75	-0.09268 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.02831	-0.12099	44
WERE	'KNOLL 3 115 115KV'	75	-0.09268 WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.01953	-0.11221	47
WERE	'KNOLL 3 115 115KV'	75	-0.09268 WERE	'LAWRENCE ENERGY CENTER 230KV'	230,3248	0.01814	-0.11082	48
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50621 WERE	'HUTCHINSON ENERGY CENTER 115KV'	40	-0.40086	-0.10535	50
WERE	'KNOLL 3 115 115KV'	75	-0.09268 WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00472	-0.0974	54
WERE	'KNOLL 3 115 115KV'	75	-0.09268 WERE	'CITY OF AUGUSTA 69KV'	19.63601	0.00123	-0.09391	56
WERE	'KNOLL 3 115 115KV'	75	-0.09268 WERE	'EVANS ENERGY CENTER 138KV'	187.8892	0.0005	-0.09318	57
WEPL	'A. M. MULLERGREN GENERATOR 115KV'	63	-0.17717 WEPL	'GRAY COUNTY WIND FARM 115KV'	60	-0.11561	-0.06156	86
WERE	'GILL ENERGY CENTER 138KV'	218	-0.00479 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02952	-0.03431	154
WERE	'GILL ENERGY CENTER 138KV'	218	-0.00479 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.02831	-0.0331	159
WERE	'GILL ENERGY CENTER 69KV'	118	-0.00342 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02952	-0.03294	160
WERE	'GILL ENERGY CENTER 69KV'	118	-0.00342 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.02831	-0.03173	166

WERE GILL ENERGY CENTER 69KV 118 -0.00342[WERE JEFFREY ENERGY CENTER 230KV Maximum Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified. Factor = Source GSF - Sink GSF Redispatch Amount = Relief Amount / Factor

Upgrade: WICHITA - RENO 345KV
Limiting Facility: NORTH AMERICAN PHILIPS - NORTH AMERICAN PHILIPS JUNCTION (SOUTH) 115KV CKT 1
Direction: From->To
Line Outage: EAST MCPHERSON - SUMMIT 230KV CKT 1
Flowgate: 57372573741568725867312207SH
Date Redispatch Needed: 6/1 - 10/1 Until EOC of Upgrade
Season Flowgate Identified: 2007 Summer Shoulder

| IAnnrenate Relief |

Reservation		Aggregate Relief Amount
1090817	2.9	8.1
1090964	4.0	8.1

1090817									
1090964	4.0								
1090965	1.2	8.1 Maximum		Sink Control		Maximum			Aggregate Redispatch
Source Control Area	Source		GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'ABILENE ENERGY CENTER 115KV'	18,23438	0.12191	-0.64406	13
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215		'CLAY CENTER JUNCTION 115KV'	11.825	0.09097	-0.61312	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'CHANUTE 69KV'	46,617	0.0031	-0.52525	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215		'CITY OF ERIE 69KV'	23,258	0.0031	-0.52525	15
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'CITY OF IOLA 69KV'	19.865	0.00354	-0.52569	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00569	-0.52784	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'EVANS ENERGY CENTER 138KV'	305	0.00086	-0.52301	15
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.033	-0.55515	15
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03435	-0.5565	15
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.02019	-0.54234	15
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.02119	-0.54334	15
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.0228	-0.54495	15
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248	WERE	'ABILENE ENERGY CENTER 115KV'	18.23438	0.12191	-0.54439	15
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229	WERE	'ABILENE ENERGY CENTER 115KV'	18.23438	0.12191	-0.5442	15
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'CITY OF MULVANE 69KV'	6.189	-0.00096	-0.52119	16
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'CITY OF WELLINGTON 69KV'	31.07001	-0.00251	-0.51964	16
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'GILL ENERGY CENTER 138KV'	77	-0.00519	-0.51696	16
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215	WERE	'WACO 138KV'	17.947	-0.00458	-0.51757	16
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248	WERE	'CLAY CENTER JUNCTION 115KV'	11.825	0.09097	-0.51345	16
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229	WERE	'CLAY CENTER JUNCTION 115KV'	11.825	0.09097	-0.51326	16
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.033	-0.45548	18
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03435	-0.45683	18
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.02019	-0.44267	18
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248	WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.02119	-0.44367	18
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.0228	-0.44528	18
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.033	-0.45529	18
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03435	-0.45664	18
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.02019	-0.44248	18
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229	WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.02119	-0.44348	18
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.0228	-0.44509	18
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248	WERE	'CHANUTE 69KV'	46.617	0.0031	-0.42558	19
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248	WERE	'CITY OF ERIE 69KV'	23.258	0.0031	-0.42558	19
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248	WERE	'CITY OF IOLA 69KV'	19.865	0.00354	-0.42602	19
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00569	-0.42817	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248	WERE	'EVANS ENERGY CENTER 138KV'	305	0.00086	-0.42334	. 19
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248		'GILL ENERGY CENTER 138KV'	77	-0.00519	-0.41729	19
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.42248		'WACO 138KV'	17.947	-0.00458	-0.4179	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229	WERE	'CHANUTE 69KV'	46.617	0.0031	-0.42539	19
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229		'CITY OF ERIE 69KV'	23.258	0.0031	-0.42539	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229	WERE	'CITY OF IOLA 69KV'	19.865	0.00354	-0.42583	19
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00569	-0.42798	19

	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229 WERE	'EVANS ENERGY CENTER 138KV'	305	0.00086	-0.42315	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229 WERE	'GILL ENERGY CENTER 138KV'	77	-0.00519	-0.4171	19
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.42229 WERE	'WACO 138KV'	17.947	-0.00458	-0.41771	19
WERE	'PAWNEE 115KV'	999	-0.24056 WERE	'ABILENE ENERGY CENTER 115KV'	18.23438	0.12191	-0.36247	22
WERE	'RICE 115KV'	999	-0.24056 WERE	'ABILENE ENERGY CENTER 115KV'	18.23438	0.12191	-0.36247	22
WERE	'ST JOHN 115KV'	7.5	-0.24056 WERE	'ABILENE ENERGY CENTER 115KV'	18.23438	0.12191	-0.36247	22
WERE	'PAWNEE 115KV'	999	-0.24056 WERE	'CLAY CENTER JUNCTION 115KV'	11.825	0.09097	-0.33153	24
WERE	'RICE 115KV'	999	-0.24056 WERE	'CLAY CENTER JUNCTION 115KV'	11.825	0.09097	-0.33153	24
WERE	'GREAT BEND PLANT 69KV'	10	-0.20969 WERE	'CLAY CENTER JUNCTION 115KV'	11.825	0.09097	-0.30066	27
WERE	'PAWNEE 115KV'	999	-0.24056 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03435	-0.27491	29
WERE	'RICE 115KV'	999	-0.24056 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03435	-0.27491	29
WERE	'PAWNEE 115KV'	999	-0.24056 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.033	-0.27356	30
WERE	'RICE 115KV'	999	-0.24056 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.033	-0.27356	30
WERE	'PAWNEE 115KV'	999	-0.24056 WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.02019	-0.26075	31
WERE	'PAWNEE 115KV'	999	-0.24056 WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.02119	-0.26175	31
WERE	'PAWNEE 115KV'	999	-0.24056 WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.0228	-0.26336	31
WERE	'RICE 115KV'	999	-0.24056 WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.02019	-0.26075	31
WERE	'RICE 115KV'	999	-0.24056 WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.02119	-0.26175	31
WERE	'RICE 115KV'	999	-0.24056 WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.0228	-0.26336	31
WERE	'PAWNEE 115KV'	999	-0.24056 WERE	'CITY OF ERIE 69KV'	23.258	0.0031	-0.24366	33
WERE	'PAWNEE 115KV'	999	-0.24056 WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00569	-0.24625	33
WERE	'RICE 115KV'	999	-0.24056 WERE	'CITY OF ERIE 69KV'	23.258	0.0031	-0.24366	33
WERE	'RICE 115KV'	999	-0.24056 WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00569	-0.24625	33
WERE	'PAWNEE 115KV'	999	-0.24056 WERE	'EVANS ENERGY CENTER 138KV'	305	0.00086		34
WERE	'PAWNEE 115KV'	999	-0.24056 WERE	'GILL ENERGY CENTER 138KV'	77	-0.00519		34
WERE	'PAWNEE 115KV'	999	-0.24056 WERE	'WACO 138KV'	17.947	-0.00458		34
WERE	'RICE 115KV'	999	-0.24056 WERE	'EVANS ENERGY CENTER 138KV'	305	0.00086		
WERE	'RICE 115KV'	999	-0.24056 WERE	'GILL ENERGY CENTER 138KV'	77	-0.00519	-0.23537	34
WERE	'RICE 115KV'	999	-0.24056 WERE	'WACO 138KV'	17.947	-0.00458	-0.23598	34
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.52215 WERE	'HUTCHINSON ENERGY CENTER 115KV'	80.00001	-0.42248	-0.09967	81
WERE	'KNOLL 3 115 115KV'	75	-0.04377 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03435		
WERE	'KNOLL 3 115 115KV'	75	-0.04377 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.033	-0.07677	105
WERE	'KNOLL 3 115 115KV'	75	-0.04377 WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.0228	-0.06657	122
WERE	'KNOLL 3 115 115KV'	75	-0.04377 WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.02119	-0.06496	125
WERE	'KNOLL 3 115 115KV'	75	-0.04377 WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.02019		126
WERE	'KNOLL 3 115 115KV'	75	-0.04377 WERE	'EVANS ENERGY CENTER 138KV'	305	0.00086		181
WERE	'GILL ENERGY CENTER 138KV'	118	-0.00519 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03435		205
WERE	'KNOLL 3 115 115KV'	75	-0.04377 WERE	'GILL ENERGY CENTER 138KV'	77	-0.00519	-0.03858	210
WERE	'GILL ENERGY CENTER 138KV'	118	-0.00519 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.033	-0.03819	
WERE	'GILL ENERGY CENTER 69KV'	118	-0.00364 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03435	-0.03799	213
WERE	'GILL ENERGY CENTER 69KV'	118	-0.00364 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.033	-0.03664	221
WERE	'EVANS ENERGY CENTER 138KV'	488	0.00086 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03435		242
WERE	'EVANS ENERGY CENTER 138KV'	488	0.00086 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.033		252
WERE	'LATHAM1234.0 345KV'	150	0.00285 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.03435	-0.0315	257
WERE	'LATHAM1234.0 345KV'	150	0.00285 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.033	-0.03015	268

Reservation

WICHITA - RENO 345KV
NORTH AMERICAN PHILIPS - NORTH AMERICAN PHILIPS JUNCTION (SOUTH) 115KV CKT 1
From->To
EAST MCPHERSON - SUMMIT 230KV CKT 1
57372573741568725687312207WP
12/1/07 - 4/1/08
2007 Winter Peak

[Aggregate Relief]

Upgrade: Limiting Facility: Direction: Line Outage: Flowgate: Date Redispatch Needed:

Relief Amount

Season Flowgate Identified:

