



SPP *Southwest Power Pool*

*Preliminary
System Impact Study
SPP-2004-075-2P (Option 1)
For The Designation of a New
Network Resource
Requested By
GDS Associates*

From AEPW to AEPW

*For a Reserved Amount Of 200MW
From 1/1/2006
To 1/1/2009*

SPP Engineering, Tariff Studies

System Impact Study

GDS Associates has requested a system impact study to designate a new Network Resource in the AEPW control area for 200 MW to serve Network Load in the AEPW control area. The period of the service requested is from 1/1/2006 to 1/1/2009. The principal objective of this study is to identify system constraints on the SPP Regional Tariff System and potential system facility upgrades that may be necessary to provide the requested service.

This study was performed for the AEPW to AEPW request in order to provide preliminary results identifying facility upgrades that may be required for the requested service. The requested service was modeled as a transfer from the new Network Resource in the AEPW control area to the Network Load in the AEPW control area. Positive impacts removed by the existing Network Resource were given as credits to the new Network Resource based upon the existing Network Resource being replaced by the new Network Resource. The preliminary study is performed with only confirmed reservations included in the models. The models do not include any reservations, even those with a higher priority, that are still in study mode. The results of the transfer analyses are documented in Tables 1, 2 and 3 of the report. Table 1 summarizes the results of the Scenario 1 system impact analysis. Table 2 summarizes the results of the Scenario 2 system impact analysis. Table 3 summarizes the results of the Scenario 3 system impact analysis. The results given in Tables 1, 2 and 3 include upgrades that may be assigned to higher priority requests. If a facility identified for the AEPW to AEPW study is also identified for a study with higher priority, the facility will be assigned to the request with the highest priority. If the higher priority customer does not take service, the facility would then be assigned to the AEPW to AEPW request. The primary purpose of this preliminary study is to provide the customer with an estimated cost of the facility upgrades that may be required in order to accommodate the requested service. The preliminary study is performed by monitoring each facility at 90% of its rating. This is done to provide an estimate of possible overloads that may be assigned to the customer if requests with higher priority are accepted.

Ten seasonal models were used to study the AEPW to AEPW request for the requested service period. The SPP 2004 Series Cases Update 2, 2005 April Minimum (05AP), 2005 Spring Peak (05G), 2005 Summer Peak (05SP), 2005 Summer Shoulder (05SH), 2005 Fall Peak (05FA), 2005/06 Winter Peak (05WP), 2007 Summer Peak (07SP), 2007/08 Winter Peak (07WP), 2010 Summer Peak (10SP) and 2010/11 Winter Peak (10WP) were used to study the impact of the request on the SPP system during the requested service period of 1/1/2006 to 1/1/2009. The chosen base case models were modified to reflect the most current modeling information. The cases were modified to reflect firm transfers during the requested service period that were not already included in the January 2004 base case series models. From the ten seasonal models, three system scenarios were developed Scenario 1 includes confirmed West to East transfers not already included in the January 2004 base case series models, SPS Exporting (including the Lamar HVDC Tie flowing from SPS to Lamar), and ERCOT exporting. Scenario 2 includes confirmed East to West transfers not already included in the January 2004 base case series models, SPS Importing (including the Lamar HVDC Tie flowing from Lamar to SPS), and ERCOT importing. Scenario 3 includes confirmed West to East transfers not already included in the January 2004 base case series models, SPS Importing (including the Lamar HVDC Tie flowing from Lamar to SPS), and ERCOT importing.

PTI's MUST First Contingency Incremental Transfer Capability (FCITC) DC analysis was used to study the request. The MUST options chosen to conduct the System Impact Study analysis can be found in Appendix A. The MUST option to convert MVA branch ratings to estimated MW ratings was used to partially compensate for reactive loading.

These study results are preliminary estimates only and are not intended for use in final determination of the granting of service. These results do not include an evaluation of potential constraints in the planning horizon beyond the reservation period that may limit the right to renew service. Also, these results do not include third party constraints. Any solutions, upgrades, and costs provided in the preliminary System Impact Study are planning estimates only. The final ATC and upgrades required may vary from these results due to the status of higher priority requests, unknown facility upgrades and proposed transmission plans that will be identified during the facility study process, and the final results of the full AC analysis.

SPP will also review the possibility of curtailment of previously confirmed service and/or the redispatch of units as an option for relieving the additional impacts on the SPP facilities caused by the AEPW to AEPW request. It is the responsibility of the customer to reach an agreement with the applicable party concerning the curtailment of confirmed service and the redispatch of units. The curtailment and redispatch requirements would be called upon prior to implementing NERC TLR Level 5a. These options will be evaluated as part of the full AC analysis. The final upgrade solutions, cost assignments and available redispatch and curtailment options will be determined upon the completion of the full AC analysis.

Table 1 – SPP facility overloads identified for the AEPW to AEPW transfer using Scenario 1

Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
05AP		NONE IDENTIFIED								200		
05G	AEPW-AEPW	53571 MARSHL-4 138 *B042 1 1	107	94.3	101.3	3.7410	101.0	3.584	53623 MARAUTO2 69 *B017 1 2	163	Replace 755 ACAR Strain Bus & Replace 1033 AAC Jumpers	\$ 40,000
05G	AEPW-AEPW	53623 MARAUTO2 69 *B042 1 1	107	94.3	101.3	3.7410	101.0	3.584	53571 MARSHL-4 138 *B017 1 2	163	See Previous Upgrade Specified For Facility	
05G	AEPW-AEPW	53571 MARSHL-4 138 *B017 1 2	107	94.2	101.2	3.7370	100.9	3.579	53571 MARSHL-4 138 *B042 1 1	166	See Previous Upgrade Specified For Facility	
05G	AEPW-AEPW	53623 MARAUTO2 69 *B017 1 2	107	94.2	101.2	3.7370	100.9	3.579	53571 MARSHL-4 138 *B042 1 1	166	See Previous Upgrade Specified For Facility	
05SP	AEPW-AEPW	53276 LSSOUTH4 138 53311 PITTSB_4 138 1	196	101.4	113.5	11.8660	113.4	11.769	53619 WILKES 4 138 53622 WELSHRE4 138 1	0	Reset CT @ Pittsburg.	\$ 10,000
05SP	AEPW-AEPW	53278 MAGNOLA2 69 53336 WINNSBO2 69 1	72	103.1	114.5	4.0610	114.0	3.883	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	0	Replace Breaker, switches & jumpers @ Winnsboro. Replace switch # 9114 @ Magnolia Tap	\$ 125,000
05SP	AEPW-AEPW	53278 MAGNOLA2 69 53532 FORSTHL2 69 1	71	102.6	114.0	4.0610	113.5	3.883	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	0	Replace switch # 9116 @ Magnolia Tap	\$ 40,000
05SP	AEPW-AEPW	53532 FORSTHL2 69 53596 QUITMAN2 69 1	58	118.9	129.8	3.1870	129.2	3.0080	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	0	Replace Quitman bus, switches & jumpers. Change relay settings @ Quitman	\$ 150,000
05SP	AEPW-AEPW	53571 MARSHL-4 138 *B041 1 1	107	108.5	115.5	3.7210	114.6	3.267	53623 MARAUTO2 69 *B142 1 2	0	See Previous Upgrade Specified For Facility	
05SP	AEPW-AEPW	53571 MARSHL-4 138 *B142 1 2	107	108.4	115.4	3.7170	114.5	3.263	53623 MARAUTO2 69 *B041 1 1	0	See Previous Upgrade Specified For Facility	
05SP	AEPW-AEPW	53623 MARAUTO2 69 *B041 1 1	107	108.4	115.4	3.7210	114.5	3.267	53571 MARSHL-4 138 *B142 1 2	0	See Previous Upgrade Specified For Facility	
05SP	AEPW-AEPW	53623 MARAUTO2 69 *B142 1 2	107	108.3	115.3	3.7170	114.4	3.263	53623 MARAUTO2 69 *B041 1 1	0	See Previous Upgrade Specified For Facility	
05SP	AEPW-AEPW	53245 ALUMXT 4 138 53300 NWTXARK4 138 1	260	94.3	100.5	8.0890	99.5	6.751	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	183	Rebuild 1.68 miles of 1024 ACAR with 2156 ACSR, Replace wavetrap jumpers with 2156 ACSR	\$ 840,000
05SP	AEPW-AEPW	53527 DIANA 4 138 53590 PERDUE 4 138 1	268	84.0	92.6	11.4950	92.2	11.005	53542 HARRISN4 138 53561 LIBCYTP4 138 1	200	Replace Breaker 10070 @ Perdue	\$ 150,000
05SP	AEPW-AEPW	53540 GREGGTN2 69 53562 LLAMOND2 69 1	107	88.4	95.3	3.6810	95.1	3.574	53527 DIANA 4 138 53590 PERDUE 4 138 1	200	Rebuild 2.66 miles of 755 ACAR with 1590 ACSR	\$ 1,100,000

