



SPP *Southwest Power Pool*

***System Impact Study SPP-2001-036
For Transmission Service
Requested By
Axia Energy***

From CSWS To EES

***For a Reserved Amount Of 200MW
From 6/1/03
To 6/1/08***

SPP Coordinated Planning

System Impact Study

Axia Energy has requested a system impact study for long-term Firm Point-to-Point transmission service from CSWS to EES. The period of the transaction is from 6/1/03 to 6/1/08. The request is for OASIS reservation 237622 for an amount of 200 MW.

The principal objective of this study is to identify constraints on the SPP Regional Tariff System and potential facility upgrades that may be necessary to facilitate the additional 200MW of service requested.

The CSWS to EES transfer was first studied to determine the facility upgrades required if the request were the highest priority request in the queue. These results are documented in Table 1 of the report. The request was then studied to determine the facility upgrades required based on the actual queue position of the request with the higher priority requests still being studied included in the models. These results are documented in Table 2 of the report. Results of the two studies can then be compared to give the customer an estimated range of facility upgrades that may be required in order to accommodate the 200MW CSWS to EES transfer.

SPP used six seasonal models to study the CSWS to EES 200 MW transfer for the requested service period for each scenario. The SPP 2002 Series Cases 2003 Summer Peak, 2003 Fall Peak, 2003/04 Winter Peak, 2004 Spring Peak, 2005 Summer Peak, and 2005/06 Winter Peak were used to study the impact of the 200 MW transfer on the SPP system during the requested service period of 6/1/2003 to 6/1/2008. 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. The cases were modified to reflect firm transfers during the requested service period that were not already included in the January 2002 base case series models.

With the CSWS to EES 200MW transfer as the highest priority request in the queue, the study results show that limiting constraints exist. By studying the request in its actual queue position with higher priority requests included, the number of constraints that limit the ATC to less than 200MW increases. Due to the number of limiting constraints identified, the Transmission Service Request cannot be granted. 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. The upgrades and cost provided in the 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 that will be identified during the facility study process, and the final results of the full AC analysis. Execution of a Facility Study Agreement is now required to maintain queue position. The final upgrade solutions and cost assignments will be determined upon the completion of the facility study.

Table 1 – SPP facility upgrades that would be required if the CSWS to EES request were the highest priority request in the queue

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cost
03G	WERE-WERE	Athens Sw Station - Coffey County No. 4 69kV	45	Wolf Creek - Lacygne 345kV	0	May be relieved due to Westar Transmission Operating Directive 1304	Not Available
03G	WERE-WERE	Auburn Road - Indian Hills 115kV	118	Hoyt - Jeffery Energy Center 345kV	0	May be relieved due to Westar Transmission Operating Directive 400	Not Available
03G	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	May be relieved due to Westar Transmission Operating Directive 400	Not Available
03G	WERE-WERE	Auburn Road - South Gage (West) 115kV	75	Hoyt - Jeffery Energy Center 345kV	0	May be relieved due to Westar Transmission Operating Directive 400	Not Available
03G	WERE-WERE	Auburn Road - South Gage (West) 115kV ckt 2	97	Hoyt - Jeffery Energy Center 345kV Ckt 1	0	May be relieved due to Westar Transmission Operating Directive 400	Not Available
03G	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	Replace 82 structures	\$ 742,000
03G	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	May be relieved due to Westar Transmission Operating Directive 803	Not Available
03G	WERE-WERE	Coffey County No. 4 Vernon - Green 69kV	45	Wolf Creek - Lacygne 345kV	0	May be relieved due to Westar Transmission Operating Directive 1304	Not Available
03G	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	May be relieved due to Westar Transmission Operating Directive 803	Not Available
03G	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	May be relieved due to Westar Transmission Operating Directive 803	Not Available
03SP	WERE-WERE	166Th Street - Jarbalo Junction Sw Station 115kV	97	Midland Junction - Pentagon 115kV	0	May be relieved due to Westar Transmission Operating Directive 1202	Not Available
03SP	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
03SP	WERE-WERE	Auburn Road - South Gage (West) 115kV	75	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
03SP	WERE-WERE	Auburn Road - South Gage (West) 115kV ckt 2	97	Hoyt - Jeffery Energy Center 345kV Ckt 1	0	See Previous	\$ -
03SP	AEPW-AEPW	Big Sandy - Perdue 69kV	85	Perdue - Lake Hawkins 138kV	0	Solution Undetermined	Not Available
03SP	SWPA-EES	Bull Shoals - Midway 161kV	162	Ises - Morefield 161kV	0	Replace disconnect switches , metering CTs and wave trap at Bull Shoals	\$ 150,000
03SP	WFEC-WFEC	Carter Jct - Lake Creek 69kV	26	Elk City 138/69kV Transformer	0	Solution Undetermined	Not Available
03SP	SWPA-EES	Carthage - Reed Springs 69kV	36	Carthage - Jasper 69kV	0	Third Party Facility	\$ -
03SP	SWPA-SWPA	Carthage 161/69kV Transformer ckt 1	84	Carthage 161/69kV Transformer Ckt 2	0	Third Party Facility	\$ -
03SP	AEPW-AEPW	Cherokee Rec - Knox Lee 138kV	209	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	0	Reconductor 3.25 miles of 666 ACSR with 1272 ACSR	\$ 981,000
03SP	AEPW-AEPW	Cherokee Rec - Tatum 138kV	209	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	52	Reconductor 6.25 miles of 666 ACSR with 1272 ACSR	\$ 1,641,000
03SP	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03SP	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03SP	GRRD-GRRD	Claremore 161/69kV Transformer ckt 2	84	Claremore 161/69kV Transformer Ckt 1	87	Solution Undetermined	Not Available
03SP	AEPW-AEPW	Denver-West 138/13.8kV Transformer	33	Carson South - Kenosha West 138kV	0	Solution Undetermined	Not Available