1090817

1090617		14.1							
1090964	7.0	14.1	l						
1090965	2.0	14.1			1	1		,	
		Maximum		Sink Control					Aggregate
Source Control Area	Source		GSF	Area	Sink	Maximum Decrement(MW)	GSF	Factor	Redispatch Amount (MW)
WERE	BPU - CITY OF MCPHERSON 115KV		-0.50615		JEFFREY ENERGY CENTER 230KV	,		-0.53451	
WERE	BPU - CITY OF MCPHERSON 115KV	259 259	-0.50615		JEFFREY ENERGY CENTER 230KV	470 940		-0.53451	26
									26
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615		'LAWRENCE ENERGY CENTER 230KV'	169.36		-0.52434	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615		'CHANUTE 69KV'	34.818		-0.50878	28
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615		'CITY OF AUGUSTA 69KV'	14.628		-0.50742	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615		'CITY OF IOLA 69KV'	14.565	0.00301	-0.50916	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615		'CITY OF WELLINGTON 69KV'	20		-0.50384	- 28
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.95		-0.51091	28
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615		'EVANS ENERGY CENTER 138KV'	55		-0.50669	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615		'WACO 138KV'	17.93		-0.50194	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.40081		'JEFFREY ENERGY CENTER 230KV'	470		-0.42917	33
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.40081		'JEFFREY ENERGY CENTER 345KV'	940		-0.43038	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40061		'JEFFREY ENERGY CENTER 230KV'	470		-0.42897	33
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40061		'JEFFREY ENERGY CENTER 345KV'	940		-0.43018	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.40081		'LAWRENCE ENERGY CENTER 230KV'	169.36			
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40061		'LAWRENCE ENERGY CENTER 230KV'	169.36		-0.4188	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.40081		'CITY OF AUGUSTA 69KV'	14.628		-0.40208	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.40081	WERE	'CITY OF WELLINGTON 69KV'	20	-0.00231	-0.3985	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.40081	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.95	0.00476	-0.40557	35
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.40081	WERE	'EVANS ENERGY CENTER 138KV'	55		-0.40135	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40061	WERE	'CITY OF AUGUSTA 69KV'	14.628	0.00127	-0.40188	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40061	WERE	'CITY OF WELLINGTON 69KV'	20	-0.00231	-0.3983	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40061	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.95	0.00476	-0.40537	35
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40061	WERE	'EVANS ENERGY CENTER 138KV'	55	0.00054	-0.40115	35
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.40081	WERE	'WACO 138KV'	17.93	-0.00421	-0.3966	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40061	WERE	'WACO 138KV'	17.93	-0.00421	-0.3964	36
WERE	'PAWNEE 115KV'	999	-0.21556	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02957	-0.24513	57
WERE	'RICE 115KV'	999	-0.21556	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02957	-0.24513	57
WERE	'PAWNEE 115KV'	999	-0.21556	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.02836	-0.24392	58
WERE	'RICE 115KV'	999	-0.21556	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.02836	-0.24392	58
WERE	'PAWNEE 115KV'	999	-0.21556	WERE	'LAWRENCE ENERGY CENTER 230KV'	169.36	0.01819	-0.23375	60
WERE	'RICE 115KV'	999	-0.21556	WERE	'LAWRENCE ENERGY CENTER 230KV'	169.36	0.01819	-0.23375	60
WERE	'PAWNEE 115KV'	999	-0.21556	WERE	'EVANS ENERGY CENTER 138KV'	55	0.00054	-0.2161	65
WERE	'RICE 115KV'	999	-0.21556		'EVANS ENERGY CENTER 138KV'	55		-0.2161	
WERE	'KNOLL 3 115 115KV'	75			'JEFFREY ENERGY CENTER 345KV'	940		-0.12219	
WERE	'KNOLL 3 115 115KV'	75	-0.09262		'JEFFREY ENERGY CENTER 230KV'	470		-0.12098	
WERE	'KNOLL 3 115 115KV'	75	-0.09262		'LAWRENCE ENERGY CENTER 230KV'	169.36		-0.11081	12
WERE	'KNOLL 3 115 115KV'	75	-0.09262		'EVANS ENERGY CENTER 138KV'	55		-0.09316	
WERE	'GILL ENERGY CENTER 138KV'	218	-0.00475		JEFFREY ENERGY CENTER 345KV'	940		-0.03432	
WERE	GILL ENERGY CENTER 138KV'	218	-0.00475		JEFFREY ENERGY CENTER 230KV	470		-0.03432	42
YEILE	OILL LINE NOT OF MALEY 199KA	210	-0.00473	**LI\L	OLITICE ENERGY CENTER 250RV	470	0.02030	-0.00011	42

PYERS | GILL ENERGY CENTER 136KV | 218 | -0.00475|WERE | JEFFREY ENERGY CENTER 230KV | AWAINIUM Decrement and Maximum Increment were determine from the Souce and Sink Operating Points in the study models where limiting facility was identified. Factor = Source GSF - Sink GSF

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

Redispatch Amount = Relief Amount / Factor

 Upgrade:
 WICHITA - RENO 345KV

 Limiting Facility:
 NORTH AMERICAN PHILIPS - NORTH AMERICAN PHILIPS JUNCTION (SOUTH) 115KV CKT 1

 Direction:
 From:>To

 Line Outage:
 EAST MCPHERSON - SUMMIT 230KV CKT 1

 Flowgate:
 57372573741568725687314208WP

 Date Redispatch Needed:
 Starting 2008 12/1 - 4/1 Until EOC

 Season Flowagite Identified:
 2008 Winter Peak

Season Flowgate Identified:	2008 Winter Peak		
Reservation	Relief Amount		Aggregate Relief Amount
1090817		0.8	4.4
1090829		0.6	4.4
1090917		0.4	4.4
1090919		0.1	4.4
1090920		0.6	4.4
1090921		0.2	4.4
1090964	·	1.1	4.4
1090965		0.4	4.4
1001057			

1090964	1.1	4.4							
1090965 1091057	0.4 0.4	4.4							
1031037	0.4	4.4							Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF 0.50045	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE WERE	'BPU - CITY OF MCPHERSON 115KV' 'BPU - CITY OF MCPHERSON 115KV'	259 259	-0.50615 -0.50615	WERE WERE	'CLAY CENTER JUNCTION 115KV' JEFFREY ENERGY CENTER 230KV'	6.7 470	0.08529 0.02825	-0.59144 -0.5344	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02949	-0.53564	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615	WERE	'LAWRENCE ENERGY CENTER 230KV'	193.727	0.01813	-0.52428	8
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615	WERE	TECUMSEH ENERGY CENTER 115KV'	48	0.01951	-0.52566	
WERE WERE	'BPU - CITY OF MCPHERSON 115KV' 'BPU - CITY OF MCPHERSON 115KV'	259 259	-0.50615 -0.50615	WERE WERE	'CHANUTE 69KV' 'CITY OF AUGUSTA 69KV'	34.903 15.285	0.00262 0.0012	-0.50877 -0.50735	9
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615	WERE	'CITY OF BURLINGTON 69KV'	4.8	0.0012	-0.51082	9
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615	WERE	'CITY OF IOLA 69KV'	19.902	0.00302	-0.50917	9
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615	WERE	'CITY OF MULVANE 69KV'	3.921	-0.0011	-0.50505	9
WERE WERE	'BPU - CITY OF MCPHERSON 115KV' 'BPU - CITY OF MCPHERSON 115KV'	259 259	-0.50615 -0.50615	WERE WERE	CITY OF WELLINGTON 69KV'	20 19.61	-0.00237 0.00467	-0.50378 -0.51082	9
WERE	BPU - CITY OF MCPHERSON 115KV	259	-0.50615	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV' 'EVANS ENERGY CENTER 138KV'	19.61	0.00467	-0.51082	9
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.50615	WERE	'WACO 138KV'	17.414	-0.00428	-0.50187	9
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.4008	WERE	'CLAY CENTER JUNCTION 115KV'	6.7	0.08529	-0.48609	9
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67		WERE	CLAY CENTER JUNCTION 115KV	6.7	0.08529	-0.4857	9
WERE WERE	'BPU - CITY OF MCPHERSON 115KV' 'BPU - CITY OF MCPHERSON 115KV'	259 259	-0.50615 -0.50615	WERE WERE	'COLBY 115KV' 'KNOLL 3 115 115KV'	5.652049 75	-0.07459 -0.0925	-0.43156 -0.41365	10 11
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.4008	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.02825	-0.42905	10
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.4008	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02949	-0.43029	10
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.4008	WERE	'LAWRENCE ENERGY CENTER 230KV'	193.727	0.01813	-0.41893	11
WERE WERE	'HUTCHINSON ENERGY CENTER 115KV' 'HUTCHINSON ENERGY CENTER 69KV'	383 67	-0.4008 -0.40041	WERE WERE	TECUMSEH ENERGY CENTER 115KV' 'JEFFREY ENERGY CENTER 230KV'	48 470	0.01951 0.02825	-0.42031 -0.42866	11 10
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67		WERE	'JEFFREY ENERGY CENTER 230KV	940	0.02825	-0.42866	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40041	WERE	'LAWRENCE ENERGY CENTER 230KV'	193.727	0.01813	-0.41854	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40041	WERE	TECUMSEH ENERGY CENTER 115KV'	48	0.01951	-0.41992	
WERE WERE	'HUTCHINSON ENERGY CENTER 115KV' 'HUTCHINSON ENERGY CENTER 115KV'	383 383	-0.4008 -0.4008	WERE WERE	'CHANUTE 69KV' 'CITY OF AUGUSTA 69KV'	34.903 15.285	0.00262 0.0012	-0.40342 -0.402	11 11
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.4008	WERE	CITY OF AUGUSTA 69KV	15.285	0.0012	-0.40547	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.4008	WERE	'CITY OF IOLA 69KV'	19.902	0.00302	-0.40382	. 11
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.4008	WERE	'CITY OF MULVANE 69KV'	3.921	-0.0011	-0.3997	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.4008	WERE	'CITY OF WELLINGTON 69KV'	20	-0.00237	-0.39843	11
WERE WERE	'HUTCHINSON ENERGY CENTER 115KV' 'HUTCHINSON ENERGY CENTER 115KV'	383 383	-0.4008 -0.4008	WERE WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV' 'EVANS ENERGY CENTER 138KV'	19.61 110	0.00467 0.00047	-0.40547 -0.40127	11
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.4008	WERE	'WACO 138KV'	17.414	-0.00428	-0.39652	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67		WERE	'CHANUTE 69KV'	34.903	0.00262	-0.40303	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67		WERE	'CITY OF AUGUSTA 69KV'	15.285	0.0012	-0.40161	11
WERE WERE	'HUTCHINSON ENERGY CENTER 69KV' 'HUTCHINSON ENERGY CENTER 69KV'	67 67		WERE WERE	'CITY OF BURLINGTON 69KV' 'CITY OF IOLA 69KV'	4.8 19.902	0.00467 0.00302	-0.40508 -0.40343	11 11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67		WERE	CITY OF IOLA 69KV	3.921	-0.0011	-0.40343	11
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67		WERE	'CITY OF WELLINGTON 69KV'	20	-0.00237	-0.39804	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67		WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.61	0.00467	-0.40508	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67		WERE	EVANS ENERGY CENTER 138KV	110	0.00047	-0.40088	
WERE WERE	'HUTCHINSON ENERGY CENTER 69KV' 'HUTCHINSON ENERGY CENTER 115KV'	67 383	-0.40041 -0.4008	WERE WERE	'WACO 138KV' 'COLBY 115KV'	17.414 5.652049	-0.00428 -0.07459	-0.39613 -0.32621	11 14
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67		WERE	'COLBY 115KV'	5.652049	-0.07459	-0.32582	14
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.4008	WERE	'KNOLL 3 115 115KV'	75	-0.0925	-0.3083	14
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.40041	WERE	'KNOLL 3 115 115KV'	75	-0.0925	-0.30791	14
WERE WERE	'PAWNEE 115KV' 'RICE 115KV'	999 999	-0.2156 -0.2156	WERE WERE	CLAY CENTER JUNCTION 115KV' CLAY CENTER JUNCTION 115KV'	6.7	0.08529 0.08529	-0.30089 -0.30089	
WERE	'ST JOHN 115KV'	7.5	-0.2156	WERE	'CLAY CENTER JUNCTION 115KV'	6.7	0.08529	-0.30089	
WERE	'GREAT BEND PLANT 69KV'	10		WERE	'CLAY CENTER JUNCTION 115KV'	6.7	0.08529	-0.26485	17
WERE	'PAWNEE 115KV'	999	-0.2156	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.02825	-0.24385	18
WERE WERE	'PAWNEE 115KV' 'RICE 115KV'	999 999	-0.2156 -0.2156	WERE WERE	JEFFREY ENERGY CENTER 345KV'	940 470	0.02949 0.02825	-0.24509 -0.24385	18 18
WERE	'RICE 115KV'	999	-0.2156	WERE	'JEFFREY ENERGY CENTER 230KV' 'JEFFREY ENERGY CENTER 345KV'	940	0.02825	-0.24385	
WERE	'ST JOHN 115KV'	7.5	-0.2156	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.02825	-0.24385	18
WERE	'ST JOHN 115KV'	7.5	-0.2156	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.02949	-0.24509	
WERE WERE	'PAWNEE 115KV' 'PAWNEE 115KV'	999 999	-0.2156 -0.2156	WERE WERE	'LAWRENCE ENERGY CENTER 230KV' TECUMSEH ENERGY CENTER 115KV'	193.727	0.01813 0.01951	-0.23373 -0.23511	
WERE	'RICE 115KV'	999	-0.2156	WERE	'LAWRENCE ENERGY CENTER 115KV	193.727	0.01951	-0.23373	19
WERE	'RICE 115KV'	999	-0.2156	WERE	TECUMSEH ENERGY CENTER 115KV'	48	0.01951	-0.23511	
WERE	'ST JOHN 115KV'	7.5	-0.2156	WERE	'LAWRENCE ENERGY CENTER 230KV'	193.727	0.01813	-0.23373	19
WERE	'ST JOHN 115KV'	7.5	-0.2156	WERE	TECUMSEH ENERGY CENTER 115KV'	48	0.01951	-0.23511	
WERE WERE	'PAWNEE 115KV' 'PAWNEE 115KV'	999 999	-0.2156 -0.2156	WERE WERE	'CHANUTE 69KV' 'CITY OF AUGUSTA 69KV'	34.903 15.285	0.00262	-0.21822 -0.2168	20 21
WERE	'PAWNEE 115KV'	999	-0.2156	WERE	'CITY OF IOLA 69KV'	19.902	0.00302	-0.21862	20
WERE	'PAWNEE 115KV'	999	-0.2156		'CITY OF WELLINGTON 69KV'	20	-0.00237	-0.21323	21
WERE	'PAWNEE 115KV'	999	-0.2156		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.61	0.00467	-0.22027	
WERE WERE	'PAWNEE 115KV' 'PAWNEE 115KV'	999 999	-0.2156 -0.2156		'EVANS ENERGY CENTER 138KV' 'WACO 138KV'	110 17.414		-0.21607 -0.21132	21
WERE	'RICE 115KV'	999			'CHANUTE 69KV'	34.903	0.00262	-0.21132	20
WERE	'RICE 115KV'	999	-0.2156	WERE	'CITY OF AUGUSTA 69KV'	15.285	0.0012	-0.2168	21
WERE	'RICE 115KV'	999		WERE	'CITY OF IOLA 69KV'	19.902	0.00302	-0.21862	
WERE	'RICE 115KV'	999	-0.2156	WERE	'CITY OF WELLINGTON 69KV' 'COFFEY COUNTY NO. 2 SHARPE 69KV'	20	-0.00237	-0.21323	
WERE WERE	'RICE 115KV' 'RICE 115KV'	999 999	-0.2156 -0.2156	WERE WERE	EVANS ENERGY CENTER 138KV	19.61 110	0.00467 0.00047	-0.22027 -0.21607	
WERE	'RICE 115KV'	999	-0.2156	WERE	'WACO 138KV'	17.414	-0.00428	-0.21132	
WERE	'ST JOHN 115KV'	7.5	-0.2156	WERE	'CHANUTE 69KV'	34.903	0.00262	-0.21822	20
WERE	'ST JOHN 115KV'	7.5	-0.2156	WERE	'CITY OF AUGUSTA 69KV'	15.285	0.0012	-0.2168	
WERE WERE	'ST JOHN 115KV' 'ST JOHN 115KV'	7.5 7.5	-0.2156 -0.2156	WERE WERE	'CITY OF IOLA 69KV' 'CITY OF WELLINGTON 69KV'	19.902	0.00302 -0.00237	-0.21862 -0.21323	
WERE	'ST JOHN 115KV'	7.5			'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.61	0.00237	-0.21323	
		1.0	J.L.100				2.30 .31		