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Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
05SP	AEPW-AEPW	53245 ALUMXT 4 138 53250 BANN 4 138 1	260	88.7	94.9	8.0890	93.9	6.751	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	200	Replace six (6) 138 kV switches, five at Bann & one at Alumax Tap. Rebuild 0.67 miles of 1024 ACAR with 2156 ACSR. Replace wavetrap jumpers @ Bann. Replace breaker 3300 @ Bann.	\$ 630,000
05SP	OKGE-OKGE	54933 DRAPER 4 138 *B232 DRAPER 3 1 1	490	91.7	92.9	3.0240	N/A*	N/A*	54933 DRAPER 4 138 *B233 DRAPER 4 1 2	200	OKGE Upgrade in service by 6/1/2005	
05SP	OKGE-OKGE	54933 DRAPER 4 138 *B233 DRAPER 4 1 2	490	91.7	92.9	3.0240	N/A*	N/A*	54934 DRAPER 7 345 *B232 DRAPER 3 1 1	200	OKGE Upgrade in service by 6/1/2005	
05SP	OKGE-OKGE	54934 DRAPER 7 345 *B232 DRAPER 3 1 1	486	92.5	93.7	3.0240	N/A*	N/A*	54933 DRAPER 4 138 *B233 DRAPER 4 1 2	200	OKGE Upgrade in service by 6/1/2005	
05SP	OKGE-OKGE	54934 DRAPER 7 345 *B233 DRAPER 4 1 2	486	92.5	93.7	3.0240	N/A*	N/A*	54933 DRAPER 4 138 *B232 DRAPER 3 1 1	200	OKGE Upgrade in service by 6/1/2005	
05SP	OKGE-OKGE	55234 PECANCK5 161 *B423 PECANCK1 1 1	369	88.7	91.2	4.6990	N/A*	N/A*	55224 MUSKOGEE 7 345 55302 FTSMITH 7 345 1	200	Add 2nd 345/161 kV 369MVA transformer.	\$ 3,000,000
05SP	OKGE-OKGE	55235 PECANCK7 345 *B423 PECANCK1 1 1	366	89.6	92.1	4.6990	N/A*	N/A*	55224 MUSKOGEE 7 345 55302 FTSMITH 7 345 1	200	See Previous Upgrade Specified For Facility	
05SH	AEPW-AEPW	53532 FORSTHL2 69 53596 QUITMAN2 69 1	58	93.9	104.8	3.1820	104.7	3.142	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	111	See Previous Upgrade Specified For Facility	
05SH	AEPW-AEPW	53245 ALUMXT 4 138 53300 NWTXARK4 138 1	260	87.8	94.0	8.0880	93.4	7.284	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	200	See Previous Upgrade Specified For Facility	
05SH	AEPW-AEPW	53276 LSSOUTH4 138 53527 DIANA 4 138 1	266	89.1	92.6	4.6400	92.1	3.93	Multiple Outage Contingency 53615 WELSH 7 345 53620 WILKES 7 345 1 53615 WELSH 7 345 53301 NWTXARK7 345 1	200	Rebuild 11.78 miles of double 336 & 397 ACSR with 2-795 ACSR. Replace 1200A switch # 10387 & wavetrap jumpers @ Diana	\$ 6,500,000
05SH	AEPW-AEPW	53278 MAGNOLA2 69 53336 WINNSBO2 69 1	72	81.8	93.1	4.0540	93.0	4.014	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	200	See Previous Upgrade Specified For Facility	
05SH	AEPW-AEPW	53278 MAGNOLA2 69 53532 FORSTHL2 69 1	72	81.5	92.8	4.0540	92.7	4.014	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	200	See Previous Upgrade Specified For Facility	
05SH	AEPW-AEPW	53571 MARSHL-4 138 *B041 1 1	107	91.0	98.0	3.7220	97.8	3.637	53571 MARSHL-4 138 *B142 1 2	200	See Previous Upgrade Specified For Facility	
05SH	AEPW-AEPW	53571 MARSHL-4 138 *B142 1 2	107	90.9	97.9	3.7180	97.7	3.633	53623 MARAUTO2 69 *B041 1 1	200	See Previous Upgrade Specified For Facility	