Table 1 - cont – SPP facility upgrades that would be required if the CSWS to EES request were the highest priority request in the queue

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cost
03SP	OKGE-OKGE	Draper Lake 138/345kV Transformer ckt 1	493	Draper Lake 138/345kV Transformer Ckt 2	147	May be relieved due to OKGE Operating Guide	Not Available
03SP	OKGE-OKGE	Draper Lake 138/345kV Transformer ckt 2	493	Draper Lake 138/345kV Transformer Ckt 1	147	See Previous	\$ -
03SP	AEPW-AEPW	Dyess - Chamber Springs 161kV	244	Chamber Springs - Farmington Aecc 161kV	0	AEPW Planned Tontitown Project	\$ -
03SP	AEPW-AEPW	Dyess - East Rogers 161kV	244	Flint Creek - Gentry Rec 161kV	0	AEPW Planned Tontitown Project	\$ -
03SP	AEPW-AEPW	Flint Creek - Elm Springs Rec 161kV	312	Flint Creek - Gentry Rec 161kV	0	AEPW Planned Tontitown Project	\$ -
03SP	AEPW-AEPW	Flint Creek - Gentry Rec 161kV	353	Dyess - East Rogers 161kV	0	Rebuild 1.09 miles of 2-397.5 ACSR with 2156 ACSR.	\$ 400,000
03SP	AEPW-AEPW	Greggton - Lake Lamond 69kV	107	Diana - Perdue 138kV	0	Solution Undetermined	Not Available
03SP	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03SP	AEPW-AEPW	Longwood - Noram 138kV	234	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	102	Reconductor 4.66 miles of bundled 266 ACSR with 1590 ACSR and replace jumpers & Bus Riser jumpers	\$ 1,577,000
03SP	AEPW-AEPW	Marshall 138/69kV Transformer ckt 1	107	Marshall 138/69kV Transformer Ckt 2	0	Replace 755 ACAR Strain Bus	\$ 25,000
03SP	AEPW-AEPW	Marshall 138/69kV Transformer ckt 2	107	Marshall 138/69kV Transformer Ckt 1	0	Replace 755 ACAR Strain Bus	\$ 25,000
03SP	WERE-WERE	Mockingbird Hill Sw Station - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	May be relieved due to Westar Transmission Operating Directive 803	Not Available
03SP	AEPW-AEPW	Pittsburg - Ferndale Lake Tap 69kV	79	Adora Rec - Adora T 69kV	37	Reset CTs @ Pittsburg	\$ 10,000
03SP	AEPW-AEPW	Rock Hill - Tatum 138kV	209	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	119	Reconductor 0.81 miles 666MCM to 1272 ACSR - other 5.76 miles of 795 ACSR with 1272 ACSR. Reset CTs and relay settings @ Rock Hill	\$ 342,970
03SP	MIDW-WEPL	Seward 69/115kV Transformer	44	Heizer 115/230kV Transformer	0	Solution Undetermined	Not Available
03SP	KACP-KACP	Stilwell - Lacygne 345kV	1251	West Gardner - Lacygne 345kV	0	Build new Linn County substation with 345/161kV 400 Mva transformer. Tap Wolf Creek to LaCygne 345kV line and Centerville to Paola 161kV line	\$ 6,945,000
03SP	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03SP	OKGE-OKGE	Tinker #4 - Tinker #2 138kV	100	Horseshoe Lake - Midway 138kV	0	Invalid Overload	\$ -
03FA	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
03FA	WERE-WERE	Auburn Road - South Gage (West) 115kV	75	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
03FA	WERE-WERE	Auburn Road - South Gage (West) 115kV ckt 2	97	Hoyt - Jeffery Energy Center 345kV Ckt 1	0	See Previous	\$ -
03FA	SWPA-EES	Bull Shoals - Midway 161kV	162	Bull Shoals - Buford Tap 161kV	0	See Previous	\$ -
03FA	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03FA	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03FA	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03FA	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03WP	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
03WP	WERE-WERE	Auburn Road - South Gage (West) 115kV	75	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
03WP	SWPA-EES	Carthage - Reed Springs 69kV	43	Carthage - Jasper 69kV	11	See Previous	\$ -