WERE	'ST JOHN 115KV'	7.5	-0.2156	WERE	'EVANS ENERGY CENTER 138KV'	110	0.00047	-0.21607	21
WERE	'ST JOHN 115KV'	7.5	-0.2156	WERE	'WACO 138KV'	17.414	-0.00428	-0.21132	21
WERE	'GREAT BEND PLANT 69KV'	10	-0.17956		'JEFFREY ENERGY CENTER 230KV'	470	0.02825	-0.20781	21
WERE	'GREAT BEND PLANT 69KV'	10	-0.17956		'JEFFREY ENERGY CENTER 345KV'	940	0.02949	-0.20905	21
WERE	'GREAT BEND PLANT 69KV'	10	-0.17956	WERE	'LAWRENCE ENERGY CENTER 230KV'	193.727	0.01813	-0.19769	23
WERE	'GREAT BEND PLANT 69KV'	10	-0.17956	WERE	'TECUMSEH ENERGY CENTER 115KV'	48	0.01951	-0.19907	22
WERE	'GREAT BEND PLANT 69KV'	10	-0.17956	WERE	'CHANUTE 69KV'	34.903	0.00262	-0.18218	24
WERE	'GREAT BEND PLANT 69KV'	10	-0.17956	WERE	'CITY OF AUGUSTA 69KV'	15.285	0.0012	-0.18076	25
WERE	'GREAT BEND PLANT 69KV'	10	-0.17956	WERE	'CITY OF IOLA 69KV'	19.902	0.00302	-0.18258	24
WERE	'GREAT BEND PLANT 69KV'	10	-0.17956	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.61	0.00467	-0.18423	24
WERE	'GREAT BEND PLANT 69KV'	10	-0.17956	WERE	'CITY OF WELLINGTON 69KV'	20	-0.00237	-0.17719	25
WERE	'GREAT BEND PLANT 69KV'	10	-0.17956	WERE	'EVANS ENERGY CENTER 138KV'	110	0.00047	-0.18003	25
WERE	'GREAT BEND PLANT 69KV'	10	-0.17956	WERE	'WACO 138KV'	17.414	-0.00428	-0.17528	25
WERE	'PAWNEE 115KV'	999		WERE	'KNOLL 3 115 115KV'	75	-0.0925	-0.1231	36
WERE	'RICE 115KV'	999	-0.2156	WERE	'KNOLL 3 115 115KV'	75	-0.0925	-0.1231	36

Upgrade: Limiting Facility: Direction: WICHITA - RENO 345KV NORTH AMERICAN PHILIPS JUNCTION (SOUTH) - WEST MCPHERSON 115KV CKT 1

From-STO
EAST MCPHERSON - SUMMIT 230KV CKT 1
57374574381568725687312206WP
12/1/06 - 4/1/07

Line Outage:
Flowgate:
Date Redispatch Needed:
Season Flowgate Identified: 2006 Winter Peak

Reservation	Relief Amount	Aggregate Relief Amount
1090964	3.2	4.1

1090964	3.2	4.1							
			ł						
1090965	0.9	4.1			T	1			IA
				Sink Control					Aggregate
C C4! A	0	Maximum	005		Cial.	Maximum	GSF		Redispatch
Source Control Area	Source		GSF	Area	Sink	Decrement(MW)		Factor	Amount (MW)
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24288		'JEFFREY ENERGY CENTER 230KV'	470	0.01575	-0.25863	16
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24288		'JEFFREY ENERGY CENTER 345KV'	940	0.01637	-0.25925	16
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24288		'LAWRENCE ENERGY CENTER 230KV'	130.0238		-0.25316	16
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24288		'CHANUTE 69KV'	35.344	0.00143	-0.24431	17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24288		'CITY OF AUGUSTA 69KV'	17.25201	0.00045	-0.24333	17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24288		'CITY OF IOLA 69KV'	13.978		-0.24454	17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24288		'CITY OF WELLINGTON 69KV'	24	-0.00129	-0.24159	17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24288	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00266	-0.24554	17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24288	WERE	'EVANS ENERGY CENTER 138KV'	25.88745	0.00032	-0.2432	17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24288	WERE	'WACO 138KV'	17.953	-0.00227	-0.24061	17
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.19671	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01575	-0.21246	19
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.19671	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.01637	-0.21308	19
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19662	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01575	-0.21237	19
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19662	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.01637	-0.21299	19
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.19671	WERE	'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.01028	-0.20699	20
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19662	WERE	'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.01028	-0.2069	20
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.19671	WERE	'CHANUTE 69KV'	35.344	0.00143	-0.19814	. 2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.19671	WERE	'CITY OF AUGUSTA 69KV'	17,25201	0.00045	-0.19716	2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.19671	WERE	'CITY OF IOLA 69KV'	13,978		-0.19837	2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.19671	WERE	'CITY OF WELLINGTON 69KV'	24		-0.19542	2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.19671	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00266	-0.19937	2
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.19671	WERE	'EVANS ENERGY CENTER 138KV'	25.88745	0.00032	-0.19703	2.
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.19671	WERE	'WACO 138KV'	17.953	-0.00227	-0.19444	2
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19662		'CHANUTE 69KV'	35.344		-0.19805	2
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19662	WERE	'CITY OF AUGUSTA 69KV'	17.25201	0.00045	-0.19707	2
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19662		CITY OF AGGGSTA GSKV	13.978		-0.19828	2.
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19662		'CITY OF WELLINGTON 69KV'	13.970	-0.00100	-0.19533	2.
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19662		COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00123	-0.19928	2.
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19662	WERE	EVANS ENERGY CENTER 138KV	25.88745		-0.19920	2
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19662		WACO 138KV	25.88745	-0.00227	-0.19694	2
WERE	PAWNEE 115KV	999	-0.19662		JEFFREY ENERGY CENTER 230KV	470	0.01575	-0.19435	32
		999			JEFFREY ENERGY CENTER 230KV	940			32
WERE	'PAWNEE 115KV'		-0.1139				0.01637	-0.13027	
WERE	'RICE 115KV'	999	-0.1139		'JEFFREY ENERGY CENTER 230KV'	470	0.01575	-0.12965	32
WERE	'RICE 115KV'	999	-0.1139		'JEFFREY ENERGY CENTER 345KV'	940	0.01637	-0.13027	32
WERE	'PAWNEE 115KV'	999	-0.1139		'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.01028	-0.12418	33
WERE	'RICE 115KV'	999	-0.1139		'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.01028	-0.12418	33
WERE	'PAWNEE 115KV'	999	-0.1139		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00266	-0.11656	35
WERE	'RICE 115KV'	999	-0.1139		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00266	-0.11656	3.
WERE	'PAWNEE 115KV'	999	-0.1139		'CITY OF AUGUSTA 69KV'	17.25201	0.00045	-0.11435	36
WERE	'PAWNEE 115KV'	999	-0.1139		'EVANS ENERGY CENTER 138KV'	25.88745	0.00032	-0.11422	36
WERE	'RICE 115KV'	999	-0.1139		'CITY OF AUGUSTA 69KV'	17.25201	0.00045	-0.11435	36
WERE	'RICE 115KV'	999	-0.1139		'EVANS ENERGY CENTER 138KV'	25.88745		-0.11422	36
WERE	'PAWNEE 115KV'	999	-0.1139		'CITY OF WELLINGTON 69KV'	24		-0.11261	37
WERE	'PAWNEE 115KV'	999	-0.1139	WERE	'WACO 138KV'	17.953	-0.00227	-0.11163	37
WERE	'RICE 115KV'	999	-0.1139	WERE	'CITY OF WELLINGTON 69KV'	24	-0.00129	-0.11261	37
WERE	'RICE 115KV'	999	-0.1139	WERE	'WACO 138KV'	17.953	-0.00227	-0.11163	37
WEPL	'A. M. MULLERGREN GENERATOR 115KV'	63	-0.10301	WEPL	'GRAY COUNTY WIND FARM 115KV'	73	-0.06549	-0.03752	110
WERE	'KNOLL 3 115 115KV'	75	-0.01862	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.01637	-0.03499	118
WERE	'KNOLL 3 115 115KV'	75	-0.01862	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01575	-0.03437	120