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05SH	AEPW-AEPW	53623 MARAUTO2 69 *B041 1 1	107	91.0	98.0	3.7220	97.8	3.637	53623 MARAUTO2 69 *B142 1 2	200	See Previous Upgrade Specified For Facility	
05SH	AEPW-AEPW	53623 MARAUTO2 69 *B142 1 2	107	90.9	97.9	3.7180	97.7	3.633	53571 MARSHL-4 138 *B041 1 1	200	See Previous Upgrade Specified For Facility	
05SH	OKGE-OKGE	55234 PECANCK5 161 *B423 PECANCK1 1 1	370	96.5	99.0	4.7000	N/A*	N/A*	55224 MUSKOGEE7 345 55302 FTSMITH7 345 1	200	See Previous Upgrade Specified For Facility	
05SH	OKGE-OKGE	55235 PECANCK7 345 *B423 PECANCK1 1 1	367	97.4	99.9	4.7000	N/A*	N/A*	55224 MUSKOGEE7 345 55302 FTSMITH7 345 1	200	See Previous Upgrade Specified For Facility	
05FA	AEPW-AEPW	53571 MARSHL-4 138 *B125 1 1	107	90.9	97.9	3.7190	97.7	3.64	53571 MARSHL-4 138 *B140 1 2	200	See Previous Upgrade Specified For Facility	
05FA	AEPW-AEPW	53571 MARSHL-4 138 *B140 1 2	107	90.8	97.8	3.7150	97.6	3.636	53571 MARSHL-4 138 *B125 1 1	200	See Previous Upgrade Specified For Facility	
05FA	AEPW-AEPW	53623 MARAUTO2 69 *B125 1 1	107	90.9	97.9	3.7190	97.7	3.64	53571 MARSHL-4 138 *B140 1 2	200	See Previous Upgrade Specified For Facility	
05FA	AEPW-AEPW	53623 MARAUTO2 69 *B140 1 2	107	90.8	97.8	3.7150	97.6	3.636	53623 MARAUTO2 69 *B125 1 1	200	See Previous Upgrade Specified For Facility	
05WP	AEPW-AEPW	53278 MAGNOLA2 69 53532 FORSTHL2 69 1	72	101.6	113.1	4.1250	113.0	4.115	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	0	See Previous Upgrade Specified For Facility	
07SP	AEPW-AEPW	53571 MARSHL-4 138 *B069 1 1	107	111.9	118.8	3.7020	118.2	3.381	3Wnd: OPEN *B0 99 2	0	See Previous Upgrade Specified For Facility	
07SP	AEPW-AEPW	53571 MARSHL-4 138 *B099 1 2	107	111.8	118.7	3.6980	118.1	3.377	3Wnd: OPEN *B0 69 1	0	See Previous Upgrade Specified For Facility	
07SP	AEPW-AEPW	53623 MARAUTO2 69 *B069 1 1	107	111.7	118.6	3.7020	118.0	3.381	3Wnd: OPEN *B0 99 2	0	See Previous Upgrade Specified For Facility	
07SP	AEPW-AEPW	53623 MARAUTO2 69 *B099 1 2	107	111.6	118.5	3.6980	117.9	3.377	3Wnd: OPEN *B0 69 1	0	See Previous Upgrade Specified For Facility	
07SP	AEPW-AEPW	53245 ALUMXT 4 138 53300 NWTXARK4 138 1	260	98.3	104.5	8.1030	103.7	6.968	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	54	See Previous Upgrade Specified For Facility	
07SP	AEPW-AEPW	53245 ALUMXT 4 138 53250 BANN 4 138 1	260	92.8	99.0	8.1030	98.1	6.968	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	200	See Previous Upgrade Specified For Facility	
07SP	AEPW-AEPW	53423 LONGWD 4 138 53457 OAKPH 4 138 1	208	92.4	96.5	4.2790	N/A*	N/A*	Multiple Outage Contingency 53454 SW SHV 7 345 53424 LONGWD 7 345 1 53454 SW SHV 7 345 53528 DIANA 7 345 1	200	Rebuild 1.8 miles of 666 ACSR with 1590 ACSR	\$ 800,000
07SP	AEPW-AEPW	53527 DIANA 4 138 53590 PERDUE 4 138 1	268	81.9	90.2	11.1710	90.1	11.029	53542 HARRISN4 138 53561 LIBCYTP4 138 1	200	See Previous Upgrade Specified For Facility	

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07SP	OKGE-OKGE	55234 PECANCK5 161 *B399 PECANCK1 1 1	369	89.2	91.7	4.5890	91.0	3.295	55224 MUSKOGEE7 345 55302 FTSMITH7 345 1	200	See Previous Upgrade Specified For Facility	
07SP	OKGE-OKGE	55235 PECANCK7 345 *B399 PECANCK1 1 1	366	90.1	92.6	4.5890	91.9	3.295	55224 MUSKOGEE7 345 55302 FTSMITH7 345 1	200	See Previous Upgrade Specified For Facility	
07WP	OKGE-OKGE	55234 PECANCK5 161 *B399 PECANCK1 1 1	370	90.3	92.8	4.5820	90.8	0.9300	55224 MUSKOGEE7 345 55302 FTSMITH7 345 1	200	See Previous Upgrade Specified For Facility	
07WP	OKGE-OKGE	55235 PECANCK7 345 *B399 PECANCK1 1 1	369	90.6	93.1	4.5820	91.1	0.9300	55224 MUSKOGEE7 345 55302 FTSMITH7 345 1	200	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53245 ALUMXT 4 138 53300 NWTXARK4 138 1	260	102.9	109.2	8.1100	108.2	6.863	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	0	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53276 LSSOUTH4 138 53311 PITTSB_4 138 1	195	122.3	134.2	11.6750	134.0	11.449	53619 WILKES 4 138 53622 WELSHRE4 138 1	0	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53557 KNOXLEE4 138 53586 OAK2HIL4 138 1	206	109.0	113.7	4.8800	113.5	4.632	53557 KNOXLEE4 138 53574 MONROER4 138 1	0	Reset relays & replace wavetrap @ Knoxlee	\$ 50,000
10SP	AEPW-AEPW	53245 ALUMXT 4 138 53250 BANN 4 138 1	260	97.0	103.3	8.1100	102.3	6.863	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	95	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53597 ROKHILL2 69 *B039 1 1	46	88.9	102.8	3.1760	102.6	3.14	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	160	Requires addition of 3rd Rock Hill 138/69kV 46MVA Unit to eliminate overload of unit #1 and #2.	\$ 1,400,000
10SP	AEPW-AEPW	53598 ROKHILL4 138 *B039 1 1	46	88.9	102.8	3.1760	102.6	3.14	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	160	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53598 ROKHILL4 138 *B130 1 2	46	88.5	102.3	3.1540	102.1	3.119	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	167	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53597 ROKHILL2 69 *B130 1 2	46	88.3	102.0	3.1540	101.9	3.119	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	171	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53532 FORSTHL2 69 53596 QUITMAN2 69 1	58	86.9	101.0	4.1230	100.8	4.06	3Wnd: OPEN *B0 19 1	185	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53276 LSSOUTH4 138 53619 WILKES 4 138 1	312	88.8	95.0	9.7130	94.4	8.763	53521 CHAPELH4 138 53622 WELSHRE4 138 1	200	Reset CTs	\$ 2,000
10SP	AEPW-AEPW	53278 MAGNOLA2 69 53336 WINNSBO2 69 1	72	77.9	91.8	4.9870	91.6	4.924	3Wnd: OPEN *B0 19 1	200	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53278 MAGNOLA2 69 53532 FORSTHL2 69 1	72	77.4	91.4	4.9870	91.2	4.924	3Wnd: OPEN *B0 19 1	200	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53423 LONGWD 4 138 53457 OAKPH 4 138 1	208	94.6	98.7	4.2400	98.4	3.937	Multiple Outage Contingency 53454 SW SHV 7 345 53424 LONGWD 7 345 1 53454 SW SHV 7 345 53528 DIANA 7 345 1	200	See Previous Upgrade Specified For Facility	