Table 1 - cont – SPP facility upgrades that would be required if the CSWS to EES request were the highest priority request in the queue

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cost
03WP	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03WP	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03WP	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03WP	WFEC-WFEC	Lexington - Paoli 69kV	34	Canadian Sw 69/138kV Transformer	0	Solution Undetermined	Not Available
03WP	WFEC-WFEC	Paoli 69/138kV Transformer	42	Canadian Sw - Noble 69kV	0	Solution Undetermined	Not Available
03WP	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05SP	WERE-WERE	166Th Street - Jarbalo Junction Sw Station 115kV	97	Midland Junction - Pentagon 115kV	0	See Previous	\$ -
05SP	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
05SP	AECI-AECI	Bristow 138/69kV Transformer ckt 1	56	Bristow 138/69kV Transformer Ckt 2	0	Solution Undetermined	Not Available
05SP	AECI-AECI	Bristow 138/69kV Transformer ckt 2	56	Bristow 138/69kV Transformer Ckt 1	0	Solution Undetermined	Not Available
05SP	SWPA-EES	Bull Shoals - Midway 161kV	162	Ises - Morefield 161kV	0	See Previous	\$ -
05SP	SWPA-EES	Carthage - Jasper 69kV	47	Milo - Clark 69kV	0	Third Party Facility	\$ -
05SP	SWPA-EES	Carthage - Reed Springs 69kV	36	Carthage - Jasper 69kV	0	See Previous	\$ -
05SP	SWPA-SWPA	Carthage 161/69kV Transformer ckt 1	84	Carthage 161/69kV Transformer Ckt 2	0	See Previous	\$ -
05SP	SWPA-SWPA	Carthage 161/69kV Transformer ckt 2	84	Carthage 161/69kV Transformer Ckt 1	0	Transformers owned by City of Carthage and AECI	\$ -
05SP	AEPW-AEPW	Chamber Springs - Farmington Aecc 161kV	335	Chamber Springs - Tontitown 161kV	0	Replace Farmington switch	\$ 60,000
05SP	AEPW-AEPW	Chamber Springs - Tontitown 161kV	244	Chamber Springs - Farmington Aecc 161kV	0	Rebuild 12 miles with 2156ACSR	\$ 7,200,000
05SP	AEPW-AEPW	Cherokee Rec - Knox Lee 138kV	209	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	0	See Previous	\$ -
05SP	AEPW-AEPW	Cherokee Rec - Tatum 138kV	209	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	0	See Previous	\$ -
05SP	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05SP	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05SP	GRRD-GRRD	Claremore 161/69kV Transformer ckt 1	84	Claremore 161/69kV Transformer Ckt 2	0	Solution Undetermined	Not Available
05SP	GRRD-GRRD	Claremore 161/69kV Transformer ckt 2	84	Claremore 161/69kV Transformer Ckt 1	0	See Previous	\$ -
05SP	SPRM-AECI	Clay - Logan 161kV	185	Multiple Outage Contingency, Franks - Huben 345kV, Huben - Morgan 345kV	0	Replace transmission line structures to allow operation at 100C	\$ 250,000
05SP	AEPW-AEPW	Denver-West 138/13.8kV Transformer	33	Carson South - Kenosha West 138kV	0	Solution Undetermined	Not Available
05SP	OKGE-OKGE	Draper Lake 138/345kV Transformer ckt 1	493	Draper Lake 138/345kV Transformer Ckt 2	0	See Previous	\$ -
05SP	OKGE-OKGE	Draper Lake 138/345kV Transformer ckt 2	493	Draper Lake 138/345kV Transformer Ckt 1	0	See Previous	\$ -
05SP	AEPW-AEPW	Elm Springs Rec - Tontitown 161kV	306	Dyess - Tontitown 161kV	0	Replace Switch and Elm Springs Strain Bus	\$ 100,000
05SP	AEPW-AEPW	Flint Creek - Gentry Rec 161kV	353	Lowell 5 - Tontitown 161kV	0	See Previous	\$ -
05SP	AEPW-AEPW	Flint Creek - Tontitown 161kV	312	Flint Creek - Gentry Rec 161kV	0	Replace switch and jumpers	\$ 45,000
05SP	AEPW-AEPW	Hallsville - Longview Heights 69kV	48	Marshall - Marshall Auto 69kV	0	Rebuild 7.07 miles of 4/0 ACSR w ith 795 ACSR	\$ 3,000,000