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

Redispatch Amount = Relief Amount / Factor

WICHITA - RENO 345KV NORTH AMERICAN PHILIPS JUNCTION (SOUTH) - WEST MCPHERSON 115KV CKT 1 From->To EAST MCPHERSON - SUMMIT 230KV CKT 1 Upgrade: Limiting Facility: Direction: Line Outage:

Plowgate: 57374574981588725687312207FA

Date Redispatch Needed: Starting 2007 10/1 - 12/1 Until EOC of Upgrade
Season Flowgate Identified: 2007 Fall Peak

Reservation		Aggregate Relief Amount
1090817	2.2	6.1
1090964	3.1	6.1
1090965	0.9	6.1

									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2354	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01317	-0.24857	25
	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2354	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.01373	-0.24913	25
	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2354	WERE	'LAWRENCE ENERGY CENTER 230KV'	230.3248	0.00844	-0.24384	25
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2354	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00908	-0.24448	25

WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2354 WERE	'CHANUTE 69KV'	56.296	0.0012	-0.2366	26
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2354 WERE	'CITY OF AUGUSTA 69KV'	19.63601	0.00057	-0.23597	26
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2354 WERE	'CITY OF IOLA 69KV'	24.256	0.00138	-0.23678	26
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2354 WERE	'CITY OF WELLINGTON 69KV'	20	-0.00109	-0.23431	26
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2354 WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.0022	-0.2376	26
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2354 WERE	'EVANS ENERGY CENTER 138KV'	187.8892	0.00023	-0.23563	26
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2354 WERE	'WACO 138KV'	17.946	-0.00198	-0.23342	26
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.18641 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01317	-0.19958	31
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.18641 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.01373	-0.20014	31
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.18641 WERE	'LAWRENCE ENERGY CENTER 230KV'	230.3248	0.00844	-0.19485	31
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.18641 WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00908	-0.19549	31
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.18632 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01317	-0.19949	31
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.18632 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.01373	-0.20005	31
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.18632 WERE	'LAWRENCE ENERGY CENTER 230KV'	230.3248	0.00844	-0.19476	31
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.18632 WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00908	-0.1954	31
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.18641 WERE	'CITY OF AUGUSTA 69KV'	19.63601	0.00057	-0.18698	33
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.18641 WERE	'CITY OF IOLA 69KV'	24.256	0.00138	-0.18779	33
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.18641 WERE	'CITY OF WELLINGTON 69KV'	20	-0.00109	-0.18532	33
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.18641 WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.0022	-0.18861	33
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.18641 WERE	'EVANS ENERGY CENTER 138KV'	187.8892	0.00023	-0.18664	33
WERE	'HUTCHINSON ENERGY CENTER 115KV'	343	-0.18641 WERE	'WACO 138KV'	17.946	-0.00198	-0.18443	33
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.18632 WERE	'CITY OF AUGUSTA 69KV'	19.63601	0.00057	-0.18689	33
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.18632 WERE	'CITY OF IOLA 69KV'	24.256	0.00138	-0.1877	33
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.18632 WERE	'CITY OF WELLINGTON 69KV'	20	-0.00109	-0.18523	33
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.18632 WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.0022	-0.18852	33
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.18632 WERE	'EVANS ENERGY CENTER 138KV'	187.8892	0.00023	-0.18655	33
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.18632 WERE	'WACO 138KV'	17.946	-0.00198	-0.18434	33
WERE	'PAWNEE 115KV'	999	-0.10027 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01317	-0.11344	54
WERE	'PAWNEE 115KV'	999	-0.10027 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.01373	-0.114	54
WERE	'RICE 115KV'	999	-0.10027 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01317	-0.11344	54
WERE	'RICE 115KV'	999	-0.10027 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.01373	-0.114	54
WERE	'PAWNEE 115KV'	999	-0.10027 WERE	'LAWRENCE ENERGY CENTER 230KV'	230.3248	0.00844	-0.10871	56
WERE	'PAWNEE 115KV'	999	-0.10027 WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00908	-0.10935	56
WERE	'RICE 115KV'	999	-0.10027 WERE	'LAWRENCE ENERGY CENTER 230KV'	230.3248	0.00844	-0.10871	56
WERE	'RICE 115KV'	999	-0.10027 WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00908	-0.10935	56
WERE	'PAWNEE 115KV'	999	-0.10027 WERE	'EVANS ENERGY CENTER 138KV'	187.8892	0.00023	-0.1005	61
WERE	'RICE 115KV'	999	-0.10027 WERE	'EVANS ENERGY CENTER 138KV'	187.8892	0.00023	-0.1005	61
WERE	'KNOLL 3 115 115KV'	75	-0.0431 WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.01373	-0.05683	108
WERE	'KNOLL 3 115 115KV'	75	-0.0431 WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01317	-0.05627	109
WERE	'KNOLL 3 115 115KV'	75	-0.0431 WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.00908	-0.05218	118
WERE	'KNOLL 3 115 115KV'	75	-0.0431 WERE	'LAWRENCE ENERGY CENTER 230KV'	230.3248	0.00844	-0.05154	119
WERE	'KNOLL 3 115 115KV'	75	-0.0431 WERE	'EVANS ENERGY CENTER 138KV'	187.8892	0.00023	-0.04333	142

Aggregate Amount

Reservation

WICHITA - RENO 345KV
NORTH AMERICAN PHILIPS JUNCTION (SOUTH) - WEST MCPHERSON 115KV CKT 1
From->To
EAST MCPHERSON - SUMMIT 230KV CKT 1
57374574381568725687312207SH
6/1 - 10/1 Until EOC of Upgrade
2007 Summer Shoulder

[Agoregate Relief] Upgrade: Limiting Facility: Direction: Line Outage: Flowgate: Date Redispatch Needed: Season Flowgate Identified:

Relief Amount

1090817									
1090964	3.9								
1090965	1.1	7.7							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	,	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281		'ABILENE ENERGY CENTER 115KV'	18.23438	0.05669	-0.2995	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281		'CLAY CENTER JUNCTION 115KV'	11.825	0.0423	-0.28511	27
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281		'JEFFREY ENERGY CENTER 230KV'	470		-0.25815	30
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281		'JEFFREY ENERGY CENTER 345KV'	940	0.01597	-0.25878	30
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.00939	-0.2522	31
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281		'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00986	-0.25267	31
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281		'TECUMSEH ENERGY CENTER 115KV'	108	0.0106	-0.25341	31
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.19647		'ABILENE ENERGY CENTER 115KV'	18.23438	0.05669	-0.25316	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19638		'ABILENE ENERGY CENTER 115KV'	18.23438	0.05669	-0.25307	31
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281	WERE	'CHANUTE 69KV'	46.617	0.00144	-0.24425	32
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281		'CITY OF ERIE 69KV'	23.258	0.00144	-0.24425	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96		-0.24545	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281	WERE	'EVANS ENERGY CENTER 138KV'	305	0.0004	-0.24321	32
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281	WERE	'GILL ENERGY CENTER 138KV'	77	-0.00241	-0.2404	32
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.24281	WERE	'WACO 138KV'	17.947		-0.24068	32
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.19647		'CLAY CENTER JUNCTION 115KV'	11.825	0.0423	-0.23877	32
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19638		'CLAY CENTER JUNCTION 115KV'	11.825	0.0423	-0.23868	32
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.19647		'JEFFREY ENERGY CENTER 345KV'	940	0.01597	-0.21244	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19638		'JEFFREY ENERGY CENTER 345KV'	940	0.01597	-0.21235	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.19647		'JEFFREY ENERGY CENTER 230KV'	470	0.01534	-0.21181	37
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.19647		'TECUMSEH ENERGY CENTER 115KV'	108		-0.20707	37
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19638		'JEFFREY ENERGY CENTER 230KV'	470	0.01534	-0.21172	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19638		'TECUMSEH ENERGY CENTER 115KV'	108	0.0106	-0.20698	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.19647		'LAWRENCE ENERGY CENTER 115KV'	60	0.00939	-0.20586	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.19647		'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00986	-0.20633	38
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19638		'LAWRENCE ENERGY CENTER 115KV'	60	0.00939	-0.20577	38
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19638		'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00986	-0.20624	38
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.19647		'CITY OF ERIE 69KV'	23.258	0.00144	-0.19791	39
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.19647		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00264	-0.19911	39
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.19647		'EVANS ENERGY CENTER 138KV'	305	0.0004	-0.19687	39
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19638		'CITY OF ERIE 69KV'	23.258	0.00144	-0.19782	39
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19638		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.96	0.00264	-0.19902	39
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19638		'EVANS ENERGY CENTER 138KV'	305	0.0004	-0.19678	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.19647		'GILL ENERGY CENTER 138KV'	77	0.000	-0.19406	40
WERE	'HUTCHINSON ENERGY CENTER 115KV'	303	-0.19647		'WACO 138KV'	17.947	-0.00213	-0.19434	40
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19638		'GILL ENERGY CENTER 138KV'	77	-0.00241	-0.19397	40
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19638		'WACO 138KV'	17.947	-0.00213	-0.19425	40
WERE	'PAWNEE 115KV'	999	-0.11187		'ABILENE ENERGY CENTER 115KV'	18.23438	0.05669	-0.16856	46
WERE	'RICE 115KV'	999	-0.11187		'ABILENE ENERGY CENTER 115KV'	18.23438	0.05669	-0.16856	46
WERE	'PAWNEE 115KV'	999	-0.11187		'JEFFREY ENERGY CENTER 230KV'	470	0.01534	-0.12721	61
WERE	'PAWNEE 115KV'	999	-0.11187		'JEFFREY ENERGY CENTER 345KV'	940	0.01597	-0.12784	61
WERE	'RICE 115KV'	999	-0.11187		'JEFFREY ENERGY CENTER 230KV'	470	0.01534	-0.12721	61
WERE	'RICE 115KV'	999	-0.11187		'JEFFREY ENERGY CENTER 345KV'	940	0.01597	-0.12784	61
WERE	'PAWNEE 115KV'	999	-0.11187		'TECUMSEH ENERGY CENTER 115KV'	108	0.0106	-0.12247	63
WERE	'RICE 115KV'	999	-0.11187	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.0106	-0.12247	63