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10SP	AEPW-AEPW	53453 SW SHV 4 138 *B003 1 1	657	90.5	94.1	11.8760	93.8	11.059	3Wnd: OPEN *B0 9 2	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53453 SW SHV 4 138 *B009 1 2	657	88.8	92.3	11.6620	92.1	10.86	3Wnd: OPEN *B0 3 1	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53453 SW SHV 4 138 53455 SW SHVT4 138 1	302	86.8	92.4	8.4670	92.1	7.9	53464 Western Electric Tap 53453 SW Shreveport 138 1 53464 Western Electric Tap 53450 Stonewall 138 1 53464 Western Electric Tap 53463 Western Electric 138 1	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53454 SW SHV 7 345 *B003 1 1	653	91.0	94.6	11.8760	94.4	11.059	3Wnd: OPEN *B0 9 2	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53454 SW SHV 7 345 *B009 1 2	654	89.3	92.8	11.6620	92.6	10.86	3Wnd: OPEN *B0 3 1	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53527 DIANA 4 138 53590 PERDUE 4 138 1	268	88.1	96.5	11.2340	96.4	11.022	53542 HARRISN4 138 53561 LIBCYTP4 138 1	200	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53584 NWHENDR4 138 53585 OAK1HIL4 138 1	237	91.0	94.0	3.5570	93.8	3.309	53557 KNOXLEE4 138 53574 MONROER4 138 1	200	Replace wavetraps @ NW Henderson.	\$ 30,000
10SP	AEPW-AEPW	53619 WILKES 4 138 53622 WELSHRE4 138 1	260	85.8	94.0	10.5870	93.8	10.334	53276 LSSOUTH4 138 53311 PITTSB_4 138 1	200	Solution Undetermined	TBD
10SP	OKGE-OKGE	54933 DRAPER 4 138 *B232 DRAPER 3 1 1	489	92.9	94.2	3.0250	N/A*	N/A*	3Wnd: OPEN *B2 33 D RAPER 4 2	200	OKGE Upgrade in service by 6/1/2005	
10SP	OKGE-OKGE	54933 DRAPER 4 138 *B233 DRAPER 4 1 2	489	92.9	94.2	3.0250	N/A*	N/A*	3Wnd: OPEN *B2 32 D RAPER 3 1	200	OKGE Upgrade in service by 6/1/2005	
10SP	OKGE-OKGE	54934 DRAPER 7 345 *B232 DRAPER 3 1 1	484	93.9	95.2	3.0250	N/A*	N/A*	3Wnd: OPEN *B2 33 D RAPER 4 2	200	OKGE Upgrade in service by 6/1/2005	
10SP	OKGE-OKGE	54934 DRAPER 7 345 *B233 DRAPER 4 1 2	484	93.9	95.2	3.0250	N/A*	N/A*	3Wnd: OPEN *B2 32 D RAPER 3 1	200	OKGE Upgrade in service by 6/1/2005	
10SP	OKGE-OKGE	55234 PECANCK5 161 *B399 PECANCK1 1 1	369	89.9	92.3	4.5830	92.1	4.204	55224 MUSKOGEE7 345 55302 FTSMITH7 345 1	200	See Previous Upgrade Specified For Facility	
10SP	OKGE-OKGE	55235 PECANCK7 345 *B399 PECANCK1 1 1	366	90.8	93.3	4.5830	93.1	4.204	55224 MUSKOGEE7 345 55302 FTSMITH7 345 1	200	See Previous Upgrade Specified For Facility	
10WP	AEPW-AEPW	53597 ROKHILL2 69 *B042 1 1	46	78.2	92.6	3.2970	92.5	3.274	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	200	See Previous Upgrade Specified For Facility	
10WP	AEPW-AEPW	53597 ROKHILL2 69 *B140 1 2	46	77.8	92.1	3.2740	92.0	3.252	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	200	See Previous Upgrade Specified For Facility	
10WP	AEPW-AEPW	53598 ROKHILL4 138 *B042 1 1	46	78.4	92.8	3.2970	92.7	3.274	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	200	See Previous Upgrade Specified For Facility	

Table 1 – SPP facility overloads identified for the AEPW to AEPW transfer using Scenario 1

Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
10WP	AEPW-AEPW	53598 ROKHILL4 138 *B140 1 2	46	78.0	92.3	3.2740	92.2	3.252	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	200	See Previous Upgrade Specified For Facility	
											This cost may be higher due to additional facilities whose solutions will be determined during the Facility Study process	\$*
											Total Cost with Facilities Monitored @ 90% Loading	\$ 14,867,000
											Total Cost with Facilities Monitored @ 100% Loading	\$ 3,285,000

*Existing Network Resource has a minimal positive impact or a negative impact on facility. No credit for positive impact removed can be given to the New Network Resource for this facility.

Table 2 – SPP facility overloads identified for the AEPW to AEPW transfer using Scenario 2

Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
05AP		NONE IDENTIFIED								200		
05G	AEPW-AEPW	53571 MARSHL-4 138 *B017 1 2	107	86.5	93.5	3.7370	93.2	3.579	53571 MARSHL-4 138 *B042 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05G	AEPW-AEPW	53571 MARSHL-4 138 *B042 1 1	107	86.6	93.6	3.7410	93.3	3.584	53623 MARAUTO2 69 *B017 1 2	200	See Previous Upgrade Specified For Facility in Scenario 1	
05G	AEPW-AEPW	53623 MARAUTO2 69 *B017 1 2	107	86.4	93.4	3.7370	93.1	3.579	53623 MARAUTO2 69 *B042 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05G	AEPW-AEPW	53623 MARAUTO2 69 *B042 1 1	107	86.5	93.5	3.7410	93.2	3.584	53571 MARSHL-4 138 *B017 1 2	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53532 FORSTHL2 69 53596 QUITMAN2 69 1	58	111.9	122.9	3.1870	122.3	3.0080	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53571 MARSHL-4 138 *B041 1 1	107	100.3	107.2	3.7210	106.4	3.267	53623 MARAUTO2 69 *B142 1 2	0	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53571 MARSHL-4 138 *B142 1 2	107	100.2	107.1	3.7170	106.3	3.263	53571 MARSHL-4 138 *B041 1 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53623 MARAUTO2 69 *B041 1 1	107	100.2	107.1	3.7210	106.3	3.267	53623 MARAUTO2 69 *B142 1 2	0	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53623 MARAUTO2 69 *B142 1 2	107	100.1	107.0	3.7170	106.2	3.263	53623 MARAUTO2 69 *B041 1 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53276 LSSOUTH4 138 53311 PITTSB_4 138 1	196	99.7	111.8	11.8660	111.7	11.769	53619 WILKES 4 138 53622 WELSHRE4 138 1	5	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53278 MAGNOLA2 69 53336 WINNSBO2 69 1	72	97.4	108.7	4.0610	108.2	3.883	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	46	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53278 MAGNOLA2 69 53532 FORSTHL2 69 1	72	97.0	108.3	4.0610	107.8	3.883	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	53	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53245 ALUMXT 4 138 53300 NWTXARK4 138 1	260	83.9	90.1	8.0890	89.1	6.751	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	

Table 2 – SPP facility overloads identified for the AEPW to AEPW transfer using Scenario 2

Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
05SP	AEPW-AEPW	53276 LSSOUTH4 138 53619 WILKES 4 138 1	314	86.0	92.2	9.7690	92.0	9.429	53619 WILKES 4 138 53622 WELSHRE4 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53540 GREGGTN2 69 53562 LLAMOND2 69 1	107	85.6	92.5	3.6810	92.3	3.574	53527 DIANA 4 138 53590 PERDUE 4 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	OKGE-OKGE	54933 DRAPER 4 138 *B232 DRAPER 3 1 1	490	91.8	93.1	3.0240	N/A*	N/A*	54933 DRAPER 4 138 *B233 DRAPER 4 1 2	200	OKGE Upgrade in service by 6/1/2005	
05SP	OKGE-OKGE	54933 DRAPER 4 138 *B233 DRAPER 4 1 2	490	91.8	93.1	3.0240	N/A*	N/A*	54934 DRAPER 7 345 *B232 DRAPER 3 1 1	200	OKGE Upgrade in service by 6/1/2005	
05SP	OKGE-OKGE	54934 DRAPER 7 345 *B232 DRAPER 3 1 1	486	92.6	93.9	3.0240	N/A*	N/A*	54934 DRAPER 7 345 *B233 DRAPER 4 1 2	200	OKGE Upgrade in service by 6/1/2005	
05SP	OKGE-OKGE	54934 DRAPER 7 345 *B233 DRAPER 4 1 2	486	92.6	93.9	3.0240	N/A*	N/A*	54934 DRAPER 7 345 *B232 DRAPER 3 1 1	200	OKGE Upgrade in service by 6/1/2005	
05SH	AEPW-AEPW	53532 FORSTHL2 69 53596 QUITMAN2 69 1	59	86.6	97.5	3.1820	97.3	3.142	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SH	AEPW-AEPW	53571 MARSHL-4 138 *B041 1 1	107	83.3	90.2	3.7220	90.1	3.637	53571 MARSHL-4 138 *B142 1 2	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SH	AEPW-AEPW	53571 MARSHL-4 138 *B142 1 2	107	83.2	90.1	3.7180	90.0	3.633	53571 MARSHL-4 138 *B041 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SH	AEPW-AEPW	53623 MARAUTO2 69 *B041 1 1	107	83.2	90.1	3.7220	90.0	3.637	53571 MARSHL-4 138 *B142 1 2	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SH	AEPW-AEPW	53623 MARAUTO2 69 *B142 1 2	107	83.1	90.0	3.7180	89.9	3.633	53623 MARAUTO2 69 *B041 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05FA	AEPW-AEPW	53571 MARSHL-4 138 *B125 1 1	107	83.3	90.2	3.7190	90.1	3.64	53571 MARSHL-4 138 *B140 1 2	200	See Previous Upgrade Specified For Facility in Scenario 1	
05FA	AEPW-AEPW	53571 MARSHL-4 138 *B140 1 2	107	83.2	90.1	3.7150	90.0	3.636	53623 MARAUTO2 69 *B125 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05FA	AEPW-AEPW	53623 MARAUTO2 69 *B125 1 1	107	83.2	90.1	3.7190	90.0	3.64	53571 MARSHL-4 138 *B140 1 2	200	See Previous Upgrade Specified For Facility in Scenario 1	

Table 2 – SPP facility overloads identified for the AEPW to AEPW transfer using Scenario 2

Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
05FA	AEPW-AEPW	53623 MARAUTO2 69 *B140 1 2	107	83.1	90.0	3.7150	89.9	3.636	53623 MARAUTO2 69 *B125 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05WP		NONE IDENTIFIED								200		
07SP	AEPW-AEPW	53276 LSSOUTH4 138 53311 PITTSB_4 138 1	195	111.1	123.0	11.6370	122.7	11.376	53619 WILKES 4 138 53622 WELSHRE4 138 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53571 MARSHL-4 138 *B080 1 1	107	104.8	111.7	3.7020	110.9	3.2520	3Wnd: OPEN *B0 27 2	0	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53571 MARSHL-4 138 *B027 1 2	107	104.7	111.6	3.6980	110.8	3.2480	3Wnd: OPEN *B0 80 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53623 MARAUTO2 69 *B080 1 1	107	104.6	111.5	3.7020	110.7	3.2520	3Wnd: OPEN *B0 27 2	0	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53623 MARAUTO2 69 *B027 1 2	107	104.5	111.4	3.6980	110.6	3.2480	3Wnd: OPEN *B0 80 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53276 LSSOUTH4 138 53619 WILKES 4 138 1	313	97.2	103.4	9.6820	103.1	9.2740	53619 WILKES 4 138 53622 WELSHRE4 138 1	90	Reset CTs	\$ 2,000
07SP	AEPW-AEPW	53245 ALUMXT 4 138 53300 NWTXARK4 138 1	260	86.3	92.5	8.1030	91.5	6.7540	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53532 FORSTHL2 69 53596 QUITMAN2 69 1	58	80.3	94.3	4.1210	94.1	4.0520	3Wnd: OPEN *B0 19 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53540 GREGGTN2 69 53562 LLAMOND2 69 1	107	84.3	90.8	3.4820	90.7	3.4280	53527 DIANA 4 138 53590 PERDUE 4 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
07WP		NONE IDENTIFIED								200		
10SP	AEPW-AEPW	53276 LSSOUTH4 138 53311 PITTSB_4 138 1	195	120.8	132.7	11.6750	132.5	11.449	53619 WILKES 4 138 53622 WELSHRE4 138 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53557 KNOXLEE4 138 53586 OAK2HIL4 138 1	206	103.6	108.3	4.8800	108.1	4.6320	53557 KNOXLEE4 138 53574 MONROER4 138 1	0	See Previous Upgrade Specified For Facility in Scenario 1	

Table 2 – SPP facility overloads identified for the AEPW to AEPW transfer using Scenario 2

Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
10SP	AEPW-AEPW	53276 LSSOUTH4 138 53619 WILKES 4 138 1	313	97.2	103.4	9.7130	102.8	8.7630	53619 WILKES 4 138 53622 WELSHRE4 138 1	92	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53598 ROKHILL4 138 *B039 1 1	46	91.5	105.4	3.1760	105.2	3.1400	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	122	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53597 ROKHILL2 69 *B039 1 1	46	91.3	105.1	3.1760	105.0	3.1400	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	126	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53598 ROKHILL4 138 *B130 1 2	46	90.9	104.7	3.1540	104.5	3.1190	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	132	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53597 ROKHILL2 69 *B130 1 2	46	90.7	104.4	3.1540	104.2	3.1190	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	136	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53374 FULTON 3 115 53383 HOPE 3 115 1	173	96.9	101.4	3.8720	100.3	2.9670	54033 PITTSB-7 345 54037 VALIANT7 345 1	138	Solution Undetermined	TBD
10SP	AEPW-AEPW	53532 FORSTHL2 69 53596 QUITMAN2 69 1	58	86.9	101.0	4.1230	100.8	4.0600	53580 NMINEOL2 69 *B019 1 1	185	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53245 ALUMXT 4 138 53250 BANN 4 138 1	260	84.9	91.1	8.1100	90.2	6.8630	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53245 ALUMXT 4 138 53300 NWTXARK4 138 1	260	90.8	97.0	8.1100	96.1	6.8630	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53278 MAGNOLA2 69 53336 WINNSBO2 69 1	72	77.9	91.8	4.9870	91.6	4.9240	53580 NMINEOL2 69 *B019 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53278 MAGNOLA2 69 53532 FORSTHL2 69 1	72	77.4	91.4	4.9870	91.2	4.9240	53580 NMINEOL2 69 *B019 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53453 SW SHV 4 138 *B003 1 1	657	92.8	96.4	11.8760	96.2	11.059	53454 SW SHV 7 345 *B009 1 2	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53453 SW SHV 4 138 *B009 1 2	657	91.0	94.6	11.6620	94.4	10.860	53453 SW SHV 4 138 *B003 1 1	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53453 SW SHV 4 138 53455 SW SHVT4 138 1	302	90.8	96.4	8.4670	96.0	7.9000	53464 Western Electric Tap 53453 SW Shreveport 138 1 53464 Western Electric Tap 53450 Stonewall 138 1 53464 Western Electric Tap 53463 Western Electric 138 1	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53454 SW SHV 7 345 *B003 1 1	653	93.4	97.0	11.8760	96.7	11.059	53453 SW SHV 4 138 *B009 1 2	200	Solution Undetermined	TBD