Table 1 - cont – SPP facility upgrades that would be required if the CSWS to EES request were the highest priority request in the queue

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cost
05SP	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05SP	WERE-WERE	Lawrence Hill - Wren 115kV	141	Mockingbird Hill Sw Sta - SW Lawrence 115kV	0	May be relieved due to Westar Transmission Operating Directive 1210	Not Available
05SP	AEPW-AEPW	Lieberman - IPC Jefferson 138kV	136	Longwood - Wilkes 345kV	199	Reconductor 26.35 miles of 336 ACSR with 795 ACSR, Replace Switches @ Lieberman, Reset Relays @ Jefferson IPC, & Reconductor 0.65 miles 397MCM to 795MCM	\$ 7,411,000
05SP	AEPW-AEPW	Longwood - Noram 138kV	234	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	0	See Previous	\$ -
05SP	AEPW-AEPW	Marshall - North Marshall 69kV	72	Flournoy 69/138kV Transformer	0	Replace 350 CU bus & jumpers @ North Marshall.	\$ 23,356
05SP	AEPW-AEPW	Marshall 138/69kV Transformer ckt 1	107	Marshall 138/69kV Transformer Ckt 2	0	See Previous	\$ -
05SP	AEPW-AEPW	Marshall 138/69kV Transformer ckt 2	107	Marshall 138/69kV Transformer Ckt 1	0	See Previous	\$ -
05SP	WERE-WERE	Mockingbird Hill Sw Station - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05SP	AEPW-AEPW	North Marshall - Woodlawn 69kV	51	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV , Southwest Shreveport to Diana 345kV	99	Replace 3/0 CU jumpers @ North Marshall	\$ 15,000
05SP	AEPW-AEPW	Northwest Henderson - Poynter 69kV	72	Evenside - Northwest Henderson 69kV	0	Solution Undetermined	Not Available
05SP	AEPW-AEPW	Raines - Noram 138kV	234	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	70	Rebuild 5.58 miles of 2-266 ACSR with 1590 ACSR	\$ 2,000,000
05SP	AEPW-AEPW	Rock Hill - Tatum 138kV	209	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	0	See Previous	\$ -
05SP	MIDW-WEPL	Seward 69/115kV Transformer	44	Heizer 115/230kV Transformer	0	See Previous	\$ -
05SP	AEPW-WFEC	Southwest Station - Anadarko 138kV	203	Fort Cobb - Southwest Station 138kV	0	Replace bus, jumpers, switches, supports and foundations at Anadarko Switch Station	\$ 450,000
05SP	KACP-KACP	Stilwell - Lacygne 345kV	1251	West Gardner - Lacygne 345kV	0	See Previous	\$ -
05SP	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05SP	OKGE-OKGE	Tinker #4 - Tinker #2 138kV	100	Horseshoe Lake - Midway 138kV	0	See Previous	\$ -
05WP	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffrey Energy Center 345kV	0	See Previous	\$ -
05WP	SWPA-EES	Carthage - Reed Springs 69kV	43	Carthage - Jasper 69kV	0	See Previous	\$ -
05WP	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05WP	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05WP	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05WP	WERE-WERE	Mockingbird Hill Sw Station - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05WP	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
Total (Excludes Costs Not Available)							\$ 33,392,970