WERE	'PAWNEE 115KV'	999	-0.11187	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.00939	-0.12126	64
WERE	'PAWNEE 115KV'	999	-0.11187	WERE	'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00986	-0.12173	64
WERE	'RICE 115KV'	999	-0.11187	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.00939	-0.12126	64
WERE	'RICE 115KV'	999	-0.11187		'LAWRENCE ENERGY CENTER 230KV'	230.2191	0.00986	-0.12173	64
WERE	'PAWNEE 115KV'	999			'CITY OF ERIE 69KV'	23.258	0.00144	-0.11331	68
WERE	'RICE 115KV'	999	-0.11187	WERE	'CITY OF ERIE 69KV'	23.258	0.00144	-0.11331	68
WERE	'PAWNEE 115KV'	999			'EVANS ENERGY CENTER 138KV'	305	0.0004	-0.11227	69
WERE	'RICE 115KV'	999			'EVANS ENERGY CENTER 138KV'	305	0.0004	-0.11227	69
WERE	'PAWNEE 115KV'	999	-0.11187		'GILL ENERGY CENTER 138KV'	77	-0.00241	-0.10946	71
WERE	'RICE 115KV'	999	-0.11187	WERE	'GILL ENERGY CENTER 138KV'	77	-0.00241	-0.10946	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259			'HUTCHINSON ENERGY CENTER 115KV'	80.00001	-0.19647	-0.04634	167
WERE	'KNOLL 3 115 115KV'	75	-0.02035		'JEFFREY ENERGY CENTER 345KV'	940	0.01597	-0.03632	
WERE	'KNOLL 3 115 115KV'	75	-0.02035	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01534	-0.03569	217
WERE	'KNOLL 3 115 115KV'	75	-0.02035	WERE	'TECUMSEH ENERGY CENTER 115KV'	108	0.0106	-0.03095	250

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

Aggregate Relief Amount

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

WICHITA - RENO 345KV NORTH AMERICAN PHILIPS JUNCTION (SOUTH) - WEST MCPHERSON 115KV CKT 1 From->TO EAST MCPHERSON - SUMMIT 230KV CKT 1 Upgrade: Limiting Facility: Direction:

Line Outage: Flowgate: Date Redispatch Needed: 57374574381568725687312207WP 12/1/07 - 4/1/08 2007 Winter Peak

Season Flowgate Identified:

		Aggregate Relief							
Reservation	Relief Amount	Amount							
1090817		6.5							
1090964		6.5							
1090965	0.9	6.5							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'BPU - CITY OF MCPHERSON 115KV'	259			'JEFFREY ENERGY CENTER 230KV'	470	0.01319	-0.24857	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		'JEFFREY ENERGY CENTER 345KV'	940	0.01375	-0.24913	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		'LAWRENCE ENERGY CENTER 230KV'	169.36	0.00846	-0.24384	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		'CHANUTE 69KV'	34.818	0.00122	-0.2366	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		'CITY OF AUGUSTA 69KV'	14.628	0.00059	-0.23597	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		'CITY OF IOLA 69KV'	14.565	0.0014	-0.23678	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		'CITY OF WELLINGTON 69KV'	20	-0.00108	-0.2343	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.95	0.00222	-0.2376	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		'EVANS ENERGY CENTER 138KV'	55	0.00025	-0.23563	28
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		'WACO 138KV'	17.93	-0.00196	-0.23342	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.18639		'JEFFREY ENERGY CENTER 230KV'	470	0.01319	-0.19958	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.18639		'JEFFREY ENERGY CENTER 345KV'	940	0.01375	-0.20014	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1863		'JEFFREY ENERGY CENTER 230KV'	470	0.01319	-0.19949	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1863		'JEFFREY ENERGY CENTER 345KV'	940	0.01375	-0.20005	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.18639		'LAWRENCE ENERGY CENTER 230KV'	169.36	0.00846	-0.19485	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1863		'LAWRENCE ENERGY CENTER 230KV'	169.36	0.00846	-0.19476	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.18639		'CITY OF AUGUSTA 69KV'	14.628	0.00059	-0.18698	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.18639		'CITY OF WELLINGTON 69KV'	20	-0.00108	-0.18531	35
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.18639		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.95	0.00222	-0.18861	35
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.18639		'EVANS ENERGY CENTER 138KV'	55	0.00025	-0.18664	35
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1863		'CITY OF AUGUSTA 69KV'	14.628	0.00059	-0.18689	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1863		'CITY OF WELLINGTON 69KV'	20	-0.00108	-0.18522	35
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1863		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.95	0.00222	-0.18852	35
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1863		'EVANS ENERGY CENTER 138KV'	55	0.00025	-0.18655	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.18639		'WACO 138KV'	17.93	-0.00196	-0.18443	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1863		'WACO 138KV'	17.93	-0.00196	-0.18434	
WERE	'PAWNEE 115KV'	999	-0.10024		'JEFFREY ENERGY CENTER 345KV'	940	0.01375	-0.11399	
WERE	'RICE 115KV'	999	-0.10024		'JEFFREY ENERGY CENTER 345KV'	940	0.01375	-0.11399	
WERE	'PAWNEE 115KV'	999	-0.10024		'JEFFREY ENERGY CENTER 230KV'	470	0.01319	-0.11343	
WERE	'RICE 115KV'	999	-0.10024		'JEFFREY ENERGY CENTER 230KV'	470	0.01319	-0.11343	
WERE	'PAWNEE 115KV'	999	-0.10024		'LAWRENCE ENERGY CENTER 230KV'	169.36	0.00846	-0.1087	60
WERE	'RICE 115KV'	999	-0.10024		'LAWRENCE ENERGY CENTER 230KV'	169.36	0.00846	-0.1087	
WERE	'PAWNEE 115KV'	999	-0.10024		'EVANS ENERGY CENTER 138KV'	55	0.00025	-0.10049	
WERE	'RICE 115KV'	999	-0.10024		'EVANS ENERGY CENTER 138KV'	55	0.00025	-0.10049	
WERE	'KNOLL 3 115 115KV'	75	-0.04307		'JEFFREY ENERGY CENTER 345KV'	940	0.01375	-0.05682	115
WERE	'KNOLL 3 115 115KV'	75		WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01319	-0.05626	
WERE	'KNOLL 3 115 115KV'	75	-0.04307		'LAWRENCE ENERGY CENTER 230KV'	169.36	0.00846	-0.05153	
WERE	'KNOLL 3 115 115KV'	75	-0.04307	WERE	'EVANS ENERGY CENTER 138KV'	55	0.00025	-0.04332	151

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

Factor = Source GSF - Sink GSF

Redispatch Amount = Relief Amount / Factor

WICHITA - RENO 345KV
NORTH AMERICAN PHILIPS JUNCTION (SOUTH) - WEST MCPHERSON 115KV CKT 1
From->To
EAST MCPHERSON - SUMMIT 230KV CKT 1

Upgrade: WICHITA - RENO 345KV
Limiting Facility: NORTH AMERICAN PHILIPS JUNCTION (SC Direction: From-570
Line Outage: EAST MCPHERSON - SUMMIT 230KV CKT 1
Flowgate: 573745743815687256873142076
Starting 2007 4/1 - 6/1 Until EOC of Upgrade 52007 Spring Peak

Season Flowgate Identified:	2007 Spring Peak								
		Aggregate Relief							
	Relief Amount	Amount							
1090964		2.4							
1090965	0.5	2.4							
									Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'ABILENE ENERGY CENTER 115KV'	40	0.05672	-0.29952	8
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01537	-0.25817	9
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.016	-0.2588	9
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'TECUMSEH ENERGY CENTER 115KV'	68.00001	0.01063	-0.25343	9
WERE	'HUTCHINSON ENERGY CENTER 115KV'	300.5205	-0.19645	WERE	'ABILENE ENERGY CENTER 115KV'	40	0.05672	-0.25317	9
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.19636	WERE	'ABILENE ENERGY CENTER 115KV'	40	0.05672	-0.25308	9
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'CHANUTE 69KV'	40.39	0.00148	-0.24428	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'CITY OF AUGUSTA 69KV'	20.02	0.0008	-0.2436	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'CITY OF BURLINGTON 69KV'	4.8	0.00267	-0.24547	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'CITY OF IOLA 69KV'	17.08	0.00168	-0.24448	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'CITY OF MULVANE 69KV'	4.922	-0.00042	-0.24238	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'CITY OF WELLINGTON 69KV'	40.503	-0.00115	-0.24165	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	20.09	0.00267	-0.24547	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'EVANS ENERGY CENTER 138KV'	305	0.00042	-0.24322	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'GILL ENERGY CENTER 138KV'	155	-0.00239	-0.24041	10
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.2428	WERE	'LAWRENCE ENERGY CENTER 115KV'	60	0.00942	-0.25222	10