Table 2 – SPP facility overloads identified for the AEPW to AEPW transfer using Scenario 2

Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
10SP	AEPW-AEPW	53454 SW SHV 7 345 *B009 1 2	654	91.6	95.1	11.6620	94.9	10.860	53453 SW SHV 4 138 *B003 1 1	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53527 DIANA 4 138 53590 PERDUE 4 138 1	268	83.5	91.9	11.2340	91.7	11.022	53542 HARRISN4 138 53561 LIBCYTP4 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53619 WILKES 4 138 53622 WELSHRE4 138 1	260	86.2	94.3	10.5870	94.1	10.334	53276 LSSOUTH4 138 53311 PITTSB_4 138 1	200	Solution Undetermined	TBD
10SP	OKGE-OKGE	54933 DRAPER 4 138 *B232 DRAPER 3 1 1	489	93.0	94.2	3.0250	N/A*	N/A*	54933 DRAPER 4 138 *B233 DRAPER 4 1 2	200	OKGE Upgrade in service by 6/1/2005	
10SP	OKGE-OKGE	54933 DRAPER 4 138 *B233 DRAPER 4 1 2	489	93.0	94.2	3.0250	N/A*	N/A*	54934 DRAPER 7 345 *B232 DRAPER 3 1 1	200	OKGE Upgrade in service by 6/1/2005	
10SP	OKGE-OKGE	54934 DRAPER 7 345 *B232 DRAPER 3 1 1	484	94.0	95.2	3.0250	N/A*	N/A*	54933 DRAPER 4 138 *B233 DRAPER 4 1 2	200	OKGE Upgrade in service by 6/1/2005	
10SP	OKGE-OKGE	54934 DRAPER 7 345 *B233 DRAPER 4 1 2	484	94.0	95.2	3.0250	N/A*	N/A*	54934 DRAPER 7 345 *B232 DRAPER 3 1 1	200	OKGE Upgrade in service by 6/1/2005	
10WP	AEPW-AEPW	53597 ROKHILL2 69 *B042 1 1	46	80.6	95.0	3.2970	94.9	3.2740	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10WP	AEPW-AEPW	53597 ROKHILL2 69 *B140 1 2	46	80.2	94.5	3.2740	94.4	3.2520	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10WP	AEPW-AEPW	53598 ROKHILL4 138 *B042 1 1	46	80.8	95.2	3.2970	95.1	3.2740	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10WP	AEPW-AEPW	53598 ROKHILL4 138 *B140 1 2	46	80.2	94.5	3.2740	94.4	3.2520	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
											This cost may be higher due to additional facilities whose solutions will be determined during the Facility Study process	\$*
											Total Cost with Facilities Monitored @ 90% Loading	\$
											Total Cost with Facilities Monitored @ 100% Loading	\$ 2,000

*Existing Network Resource has a minimal positive impact or a negative impact on facility. No credit for positive impact removed can be given to the New Network Resource for this facility.

Table 3 – SPP facility overloads identified for the AEPW to AEPW transfer using Scenario 3

Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
05AP		NONE IDENTIFIED								200		
05G	SWPA-AEPW	52814 BRKN BW4 138 54015 CRAIGJT4 138 1	107	85.0	93.2	4.4270	92.6	2.6250	56004 MTRIVER4 138 54015 CRAIGJT4 138 1	200	May be relieved by alternative switching scheme, otherwise rebuild 7.66 miles of 3/0 CW CU with 795 ACSR	\$ 2,700,000
05G	AEPW-AEPW	53571 MARSHL-4 138 *B017 1 2	107	88.0	95.0	3.7370	94.7	3.579	53571 MARSHL-4 138 *B042 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05G	AEPW-AEPW	53571 MARSHL-4 138 *B042 1 1	107	88.1	95.1	3.7410	94.8	3.584	53623 MARAUTO2 69 *B017 1 2	200	See Previous Upgrade Specified For Facility in Scenario 1	
05G	AEPW-AEPW	53623 MARAUTO2 69 *B017 1 2	107	87.9	94.9	3.7370	94.6	3.579	53571 MARSHL-4 138 *B042 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05G	AEPW-AEPW	53623 MARAUTO2 69 *B042 1 1	107	88.1	95.1	3.7410	94.8	3.584	53571 MARSHL-4 138 *B017 1 2	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53532 FORSTHL2 69 53596 QUITMAN2 69 1	58	113.8	124.8	3.1870	124.1	3.0080	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53571 MARSHL-4 138 *B041 1 1	107	102.1	109.0	3.7210	108.2	3.267	53571 MARSHL-4 138 *B142 1 2	0	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53571 MARSHL-4 138 *B142 1 2	107	102.0	108.9	3.7170	108.1	3.263	53571 MARSHL-4 138 *B041 1 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53623 MARAUTO2 69 *B041 1 1	107	102.1	109.0	3.7210	108.2	3.267	53571 MARSHL-4 138 *B142 1 2	0	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53623 MARAUTO2 69 *B142 1 2	107	101.9	108.8	3.7170	108.0	3.263	53571 MARSHL-4 138 *B041 1 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53276 LSSOUTH4 138 53311 PITTSB_4 138 1	196	99.6	111.7	11.8660	111.6	11.769	53619 WILKES 4 138 53622 WELSHRE4 138 1	7	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53278 MAGNOLA2 69 53336 WINNSBO2 69 1	72	98.9	110.3	4.0610	109.8	3.883	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	19	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53278 MAGNOLA2 69 53532 FORSTHL2 69 1	72	98.5	109.9	4.0610	109.4	3.883	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	26	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53245 ALUMXT 4 138 53300 NWTXARK4 138 1	260	88.0	94.3	8.0890	93.2	6.751	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53276 LSSOUTH4 138 53619 WILKES 4 138 1	314	85.6	91.9	9.7690	91.6	9.429	53619 WILKES 4 138 53622 WELSHRE4 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SP	AEPW-AEPW	53540 GREGGTN2 69 53562 LLAMOND2 69 1	107	86.2	93.1	3.6810	92.9	3.574	53527 DIANA 4 138 53590 PERDUE 4 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	

Table 3 – SPP facility overloads identified for the AEPW to AEPW transfer using Scenario 3

Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
05SP	OKGE-OKGE	54933 DRAPER 4 138 *B232 DRAPER 3 1 1	490	90.3	91.6	3.0240	N/A*	N/A*	54934 DRAPER 7 345 *B233 DRAPER 4 1 2	200	OKGE Upgrade in service by 6/1/2005	
05SP	OKGE-OKGE	54933 DRAPER 4 138 *B233 DRAPER 4 1 2	490	90.3	91.6	3.0240	N/A*	N/A*	54933 DRAPER 4 138 *B232 DRAPER 3 1 1	200	OKGE Upgrade in service by 6/1/2005	
05SP	OKGE-OKGE	54934 DRAPER 7 345 *B232 DRAPER 3 1 1	486	91.1	92.4	3.0240	N/A*	N/A*	54934 DRAPER 7 345 *B233 DRAPER 4 1 2	200	OKGE Upgrade in service by 6/1/2005	
05SP	OKGE-OKGE	54934 DRAPER 7 345 *B233 DRAPER 4 1 2	486	91.1	92.4	3.0240	N/A*	N/A*	54933 DRAPER 4 138 *B232 DRAPER 3 1 1	200	OKGE Upgrade in service by 6/1/2005	
05SP	WFEC-OKGE	55917 FRNKLS4 138 54946 MIDWEST4 138 1	187	86.9	90.5	3.3760	87.1	0.2090	54033 PITTSB-7 345 54037 VALIANT7 345 1	200	Terminal Equipment Upgrade to be Completed by WFEC by 10/1/05 or earlier for SPP OATT Attachment AA	
05SH	AEPW-AEPW	53532 FORSTHL2 69 53596 QUITMAN2 69 1	59	88.8	99.7	3.1820	99.5	3.142	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SH	AEPW-AEPW	53571 MARSHL-4 138 *B041 1 1	107	84.9	91.8	3.7220	91.7	3.637	53571 MARSHL-4 138 *B142 1 2	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SH	AEPW-AEPW	53571 MARSHL-4 138 *B142 1 2	107	84.8	91.7	3.7180	91.6	3.633	53623 MARAUTO2 69 *B041 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SH	AEPW-AEPW	53623 MARAUTO2 69 *B041 1 1	107	84.8	91.7	3.7220	91.6	3.637	53623 MARAUTO2 69 *B142 1 2	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SH	AEPW-AEPW	53623 MARAUTO2 69 *B142 1 2	107	84.7	91.6	3.7180	91.5	3.633	53571 MARSHL-4 138 *B041 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SH	OKGE-OKGE	55234 PECANCK5 161 *B423 PECANCK1 1 1	370	89.7	92.2	4.7000	90.9	2.2230	55224 MUSKOGEE7 345 55302 FTSMITH7 345 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05SH	OKGE-OKGE	55235 PECANCK7 345 *B423 PECANCK1 1 1	367	90.5	93.1	4.7000	91.7	2.2230	55224 MUSKOGEE7 345 55302 FTSMITH7 345 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05FA	AEPW-AEPW	53571 MARSHL-4 138 *B125 1 1	107	85.0	91.9	3.7190	91.8	3.64	53571 MARSHL-4 138 *B140 1 2	200	See Previous Upgrade Specified For Facility in Scenario 1	
05FA	AEPW-AEPW	53571 MARSHL-4 138 *B140 1 2	107	84.9	91.8	3.7150	91.7	3.636	53623 MARAUTO2 69 *B125 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05FA	AEPW-AEPW	53623 MARAUTO2 69 *B125 1 1	107	84.9	91.8	3.7190	91.7	3.64	53623 MARAUTO2 69 *B140 1 2	200	See Previous Upgrade Specified For Facility in Scenario 1	
05FA	AEPW-AEPW	53623 MARAUTO2 69 *B140 1 2	107	84.8	91.7	3.7150	91.6	3.636	53623 MARAUTO2 69 *B125 1 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
05WP	AEPW-AEPW	53278 MAGNOLA2 69 53336 WINNSBO2 69 1	72	97.8	109.3	4.1250	109.2	4.115	53590 PERDUE 4 138 53666 LHAWKIN4 138 1	39	See Previous Upgrade Specified For Facility in Scenario 1	
05WP	SWPA-AEPW	52814 BRKN BW4 138 54015 CRAIGJT4 138 1	107	93.3	101.6	4.4330	98.1	2.5740	55823 BBDAMTP4 138 56004 MTRIVER4 138 1	162	See Previous Upgrade Specified For Facility	

Table 3 – SPP facility overloads identified for the AEPW to AEPW transfer using Scenario 3

Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
07SP	AEPW-AEPW	53571 MARSHL-4 138 *B069 1 1	107	106.4	113.3	3.7020	112.7	3.381	3Wnd: OPEN *B0 99 2	0	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53571 MARSHL-4 138 *B099 1 2	107	106.3	113.2	3.6980	112.6	3.377	3Wnd: OPEN *B0 69 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53623 MARAUTO2 69 *B069 1 1	107	106.2	113.1	3.7020	112.5	3.381	3Wnd: OPEN *B0 99 2	0	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53623 MARAUTO2 69 *B099 1 2	107	106.1	113.0	3.6980	112.4	3.377	3Wnd: OPEN *B0 69 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53245 ALUMXT 4 138 53250 BANN 4 138 1	260	85.9	92.1	8.1030	91.2	6.968	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53245 ALUMXT 4 138 53300 NWTXARK4 138 1	260	91.5	97.7	8.1030	96.9	6.968	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53532 FORSTHL2 69 53596 QUITMAN2 69 1	59	80.5	94.5	4.1210	94.4	4.106	3Wnd: OPEN *B0 73 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53540 GREGGTN2 69 53562 LLAMOND2 69 1	107	85.0	91.5	3.4820	91.4	3.471	53527 DIANA 4 138 53590 PERDUE 4 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	AEPW-AEPW	53584 NWHENDR4 138 53585 OAK1HIL4 138 1	210	91.8	95.2	3.5880	95.1	3.555	53557 KNOXLEE4 138 53574 MONROER4 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
07SP	WFEC-OKGE	55917 FRNKLNS4 138 54946 MIDWEST4 138 1	187	90.7	94.4	3.4130	91.3	0.4890	54033 PITTSB-7 345 54037 VALIANT7 345 1	200	Terminal Equipment Upgrade to be Completed by WFEC by 10/1/05 or earlier for SPP OATT Attachment AA	
07WP	SWPA-AEPW	52814 BRKN BW4 138 54015 CRAIGJT4 138 1	107	98.7	107.0	4.4340	103.5	2.5760	55823 BBDAMTP4 138 56004 MTRIVER4 138 1	32	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53276 LSSOUTH4 138 53311 PITTSB 4 138 1	195	120.6	132.5	11.6750	132.3	11.449	53619 WILKES 4 138 53622 WELSHRE4 138 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53557 KNOXLEE4 138 53586 OAK2HIL4 138 1	206	105.2	109.9	4.8800	109.7	4.632	53557 KNOXLEE4 138 53574 MONROER4 138 1	0	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53598 ROKHILL4 138 *B039 1 1	46	91.1	105.0	3.1760	104.8	3.14	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	128	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53597 ROKHILL2 69 *B039 1 1	46	90.7	104.5	3.1760	104.3	3.14	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	135	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53598 ROKHILL4 138 *B130 1 2	46	90.4	104.2	3.1540	104.1	3.119	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	139	See Previous Upgrade Specified For Facility in Scenario 1	

Table 3 – SPP facility overloads identified for the AEPW to AEPW transfer using Scenario 3

Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
10SP	AEPW-AEPW	53597 ROKHILL2 69 *B130 1 2	46	90.0	103.7	3.1540	103.6	3.119	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	145	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53245 ALUMXT 4 138 53300 NWTXARK4 138 1	260	95.4	101.7	8.1100	100.7	6.863	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	147	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53276 LSSOUTH4 138 53619 WILKES 4 138 1	313	95.3	101.5	9.7130	100.9	8.763	53619 WILKES 4 138 53622 WELSHRE4 138 1	150	See Previous Upgrade Specified For Facility in Scenario 2	
10SP	AEPW-AEPW	53532 FORSTHL2 69 53596 QUITMAN2 69 1	58	86.9	101.0	4.1230	100.8	4.06	3Wnd: OPEN *B0 19 1	185	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	SWPA-AEPW	52814 BRKN BW4 138 54015 CRAIGJT4 138 1	107	83.6	91.8	4.4280	91.1	4.027	55823 BBDAMTP4 138 56004 MTRIVER4 138 1	200	See Previous Upgrade Specified For Facility	
10SP	AEPW-AEPW	53245 ALUMXT 4 138 53250 BANN 4 138 1	260	89.5	95.8	8.1100	94.8	6.863	53299 NW Texarkana Bann Tap 53300 N New Boston 138 1 53299 NW Texarkana Bann Tap 53298 NW Texarkana 138 1 53299 NW Texarkana Bann Tap 53250 Bann 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53278 MAGNOLA2 69 53336 WINNSBO2 69 1	72	77.9	91.8	4.9870	91.6	4.924	3Wnd: OPEN *B0 19 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53278 MAGNOLA2 69 53532 FORSTHL2 69 1	72	77.4	91.4	4.9870	91.2	4.924	3Wnd: OPEN *B0 19 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53374 FULTON 3 115 53383 HOPE 3 115 1	174	90.7	95.2	3.8720	94.6	3.313	54033 PITTSB-7 345 54037 VALIANT7 345 1	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53453 SW SHV 4 138 *B003 1 1	657	92.1	95.7	11.8760	95.5	11.059	3Wnd: OPEN *B0 9 2	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53453 SW SHV 4 138 *B009 1 2	657	90.4	94.0	11.6620	93.7	10.86	3Wnd: OPEN *B0 3 1	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53453 SW SHV 4 138 53455 SW SHVT4 138 1	302	89.9	95.5	8.4670	95.1	7.9	53464 Western Electric Tap 53453 SW Shreveport 138 1 53464 Western Electric Tap 53450 Stonewall 138 1 53464 Western Electric Tap 53463 Western Electric 138 1	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53454 SW SHV 7 345 *B003 1 1	653	92.7	96.3	11.8760	96.1	11.059	3Wnd: OPEN *B0 9 2	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53454 SW SHV 7 345 *B009 1 2	654	90.9	94.5	11.6620	94.2	10.86	3Wnd: OPEN *B0 3 1	200	Solution Undetermined	TBD
10SP	AEPW-AEPW	53527 DIANA 4 138 53590 PERDUE 4 138 1	268	84.3	92.7	11.2340	92.6	11.022	53542 HARRISN4 138 53561 LIBCYTP4 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53584 NWHENDR4 138 53585 OAK1HIL4 138 1	237	87.7	90.7	3.5570	90.5	3.309	53557 KNOXLEE4 138 53574 MONROER4 138 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10SP	AEPW-AEPW	53619 WILKES 4 138 53622 WELSHRE4 138 1	260	85.7	93.9	10.5870	93.7	10.334	53276 LSSOUTH4 138 53311 PITTSB_4 138 1	200	Solution Undetermined	TBD
10SP	OKGE-OKGE	54933 DRAPER 4 138 *B232 DRAPER 3 1 1	489	91.6	92.8	3.0250	N/A*	N/A*	3Wnd: OPEN *B2 33 D RAPER 4 2	200	OKGE Upgrade in service by 6/1/2005	
10SP	OKGE-OKGE	54933 DRAPER 4 138 *B233 DRAPER 4 1 2	489	91.6	92.8	3.0250	N/A*	N/A*	3Wnd: OPEN *B2 32 D RAPER 3 1	200	OKGE Upgrade in service by 6/1/2005	
10SP	OKGE-OKGE	54934 DRAPER 7 345 *B232 DRAPER 3 1 1	484	92.5	93.7	3.0250	N/A*	N/A*	3Wnd: OPEN *B2 33 D RAPER 4 2	200	OKGE Upgrade in service by 6/1/2005	

Table 3 – SPP facility overloads identified for the AEPW to AEPW transfer using Scenario 3

Study Case	From Area - To Area	Branch Overload	Rating <MW>	BC % Loading	TC % Loading	%TDF	Existing TC % Loading	Existing %TDF	Outaged Branch Causing Overload	ATC <MW>	Solution	Estimated Cost
10SP	OKGE-OKGE	54934 DRAPER 7 345 *B233 DRAPER 4 1 2	484	92.5	93.7	3.0250	N/A*	N/A*	3Wnd: OPEN *B2 32 D RAPER 3 1	200	OKGE Upgrade in service by 6/1/2005	
10SP	WFEC-OKGE	55917 FRNKLNS4 138 54946 MIDWEST4 138 1	187	93.8	97.4	3.3810	N/A*	N/A*	54033 PITTSB-7 345 54037 VALIANT7 345 1	200	Terminal Equipment Upgrade to be Completed by WFEC by 10/1/05 or earlier for SPP OATT Attachment AA	
10WP	SWPA-AEPW	52814 BRKN BW4 138 54015 CRAIGJT4 138 1	107	84.2	92.5	4.4310	89.0	2.5740	55823 BBDAMTP4 138 56004 MTRIVER4 138 1	200	See Previous Upgrade Specified For Facility	
10WP	AEPW-AEPW	53598 ROKHILL4 138 *B042 1 1	46	80.6	95.0	3.2970	94.9	3.274	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10WP	AEPW-AEPW	53598 ROKHILL4 138 *B140 1 2	46	79.7	94.0	3.2740	93.9	3.252	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10WP	AEPW-AEPW	53597 ROKHILL2 69 *B042 1 1	46	80.2	94.6	3.2970	94.5	3.274	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
10WP	AEPW-AEPW	53597 ROKHILL2 69 *B140 1 2	46	79.7	94.0	3.2740	93.9	3.252	53516 BLOCKRT2 69 53570 MARSHAL2 69 1	200	See Previous Upgrade Specified For Facility in Scenario 1	
											This cost may be higher due to additional facilities whose solutions will be determined during the Facility Study process	\$*
											Total Cost with Facilities Monitored @ 90% Loading	\$ 2,700,000
											Total Cost with Facilities Monitored @ 100% Loading	\$ 2,700,000

*Existing Network Resource has minimal positive impact or negative impact on facility. No credit for positive impact removed can be given to the New Network Resource for this facility.

Appendix A

MUST CHOICES IN RUNNING FCITC DC ANALYSIS

CONSTRAINTS/CONTINGENCY INPUT OPTIONS

1. AC Mismatch Tolerance – 2 MW
2. Base Case Rating – Rate A
3. Base Case % of Rating – 90%
4. Contingency Case Rating – Rate B
5. Contingency Case % of Rating – 90%
6. Base Case Load Flow – Do not solve AC
7. Convert branch ratings to estimated MW ratings – Yes
8. Contingency ID Reporting – Labels
9. Maximum number of contingencies to process - 50000

MUST CALCULATION OPTIONS

1. Phase Shifters Model for DC Linear Analysis – Constant flow for Base Case and Contingencies
2. Report Base Case Violations with FCITC – Yes
3. Maximum number of violations to report in FCITC table - 50000
4. Distribution Factor (OTDF and PTDF) Cutoff – 0.03
5. Maximum times to report the same elements - 10
6. Apply Distribution Factor to Contingency Analysis – Yes
7. Apply Distribution Factor to FCITC Reports – Yes
8. Minimum Contingency Case flow change – 1 MW
9. Minimum Contingency Case Distribution Factor change – 0.0
10. Minimum Distribution Factor for Transfer Sensitivity Analysis – 0.0