Table 2 – SPP facility upgrades required based on the actual queue position of the CSWS to EES transfer with higher priority requests included

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cost
03G	WERE-WERE	Athens Sw Station - Coffey County No. 4 69kV	45	Wolf Creek - Lacygne 345kV	0	May be relieved due to Westar Transmission Operating Directive 1304	Not Available
03G	WERE-WERE	Auburn Road - Indian Hills 115kV	118	Hoyt - Jeffery Energy Center 345kV	0	May be relieved due to Westar Transmission Operating Directive 400	Not Available
03G	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	May be relieved due to Westar Transmission Operating Directive 400	Not Available
03G	WERE-WERE	Auburn Road - South Gage (West) 115kV	75	Hoyt - Jeffery Energy Center 345kV	0	May be relieved due to Westar Transmission Operating Directive 400	Not Available
03G	WERE-WERE	Auburn Road - South Gage (West) 115kV ckt 2	97	Hoyt - Jeffery Energy Center 345kV Ckt 1	0	May be relieved due to Westar Transmission Operating Directive 400	Not Available
03G	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	Replace 82 structures	\$ 742,000
03G	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	May be relieved due to Westar Transmission Operating Directive 803	Not Available
03G	WERE-WERE	Coffey County No. 4 Vernon - Green 69kV	45	Wolf Creek - Lacygne 345kV	0	May be relieved due to Westar Transmission Operating Directive 1304	Not Available
03G	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	May be relieved due to Westar Transmission Operating Directive 803	Not Available
03G	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	May be relieved due to Westar Transmission Operating Directive 803	Not Available
03SP	WERE-WERE	166Th Street - Jarbalo Junction Sw Station 115kV	97	Midland Junction - Pentagon 115kV	0	May be relieved due to Westar Transmission Operating Directive 1202	Not Available
03SP	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
03SP	WERE-WERE	Auburn Road - South Gage (West) 115kV	75	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
03SP	WERE-WERE	Auburn Road - South Gage (West) 115kV ckt 2	97	Hoyt - Jeffery Energy Center 345kV Ckt 1	0	See Previous	\$ -
03SP	AEPW-AEPW	Big Sandy - Perdue 69kV	85	Perdue - Lake Hawkins 138kV	0	Solution Undetermined	Not Available
03SP	SWPA-EES	Bull Shoals - Midway 161kV	162	Ises - Morefield 161kV	0	Replace disconnect switches, metering CTs and wave trap at Bull Shoals	\$ 150,000
03SP	WFEC-WFEC	Carter Jct - Lake Creek 69kV	26	Elk City 138/69kV Transformer	0	Solution Undetermined	Not Available
03SP	SWPA-EES	Carthage - Jasper 69kV	47	Milo - Clark 69kV	0	Third Party Facility	\$ -
03SP	SWPA-EES	Carthage - Reed Springs 69kV	36	Carthage - Jasper 69kV	0	Third Party Facility	\$ -
03SP	SWPA-SWPA	Carthage 161/69kV Transformer ckt 1	84	Carthage 161/69kV Transformer Ckt 2	0	Third Party Facility	\$ -
03SP	SWPA-SWPA	Carthage 161/69kV Transformer ckt 2	84	Carthage 161/69kV Transformer Ckt 1	0	Transformers owned by City of Carthage and AECI	\$ -
03SP	AEPW-AEPW	Cherokee Rec - Knox Lee 138kV	209	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	0	Reconductor 3.25 miles of 666 ACSR with 1272 ACSR	\$ 981,000

Table 2 - Continued – SPP facility upgrades required based on the actual queue position with higher priority requests included