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

DEC.	===									
Color	WERE	'BPU - CITY OF MCPHERSON 115KV'	259			'LAWRENCE ENERGY CENTER 230KV'	227.1991	0.00988	-0.25268	10
WITHOUT WITH										10
NOTE										
WITTER W										11
DESCRIPTION OF COMPRESSOR 1909 250 2,500 NEED 2,500 NE										
NOTE										
WEET WITCHINGTON DEPROY CENTER 1180V 30,0000 0.1900 1.0900 0.19										
NOTES INCLINENCE DESIGN CENTER 1180/ 20.03316 0.1886/PREE COTY OF BURNATON (889/ 0.170 0.0007) 0.1891 1.1896/PREE 1.1897 0.1896/PREE										12
STATE NUTURNICO PREPROY CENTRE 1180/V 20.03.05 1.00000 1.00000 1.00000 1.00000 1.00000										
NOTES INCTINGUOS ERROY CENTRE 1180/										12
STATE STAT										
WITCH WITCHSOM DERECT CENTER 1985V 200.000 .0.00		HUTCHINSON ENERGY CENTER 115KV				CITY OF MULVANE 69KV				
OFFICE HILDSHOOD REPROVED THE TIDAY 200.000 .0.1										12
WARD										12
WATER NUTPHISON PREBY CENTRY 196V 200.000 -0.9869/PEEE NUTPHISON PREBY CENTRY 196V -0.9869/PEEE NUTPHISON PREBY		HUTCHINSON ENERGY CENTER 115KV								
WATER WATER-SON DERRY CENTRE TISKY			300.5205	-0.1964	WERE			-0.00239		12
WARDER MATCHINGTON ENERGY CENTRE 1150V		'HUTCHINSON ENERGY CENTER 115KV'								12
WATER NUTCHINGON ENERGY CENTER 1980Y 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0		'HUTCHINSON ENERGY CENTER 115KV'						0.0000		12
WERE										12
WARE HUTCHINSON BERRY CENTER 686Y 07 - 01869/WEEE CTYY OF AUGUSTA 686Y 0.00267 0.1060 1.176										12
WERE HUTCHINSON BERROY CENTER 60VY 07 0 10808/WERE CITY OF BURLINGTON 60VY 170 000050 1100051 1 1 1 1 1 1 1 1 1 1 1 1										12
WASE HJTCHHSOD BENEFY CENTER 809V 67 -0 1908/BVRE CTYP OF OLA 808V 177.00 201609 0 1909/BVRE CTYP OLA 808V 177.00 0 1909/BVRE CTYP OLA 808V 1								0.000		12
WASE HJTCHHSOD BENEFY CENTER 809V 67 -0 1908/BVRE CTYP OF OLA 808V 177.00 201609 0 1909/BVRE CTYP OLA 808V 177.00 0 1909/BVRE CTYP OLA 808V 1		'HUTCHINSON ENERGY CENTER 69KV'				'CITY OF BURLINGTON 69KV'				12
WERE HUTCHINSON ENERGY CENTER 966V 67 -0.1986/BUREE COTY OF WELLINGTON 966V 40.00 0.0007 0.1986/1 1980 1 19										12
WERE HUTCHNSON PERGY CENTER 60V 07 0.1965/0VEE (2018) 1880V 20.00 0.00007 0.19600 1 1 1 WERE HUTCHNSON PERGY CENTER 60V 07 0.0000/WEE (2018) 1880V 05 0.00007 0.19600 1 1 1 WERE HUTCHNSON PERGY CENTER 180V 07 0.0000/WEE (2018) 1880V 05 0.00007 0.19600 1 1 1 WERE HUTCHNSON PERGY CENTER 180V 07 0.0000/WEE (2018) 1 1 WERE HUTCHNSON PERGY CENTER 180V 07 0.0000/WEE (2018) 1 1 WERE HUTCHNSON PERGY CENTER 180V 07 0.0000/WEE (2018) 1 1 WERE HUTCHNSON PERGY CENTER 60V 07 0.0000/WEE (2018) 1 WERE HUTCHNSON PERGY CENTER 60V 07 0.0000/WEE (2018) 1 WERE HUTCHNSON PERGY CENTER 60V 07 0.0000/WEE (2018) 1 WERE HUTCHNSON PERGY CENTER 60V 07 0.0000/WEE (2018) 1 WERE HUTCHNSON PERGY CENTER 60V 07 0.0000/WEE (2018) 1 WERE HUTCHNSON PERGY CENTER 60V 07 0.0000/WEE (2018) 1 WERE HUTCHNSON PERGY CENTER 60V 07 0.0000/WEE (2018) 1 WERE HUTCHNSON PERGY CENTER 60V 07 0.0000/WEE (2018) 1 WERE HUTCHNSON PERGY CENTER 60V 07 0.0000/WEE (2018) 1 WERE HUTCHNSON PERGY CENTER 110V 07 0.0000/WEE (2018) 1										12
WERE HUTCHISSON ENERGY CENTER 69KV 67 0.1990/WERE (LANSENERGY CENTER 139KV) 200 0.00042 0.19978 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1										12
WERE HUTCHISSON ENERGY CENTER 69KV 67 0.1990/WERE (LANSENERGY CENTER 139KV) 200 0.00042 0.19978 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1										12
WERE HUTCHNSON DERROY CENTER 68KY 67 -0.19858/WERE LAWRENCE ENERGY CENTER 115KY 66 -0.00942 -0.2026 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1963	6 WERE	'EVANS ENERGY CENTER 138KV'	305	0.00042	-0.19678	12
WERE			67				155			12
WERE HUTCHINGON EMERGY CENTER 686V 67 -0.1985WINEE LAWRENCE EMERGY CENTER 230VV 227.1991 0.00988 -0.20024 1 1	WERE									12
WERE HUTCHINSON ENERGY CENTER 60KV 67 0.10858/WFRE TECUMSER ENERGY CENTER 118VV 86,00007 0.01063 - 2,02099 1 1 1 WERE HUTCHINSON ENERGY CENTER 60KV 67 0.01085/WFRE WALL AND CONTROL OF THE WERE HUTCHINSON ENERGY CENTER 118KV 60 0.0117 0.01052 1 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 60 0.005672 0.10856 1 1 1 WERE ST. JOHN 118W 7 2,0 0.0118 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.005672 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.01865 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.01865 0.01865 0.01865 0.01865 1 1 WERE HUTCHINSON ENERGY CENTER 118KV 90 0.01865 0.0			67				227.1991			12
WERE NUTCHINSON EMERGY CENTER 88KY 67 0.19858/WERE WAGO 138KY 18 0.00211 0.19428 1 WERE SALE 116KY 090 0.1118/WERE ABLINE EMERGY CENTER 115KY 40 0.00672 0.19558 1 WERE NCE116KY 900 0.1118/WERE ABLINE EMERGY CENTER 115KY 40 0.00672 0.19558 1 WERE NCE116KY 1907 0.00672 0.19558 1 WERE NUTCHINSON EMERGY CENTER 115KY 90 0.10567 0.19558 1 WERE NUTCHINSON EMERGY CENTER 115KY 90 0.00567 0.19558 1 WERE NUTCHINSON EMERGY CENTER 115KY 90 0.00567 0.19558 1 WERE NUTCHINSON EMERGY CENTER 115KY 90 0.05567 0.1958 1 WERE NUTCHINSON EMERGY CENTER 86KY 97 0.1958 1 WERE NUTCHINSON EMERGY CENTER 86KY 97 0.1958 1 WERE SALE 115KY 90 0.00567 0.1958 1 WERE PAWNEE 115KY 90 0.1118/WERE LIFERY EMERGY CENTER 115KY 90 0.00672 0.1958 1 WERE PAWNEE 115KY 90 0.1118/WERE LIFERY EMERGY CENTER 115KY 90 0.00572 0.1958 1 WERE PAWNEE 115KY 90 0.1118/WERE LIFERY EMERGY CENTER 13KY 90 0.00572 0.1958 1 WERE ST.COM 115KY 90 0.1118/WERE LIFERY EMERGY CENTER 13KY 90 0.00572 0.1958 1 WERE ST.COM 115KY 90 0.00572										12
WREE PAWNEE 115KV 999 -0.11180 WREE ABLENE NERGY CENTER 115KV 40 0.05672 -0.16895 1 WREE STJOHN 115KV 775 -0.11180 WREE ABLENE ENERGY CENTER 115KV 40 0.05672 -0.16895 1 WREE STJOHN 115KV 775 -0.11180 WREE ABLENE ENERGY CENTER 115KV 40 0.05672 -0.16895 1 WREE STJOHN 115KV 775 -0.11180 WREE ABLENE ENERGY CENTER 115KV 40 0.05672 -0.16895 1 WREE GREAT BEND PLANT 59KV 110 -0.0572 MINES WREE ABLENE ENERGY CENTER 115KV 40 0.05672 -0.16895 1 WREE GREAT BEND PLANT 59KV 110 -0.0573 MINES WREE PAWNEE 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 115KV 40 0.05677 -0.15422 1 WREE PAWNEE 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 20KV 40 0.05677 -0.15422 1 WREE RICCH 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 20KV 40 0.05677 -0.01527 -0.15422 1 WREE RICCH 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 40 0.05677 -0.01527 -0.15422 1 WREE RICCH 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 40 0.01537 -0.01527 -0.15422 1 WREE RICCH 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 40 0.01537 -0.01527 -0.15422 1 WREE RICCH 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 40 0.01537 -0.01527 -0.15422 1 WREE RICCH 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 40 0.016 -0.12726 1 WREE PAWNEE 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 40 0.016 -0.12726 1 WREE PAWNEE 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 40 0.016 -0.12726 1 WREE PAWNEE 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 40 0.0084 -0.016 -0.12726 1 WREE PAWNEE 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 40 0.0084 -0.012726 1 WREE PAWNEE 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 40 0.0084 -0.012726 1 WREE PAWNEE 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 50 0.0008 -0.012726 1 WREE PAWNEE 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 50 0.0008 -0.012726 1 WREE RICCH 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 50 0.0008 -0.012726 1 WREE RICCH 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 50 0.0008 -0.012726 1 WREE RICCH 115KV 999 -0.11180 WREE ABLENE ENERGY CENTER 30KV 50 0.0008 -0.012726 1 WREE RICCH 115										12
WERE RICE 118KY 999 -0.11180/WERE ABILENE ENERGY CENTER 119KV 40 0.06672 -0.16856 1 WERE HUTCHINSON ENERGY CENTER 119KV 900 -0.11180/WERE COLBY 115KV 6.18228 -0.03657 -0.16856 1 WERE HUTCHINSON ENERGY CENTER 119KV 900 -0.11860/WERE COLBY 115KV 6.18228 -0.03657 -0.16856 1 WERE PAWNEE 119KV 999 -0.11860/WERE COLBY 115KV 6.18228 -0.03657 -0.16826 1 WERE PAWNEE 119KV 999 -0.11860/WERE COLBY 115KV 6.18228 -0.03657 -0.16826 1 WERE PAWNEE 119KV 999 -0.11860/WERE SFFREY ENERGY CENTER 230KV 470 -0.01537 -0.12726 1 WERE RICE 119KV 999 -0.11860/WERE SFFREY ENERGY CENTER 230KV 470 -0.01537 -0.12726 1 WERE RICE 119KV 990 -0.111860/WERE SFFREY ENERGY CENTER 230KV 470 -0.01537 -0.12726 1 WERE RICE 119KV 991 -0.111860/WERE SFFREY ENERGY CENTER 230KV 470 -0.01537 -0.12722 1 WERE ST. JOHN 119KV 993 -0.111860/WERE SFFREY ENERGY CENTER 230KV 470 -0.01537 -0.12722 1 WERE ST. JOHN 119KV 7.5 -0.111860/WERE SFFREY ENERGY CENTER 230KV 940 -0.0153 -0.12722 1 WERE ST. JOHN 119KV 7.5 -0.111860/WERE SFFREY ENERGY CENTER 230KV 940 -0.0153 -0.12722 1 WERE PAWNEE 119KV 990 -0.111860/WERE SFFREY ENERGY CENTER 230KV 940 -0.0153 -0.12722 1 WERE PAWNEE 119KV 990 -0.111860/WERE SFFREY ENERGY CENTER 230KV 940 -0.0154 -0.12722 1 WERE PAWNEE 119KV 990 -0.111860/WERE SFFREY ENERGY CENTER 230KV 940 -0.0154 -0.12722 1 WERE PAWNEE 119KV 990 -0.111860/WERE SFFREY ENERGY CENTER 230KV 940 -0.0154 -0.12722 1 WERE RICE 119KV 990 -0.111860/WERE SFFREY ENERGY CENTER 230KV 940 -0.0154 -0.12722 1 WERE RICE 119KV 990 -0.111860/WERE SFFREY ENERGY CENTER 230KV 940 -0.0084 -0.12724 2 WERE RICE 119KV 990 -0.111860/WERE SFFREY ENERGY CENTER 230KV 940 -0.00886 -0.1274 2 WERE RICE 119KV 990 -0.111860/WERE SFFREY ENERGY CENTER 2										14
WERE STJOHN 115KV 7.5 -0.1168/WERE ABLENERGY CENTER 115KV 4.0 0.05672 -0.16898 1 WERE HUTCHINSON ENERGY CENTER 016VV 67 -0.1684/WERE COLBY 115KV 6.130238 -0.05655 -0.15991 1 WERE HUTCHINSON ENERGY CENTER 016VV 67 -0.1685/WERE COLBY 115KV 6.130238 -0.05655 -0.15991 1 WERE GREAT DEED PLANT 60KV 10 -0.0679/WERE COLBY 115KV 7.0 10 -0.06522 -0.15991 1 WERE REAL TO SERVE THE THE THE THE THE THE THE THE THE TH			999							14
WERE HUTCHINSON ENREGY CENTER 115KV 900,2008 - 0.1969 WIFEE COLBY 115KV 6.130238 - 0.08559 - 0.1969 1 1 WERE GREAT BENDE PLANT 69KV 97 - 0.19530 WERE COLBY 115KV 6.130238 - 0.08559 - 0.1969 1 1 WERE GREAT BENDE PLANT 69KV 99 - 0.11960 WIREE ABLENE ENREGY CENTER 115KV 40 0.06672 - 0.14522 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						'ABILENE ENERGY CENTER 115KV'				14
WERE HUTCHINSON ENREGY CENTER 696V 97 -019869/WERE COLEW 115KV 6.30238 -0.03856 -0.19981 1 1 WERE GREAT BERD PLANT 690 -0.0576 WERE PAWNEE 115KV 992 -0.1186 WERE JEFFRY ENREGY CENTER 236KV 470 -0.0567 -0.1722 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1										15
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WERE RICE 115KV' 999 -0.11186 WERE WACO 138KV' 18 -0.00211 -0.10975 2 WERE "ST JOHN 115KV" 7.5 -0.11186 WERE CITY OF WELLINGTON 69KV' 40.503 -0.00115 -0.1071 2 WERE "ST JOHN 115KV' 7.5 -0.11186 WERE GILL ENERGY CENTER 138KV' 155 -0.00239 -0.10947 2 WERE "ST JOHN 115KV' 7.5 -0.11186 WERE WACO 138KV' 18 -0.00231 -0.10947 2 WERE "GREAT BEND PLANT 69KV' 10 -0.0975 WERE CHANUTE 69KV' 40.39 0.00148 -0.0989 2 WERE "GREAT BEND PLANT 69KV' 10 -0.0975 WERE CITY OF AUGUSTA 69KV' 20.02 0.0008 -0.0983 2										22
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WERE 'ST JOHN 115KV' 7.5 -0.11186 WERE GILL ENERGY CENTER 138KV' 155 -0.00239 -0.10947 2 WERE 'ST JOHN 115KV' 7.5 -0.11186 WERE WACO 138KV 18 -0.00211 -0.10975 2 WERE 'GREAT BEND PLANT 69KV' 10 -0.0975 WERE 'CHANUTE 69KV' 40.39 0.00148 -0.09898 2 WERE 'GREAT BEND PLANT 69KV' 10 -0.0975 WERE 'CITY OF AUGUSTA 69KV' 20.02 0.0008 -0.0983 2	WERE	'RICE 115KV'	999	-0.1118	6 WERE		18	-0.00211	-0.10975	22
WERE ST JOHN 115KV' 7.5 -0.11186 WERE WACO 138KV' 18 -0.00211 -0.10975 2 WERE "GREAT BEND PLANT 69KV" 10 -0.0975 WERE CHANUTE 69KV' 40.39 0.00148 -0.09898 2 WERE "GREAT BEND PLANT 69KV" 10 -0.0975 WERE CITY OF AUGUSTA 69KV' 20.02 0.0008 -0.0983 2										22
WERE 'GREAT BEND PLANT 69KV' 10 -0.0975 WERE CHANUTE 69KV' 40.39 0.00148 -0.09898 2 WERE 'GREAT BEND PLANT 69KV' 10 -0.0975 WERE CITY OF AUGUSTA 69KV' 20.02 0.0008 -0.0983 2	WERE		7.5				155	-0.00239	-0.10947	22
WERE 'GREAT BEND PLANT 69KV' 10 -0.0975 WERE CHANUTE 69KV' 40.39 0.00148 -0.09898 2 WERE 'GREAT BEND PLANT 69KV' 10 -0.0975 WERE CITY OF AUGUSTA 69KV' 20.02 0.0008 -0.0983 2							ē			22
WERE GREAT BEND PLANT 69KV' 10 -0.0975 WERE CITY OF AUGUSTA 69KV' 20.02 0.0008 -0.0983 2	WERE		10			'CHANUTE 69KV'	40.39	0.00148	-0.09898	24
WERE GREAT BEND PLANT 69KV	WERE		10	-0.097	5 WERE		20.02		-0.0983	24
	WEDE		10	-0.097	5 WERE		17.08	0.00168	-0.09918	24

			Aggregate Relief
Reservation	Relief Amount		Amount
1090817		1.6	8.0
1090829		0.9	8.0
1090917		0.6	8.0
1090919		0.2	8.0
1090920		1.2	8.0
1090921		0.3	8.0
1090964		2.1	8.0
1090965		0.6	8.0
1091057		0.6	8.0

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'	259	-0.23538		JEFFREY ENERGY CENTER 230KV	470		-0.24852	2 32
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		JEFFREY ENERGY CENTER 345KV'	940		-0.24632	32
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		'LAWRENCE ENERGY CENTER 230KV'	193.727		-0.24381	33
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		TECUMSEH ENERGY CENTER 115KV	193.727		-0.24361	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		CHANUTE 69KV'	34.903	0.00307	-0.2366	34
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		'CITY OF AUGUSTA 69KV'	15.285	0.00056	-0.23594	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		CITY OF AGGGGTA GSKV	19.902		-0.23679	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		CITY OF WELLINGTON 69KV	19.302		-0.23428	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		COFFEY COUNTY NO. 2 SHARPE 69KV'	19.61	0.00217	-0.23755	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		'EVANS ENERGY CENTER 138KV'	110		-0.23756	34
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.23538		WACO 138KV	17.414	-0.00199	-0.23339	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.23338		'JEFFREY ENERGY CENTER 345KV'	940		-0.20009	40
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.18638		JEFFREY ENERGY CENTER 230KV	470		-0.19952	40
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.18638		'LAWRENCE ENERGY CENTER 230KV'	193.727		-0.19481	41
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.18638		TECUMSEH ENERGY CENTER 115KV	193.727		-0.19545	
WERE	'HUTCHINSON ENERGY CENTER 115KV	67	-0.1862		'JEFFREY ENERGY CENTER 230KV'	470		-0.19934	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1862		JEFFREY ENERGY CENTER 345KV'	940		-0.19934	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1862		LAWRENCE ENERGY CENTER 230KV	193,727	0.01371		
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1862		TECUMSEH ENERGY CENTER 115KV	193.727		-0.19463	41
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.1662		KNOLL 3 115 115KV	75		-0.19327	41
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.23536		CITY OF AUGUSTA 69KV	15.285	0.00056	-0.19237	42
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.18638		CITY OF AUGUSTA 69KV	15.265		-0.18528	43
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.18638		COFFEY COUNTY NO. 2 SHARPE 69KV'	19.61	0.00217	-0.18855	43
WERE	'HUTCHINSON ENERGY CENTER 115KV'	383	-0.18638		EVANS ENERGY CENTER 138KV	110		-0.1866	
WERE	'HUTCHINSON ENERGY CENTER 115KV	67	-0.1862		'CITY OF AUGUSTA 69KV'	15.285			
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1862		CITY OF AUGUSTA 69KV	15.265		-0.1851	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1862		COFFEY COUNTY NO. 2 SHARPE 69KV'	19.61	0.00217	-0.18837	43
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.1862		'EVANS ENERGY CENTER 138KV'	110		-0.18642	
WERE	'HUTCHINSON ENERGY CENTER 19KV'	383	-0.18638		WACO 138KV	17.414	-0.00199		
WERE	'HUTCHINSON ENERGY CENTER 115KV	67	-0.1862		WACO 138KV	17.414	-0.00199	-0.18421	43
WERE	'HUTCHINSON ENERGY CENTER 19KV'	383	-0.18638		'KNOLL 3 115 115KV'	75		-0.16421	56
WERE	'HUTCHINSON ENERGY CENTER 115KV	67	-0.1862		'KNOLL 3 115 115KV'	75		-0.14337	
WERE	'PAWNEE 115KV'	999	-0.10026		'JEFFREY ENERGY CENTER 345KV'	940		-0.14319	70
WERE	'RICE 115KV'	999	-0.10026		JEFFREY ENERGY CENTER 345KV	940		-0.11397	70
WERE	'PAWNEE 115KV'	999	-0.10026		JEFFREY ENERGY CENTER 230KV	470		-0.11397	
WERE	'RICE 115KV'	999	-0.10026		'JEFFREY ENERGY CENTER 230KV'	470		-0.1134	
WERE	'PAWNEE 115KV'	999	-0.10026		'LAWRENCE ENERGY CENTER 230KV'	193,727	0.01314		
WERE		999	-0.10026		TECUMSEH ENERGY CENTER 115KV	193.727		-0.10009	
WERE	'PAWNEE 115KV' 'RICE 115KV'	999	-0.10026		'LAWRENCE ENERGY CENTER 115KV	193,727	0.00907	-0.10933	
WERE	'RICE 115KV	999	-0.10026		TECUMSEH ENERGY CENTER 230KV	193.727		-0.10869	74
WERE	'PAWNEE 115KV'	999	-0.10026		EVANS ENERGY CENTER 115KV	110		-0.10933	
WERE	'RICE 115KV'	999	-0.10026						
		999			'EVANS ENERGY CENTER 138KV'	110 75		-0.10048 -0.05725	
WERE	'PAWNEE 115KV'	999	-0.10026		'KNOLL 3 115 115KV'	75			
WERE	'RICE 115KV' Maximum Increment were determine from the Source		-0.10026		'KNOLL 3 115 115KV'	/5	-0.04301	-0.05725	140

WICHITA - RENO 345KV
NORTH AMERICAN PHILIPS JUNCTION (SOUTH) - WEST MCPHERSON 115KV CKT 2
From->To
EAST MCPHERSON - SUMMIT 230KV CKT 1
57374574382568725687312206WP
12/1/06 - 4/1/107
2006 Winter Peak

Upgrade: Limiting Facility: Direction: Line Outage: Flowgate: Date Redispatch Needed: Season Flowgate Identified:

Reservation	Relief Amount	Aggregate Relief Amount	1						
109096									
109090									
103030	1.1	4.0			1	1	1		Aggregate
		Maximum		Sink Control		Maximum			Redispatch
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27941	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01812	-0.29753	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27941		'JEFFREY ENERGY CENTER 345KV'	940		-0.29824	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27941		'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.01183	-0.29124	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27941	WERE	'CHANUTE 69KV'	35.344	0.00165	-0.28106	3 17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27941	WERE	'CITY OF AUGUSTA 69KV'	17.25201	0.00051	-0.27992	2 17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27941	WERE	'CITY OF IOLA 69KV'	13.978	0.00191	-0.28132	2 17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27941	WERE	'CITY OF WELLINGTON 69KV'	24	-0.00148	-0.27793	3 17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27941	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00306	-0.28247	7 17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27941		'EVANS ENERGY CENTER 138KV'	25.88745	0.00037	-0.27978	3 17
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27941	WERE	'WACO 138KV'	17.953	-0.00261	-0.2768	3 17
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.2263	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01812	-0.24442	2 19
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.2263	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.01883	-0.24513	3 19
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.2262	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01812	-0.24432	2 19
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.2262	WERE	'JEFFREY ENERGY CENTER 345KV'	940		-0.24503	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.2263	WERE	'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.01183	-0.23813	3 20
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.2262		'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.01183	-0.23803	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.2263	WERE	'CHANUTE 69KV'	35.344	0.00165	-0.22795	5 21
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.2263	WERE	'CITY OF AUGUSTA 69KV'	17.25201	0.00051	-0.22681	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.2263		'CITY OF IOLA 69KV'	13.978		-0.22821	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.2263	WERE	'CITY OF WELLINGTON 69KV'	24	-0.00148	-0.22482	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.2263		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00306	-0.22936	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.2263		'EVANS ENERGY CENTER 138KV'	25.88745		-0.22667	
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.2263		'WACO 138KV'	17.953	-0.00261	-0.22369	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.2262		'CHANUTE 69KV'	35.344	0.00165	-0.22785	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67			'CITY OF AUGUSTA 69KV'	17.25201	0.00051	-0.22671	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.2262		'CITY OF IOLA 69KV'	13.978		-0.22811	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.2262		'CITY OF WELLINGTON 69KV'	24		-0.22472	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.2262		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00306	-0.22926	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.2262		'EVANS ENERGY CENTER 138KV'	25.88745		-0.22657	
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.2262		'WACO 138KV'	17.953	-0.00261	-0.22359	
WERE	'PAWNEE 115KV'	999	-0.13103		'JEFFREY ENERGY CENTER 230KV'	470		-0.14915	
WERE	'PAWNEE 115KV'	999	-0.13103		'JEFFREY ENERGY CENTER 345KV'	940		-0.14986	
WERE	'RICE 115KV'	999	-0.13103		'JEFFREY ENERGY CENTER 230KV'	470		-0.14915	
WERE	'RICE 115KV'	999	-0.13103		'JEFFREY ENERGY CENTER 345KV'	940		-0.14986	
WERE	'PAWNEE 115KV'	999	-0.13103		'LAWRENCE ENERGY CENTER 230KV'	130.0238		-0.14286	
WERE	'RICE 115KV'	999	-0.13103		'LAWRENCE ENERGY CENTER 230KV'	130.0238		-0.14286	
WERE	'PAWNEE 115KV'	999	-0.13103		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97		-0.13409	
WERE	'RICE 115KV'	999	-0.13103		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.97	0.00306	-0.13409	
WERE	'PAWNEE 115KV'	999	-0.13103		'CITY OF AUGUSTA 69KV'	17.25201		-0.13154	
WERE	'PAWNEE 115KV'	999	-0.13103		'EVANS ENERGY CENTER 138KV'	25.88745	0.00037	-0.1314	
WERE	'RICE 115KV'	999	-0.13103	WERE	'CITY OF AUGUSTA 69KV'	17.25201	0.00051	-0.13154	4 36

WERE	'RICE 115KV'	999	-0.13103	WERE	'EVANS ENERGY CENTER 138KV'	25.88745	0.00037	-0.1314	36
WERE	'PAWNEE 115KV'	999	-0.13103	WERE	'CITY OF WELLINGTON 69KV'	24	-0.00148	-0.12955	37
WERE	'PAWNEE 115KV'	999	-0.13103	WERE	'WACO 138KV'	17.953	-0.00261	-0.12842	37
WERE	'RICE 115KV'	999	-0.13103	WERE	'CITY OF WELLINGTON 69KV'	24	-0.00148	-0.12955	37
WERE	'RICE 115KV'	999	-0.13103	WERE	'WACO 138KV'	17.953	-0.00261	-0.12842	37
WEPL	'A. M. MULLERGREN GENERATOR 115KV'	63	-0.1185	WEPL	'GRAY COUNTY WIND FARM 115KV'	73	-0.07534	-0.04316	110
WERE	'KNOLL 3 115 115KV'	75	-0.02141	WERE	'JEFFREY ENERGY CENTER 345KV'	940	0.01883	-0.04024	118
WERE	'KNOLL 3 115 115KV'	75	-0.02141	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01812	-0.03953	120
WERE	'KNOLL 3 115 115KV'	75	-0.02141	WERE	'LAWRENCE ENERGY CENTER 230KV'	130.0238	0.01183	-0.03324	143

Amount

WICHITA - RENO 345KV
NORTH AMERICAN PHILIPS JUNCTION (SOUTH) - WEST MCPHERSON 115KV CKT 2
From->To
EAST MCPHERSON - SUMMIT 230KV CKT 1
57374574382568725687312207WP
12/1/07 - 4/1/08
2007 Winter Peak

Agoregate Relief

Reservation

Upgrade: Limiting Facility: Direction: Line Outage:

Relief Amount

Flowgate: Date Redispatch Needed: Season Flowgate Identified:

1090817	1.3	3.6	1						
1090964	1.7	3.6	i						
1090965	0.5	3.6	ł						
1090965	0.5	3.0			I		,		Aggregate
		Maximum	l	Sink Control		Maximum			Redispatch
Course Control Asset	0		005		Oint.	Maximum	005		
Source Control Area	Source	Increment(MW)	GSF	Area	Sink	Decrement(MW)	GSF	Factor	Amount (MW)
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078		'CLAY CENTER JUNCTION 115KV'	6.7	0.04568	-0.31646	
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01517	-0.28595	12
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078		'JEFFREY ENERGY CENTER 345KV'	940		-0.2866	12
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078		'CHANUTE 69KV'	34.818		-0.27219	13
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078	WERE	'CITY OF AUGUSTA 69KV'	14.628	0.00068	-0.27146	13
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078	WERE	'CITY OF BURLINGTON 69KV'	4.8	0.00255	-0.27333	13
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078	WERE	'CITY OF IOLA 69KV'	14.565	0.00161	-0.27239	13
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078	WERE	'CITY OF WELLINGTON 69KV'	20	-0.00124	-0.26954	13
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078	WERE	'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.95	0.00255	-0.27333	13
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078	WERE	'EVANS ENERGY CENTER 138KV'	55	0.00029	-0.27107	13
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078		'LAWRENCE ENERGY CENTER 230KV'	169.36	0.00973	-0.28051	13
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078		'WACO 138KV'	17.93		-0.26853	13
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.21442		'CLAY CENTER JUNCTION 115KV'	6.7	0.04568	-0.2601	14
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.21432		'CLAY CENTER JUNCTION 115KV'	6.7	0.04568	-0.26	14
WERE	'BPU - CITY OF MCPHERSON 115KV'	259	-0.27078		'COLBY 115KV'	6.247878		-0.23004	15
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.21442		'JEFFREY ENERGY CENTER 230KV'	470		-0.22959	15
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.21442		'JEFFREY ENERGY CENTER 345KV'	940		-0.23024	15
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.21432	WERE	'JEFFREY ENERGY CENTER 230KV'	470	0.01502	-0.23024	15
	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.21432			940		-0.22949	15
WERE					'JEFFREY ENERGY CENTER 345KV'				
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.21442		'CHANUTE 69KV'	34.818		-0.21583	16
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.21442		'CITY OF IOLA 69KV'	14.565	0.00161	-0.21603	16
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.21442		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.95	0.00255	-0.21697	16
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.21442		'LAWRENCE ENERGY CENTER 230KV'	169.36	0.00973	-0.22415	16
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.21432		'CHANUTE 69KV'	34.818		-0.21573	16
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.21432		'CITY OF IOLA 69KV'	14.565	0.00161	-0.21593	16
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.21432		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.95	0.00255	-0.21687	16
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.21432	WERE	'LAWRENCE ENERGY CENTER 230KV'	169.36	0.00973	-0.22405	16
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.21442	WERE	'CITY OF AUGUSTA 69KV'	14.628	0.00068	-0.2151	17
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.21442	WERE	'CITY OF WELLINGTON 69KV'	20	-0.00124	-0.21318	17
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.21442	WERE	'EVANS ENERGY CENTER 138KV'	55	0.00029	-0.21471	17
WERE	'HUTCHINSON ENERGY CENTER 115KV'	423	-0.21442	WERE	'WACO 138KV'	17.93	-0.00225	-0.21217	17
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.21432	WERE	'CITY OF AUGUSTA 69KV'	14.628	0.00068	-0.215	17
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.21432	WERE	'CITY OF WELLINGTON 69KV'	20	-0.00124	-0.21308	17
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.21432		'EVANS ENERGY CENTER 138KV'	55		-0.21461	17
WERE	'HUTCHINSON ENERGY CENTER 69KV'	67	-0.21432		'WACO 138KV'	17.93	-0.00225	-0.21207	17
WERE	'PAWNEE 115KV'	999	-0.11532		'JEFFREY ENERGY CENTER 230KV'	470		-0.13049	27
WERE	'PAWNEE 115KV'	999	-0.11532		'JEFFREY ENERGY CENTER 345KV'	940		-0.13114	27
WERE	'RICE 115KV'	999	-0.11532		'JEFFREY ENERGY CENTER 230KV'	470	0.01517	-0.13049	27
WERE	'RICE 115KV'	999	-0.11532		'JEFFREY ENERGY CENTER 345KV'	940	0.01582	-0.13114	27
WERE	'PAWNEE 115KV'	999	-0.11532		'LAWRENCE ENERGY CENTER 230KV'	169.36		-0.12505	28
WERE	'RICE 115KV'	999	-0.11532		'LAWRENCE ENERGY CENTER 230KV'	169.36		-0.12505	28
WERE	'PAWNEE 115KV'	999	-0.11532		'CHANUTE 69KV'	34.818		-0.12303	30
WERE	'PAWNEE 115KV'	999	-0.11532		'CITY OF IOLA 69KV'	14.565	0.00141	-0.11693	30
WERE	PAWNEE 115KV	999	-0.11532		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.95	0.00161	-0.11787	30
WERE	'RICE 115KV'	999	-0.11532		CHANUTE 69KV	34.818	0.00255	-0.11787	30
WERE		999			CHANGTE 69KV	14.565	0.00141	-0.11673	30
	'RICE 115KV'	999	-0.11532						
WERE	'RICE 115KV'		-0.11532		'COFFEY COUNTY NO. 2 SHARPE 69KV'	19.95	0.00255	-0.11787	30
WERE	'PAWNEE 115KV'	999	-0.11532		CITY OF AUGUSTA 69KV	14.628		-0.116	31
WERE	'PAWNEE 115KV'	999	-0.11532		CITY OF WELLINGTON 69KV'	20		-0.11408	31
WERE	'PAWNEE 115KV'	999	-0.11532		'EVANS ENERGY CENTER 138KV'	55		-0.11561	31
WERE	'PAWNEE 115KV'	999	-0.11532		'WACO 138KV'	17.93		-0.11307	31
WERE	'RICE 115KV'	999	-0.11532		'CITY OF AUGUSTA 69KV'	14.628		-0.116	31
WERE	'RICE 115KV'	999	-0.11532		'CITY OF WELLINGTON 69KV'	20		-0.11408	31
WERE	'RICE 115KV'	999	-0.11532		'EVANS ENERGY CENTER 138KV'	55		-0.11561	31
WERE	'RICE 115KV'	999	-0.11532		'WACO 138KV'	17.93		-0.11307	31
WERE	'KNOLL 3 115 115KV'	75			'JEFFREY ENERGY CENTER 345KV'	940		-0.06537	54
WERE	'KNOLL 3 115 115KV'	75			'JEFFREY ENERGY CENTER 230KV'	470		-0.06472	55
WERE	'KNOLL 3 115 115KV'	75			'LAWRENCE ENERGY CENTER 230KV'	169.36		-0.05928	60
WERE	'KNOLL 3 115 115KV'	75	-0.04955	WERE	'EVANS ENERGY CENTER 138KV'	55	0.00029	-0.04984	71
WEPL	'A. M. MULLERGREN GENERATOR 115KV'	63	-0.09475	WEPL	'GRAY COUNTY WIND FARM 115KV'	60	-0.06181	-0.03294	108

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

Upgrade: Limiting Facility: Direction: Line Outage: YOAKUM COUNTY INTERCHANGE 230/115KV TRANSFORMER CKT 1 Displacement YOAKUM COUNTY INTERCHANGE 230/115KV TRANSFORMER CKT 1

Limiting Facility:	OAKUM COUNTY INTERCHANGE 230/115KV TRANSFORMER CKT 1												
Direction:	To->From												
Line Outage:	MUSTANG STATION 230/115KV TRANSFORM	TANG STATION 230/115KV TRANSFORMER CKT 1											
Flowgate:	51890518911519695196611107SP												
Date Redispatch Needed:	6/1/07 - 10/1/07	7 - 10/1/07											
Season Flowgate Identified:													
		Aggregate Relief											
Reservation	Relief Amount	Amount											
1090487	22.8	22.8											
Source Control Area	Source	Maximum Increment(MW)		Sink Control Area	Sink		Maximum Decrement(MW)	GSF	Factor	Aggregate Redispatch Amount (MW)			

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

SPS	'MADOX 115KV'	75	-0.06195 SPS	'MUSTG5 118.0 230KV'	360	0.15538	-0.21733	105
SPS	'CUNNINGHAM 115KV'	50.00977	-0.06007 SPS	'MUSTG5 118.0 230KV'	360	0.15538	-0.21545	106

Table 7 Deferred Expansion Plan Projects

Transmissi on Owner	Upgrade	Solution		Assigned Upgrade E & C	needed per AG	Date Upgrade Needed per Expansion Plan	Expansion Plan E & C Cost
		Rebuild & Reconductor 0.57 Miles of 477AS33 to 477 ACCC/TW	1	-	6/1/2016		\$ \$ 200,000
OKGE	Sooner to Rose Hill 345 kV OKGE	New 345 kV line from Sooner to Oklahoma/Kansas	1	\$ 27,500,000	6/1/2016		
WERE	Sooner to Rose Hill 345 kV WERE	New 345 kV line from Oklahoma/Kansas Stateline to Rose Hill	1	\$ 27,500,000	6/1/2016		
Note: Withir	n a deferral group, the expansion plan upgrade(s) that were de	eferred as a result of a requested upgrade are so noted.					