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cost
03SP	AEPW-AEPW	Cherokee Rec - Tatum 138kV	209	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	6	Reconductor 3.25 miles of 666 ACSR with 1272 ACSR	\$ 1,641,000
03SP	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03SP	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03SP	GRRD-GRRD	Claremore 161/69kV Transformer ckt 1	84	Claremore 161/69kV Transformer Ckt 2	0	Solution Undetermined	Not Available
03SP	GRRD-GRRD	Claremore 161/69kV Transformer ckt 2	84	Claremore 161/69kV Transformer Ckt 1	0	Solution Undetermined	Not Available
03SP	AEPW-AEPW	Denver-West 138/13.8kV Transformer	33	Carson South - Kenosha West 138kV	0	Solution Undetermined	Not Available
03SP	OKGE-OKGE	Draper Lake 138/345kV Transformer ckt 1	493	Draper Lake 138/345kV Transformer Ckt 2	190	May be relieved due to OKGE Operating Guide	Not Available
03SP	OKGE-OKGE	Draper Lake 138/345kV Transformer ckt 2	493	Draper Lake 138/345kV Transformer Ckt 1	190	See Previous	\$ -
03SP	AEPW-AEPW	Dyess - Chamber Springs 161kV	244	Chamber Springs - Farmington Aecc 161kV	0	AEPW Planned Tontitown Project	\$ -
03SP	AEPW-AEPW	Dyess - East Rogers 161kV	244	Flint Creek - Gentry Rec 161kV	0	AEPW Planned Tontitown Project	\$ -
03SP	AEPW-AEPW	East Centerton - Gentry Rec 161kV	353	Dyess - East Rogers 161kV	0	Rebuild 19.16 miles of 2-397.5 ACSR with 2156 ACSR	\$ 8,000,000
03SP	AEPW-AEPW	Flint Creek - Elm Springs Rec 161kV	312	Flint Creek - Gentry Rec 161kV	0	AEPW Planned Tontitown Project	\$ -
03SP	AEPW-AEPW	Flint Creek - Gentry Rec 161kV	353	Dyess - East Rogers 161kV	0	Rebuild 1.09 miles of 2-397.5 ACSR with 2156 ACSR.	\$ 400,000
03SP	AEPW-AEPW	Greggton - Lake Lamond 69kV	107	Diana - Perdue 138kV	0	Solution Undetermined	Not Available
03SP	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03SP	AEPW-AEPW	Longwood - Noram 138kV	234	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	22	Reconductor 4.66 miles of bundled 266 ACSR with 1590 ACSR and replace jumpers & Bus Riser jumpers	\$ 1,577,000
03SP	AEPW-AEPW	Marshall 138/69kV Transformer ckt 1	107	Marshall 138/69kV Transformer Ckt 2	0	Replace 755 ACAR Strain Bus	\$ 25,000
03SP	AEPW-AEPW	Marshall 138/69kV Transformer ckt 2	107	Marshall 138/69kV Transformer Ckt 1	0	Replace 755 ACAR Strain Bus	\$ 25,000
03SP	WERE-WERE	Mockingbird Hill Sw Station - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	May be relieved due to Westar Transmission Operating Directive 803	Not Available
03SP	AEPW-AEPW	Pittsburg - Ferndale Lake Tap 69kV	79	Adora Rec - Adora T 69kV	66	Reset CTs @ Pittsburg	\$ 10,000
03SP	AEPW-AEPW	Rock Hill - Tatum 138kV	209	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	73	Reconductor 0.81 miles 666MCM to 1272 ACSR - Reconductor other 5.76 miles of 795 ACSR with 1272 ACSR. Reset CTs and relay settings @ Rock Hill	\$ 342,970
03SP	MIDW-WEPL	Seward 69/115kV Transformer	44	Heizer 115/230kV Transformer	0	Solution Undetermined	Not Available
03SP	KACP-KACP	Stilwell - Lacygne 345kV	1251	West Gardner - Lacygne 345kV	0	Build new Linn County substation with 345/161kV 400 Mva transformer. Tap Wolf Creek to LaCygne 345kV line and Centerville to Paola 161kV line	\$ 6,945,000
03SP	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03SP	OKGE-OKGE	Tinker #4 - Tinker #2 138kV	100	Horseshoe Lake - Midway 138kV	0	Invalid Overload	\$ -
03FA	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -

Table 2 - Continued – SPP facility upgrades required based on the actual queue position with higher priority requests included

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cost
03FA	WERE-WERE	Auburn Road - South Gage (West) 115kV	75	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
03FA	WERE-WERE	Auburn Road - South Gage (West) 115kV ckt 2	97	Hoyt - Jeffery Energy Center 345kV Ckt 1	0	See Previous	\$ -
03FA	SWPA-EES	Bull Shoals - Midway 161kV	162	Bull Shoals - Buford Tap 161kV	0	See Previous	\$ -
03FA	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03FA	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03FA	WERE-WERE	Coffey County No. 4 Vernon - Green 69kV	45	Wolf Creek - Lacygne 345kV	0	See Previous	\$ -
03FA	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03FA	WERE-WERE	Mockingbird Hill Sw Station - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	28	See Previous	\$ -
03FA	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03WP	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
03WP	WERE-WERE	Auburn Road - South Gage (West) 115kV	75	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
03WP	SWPA-EES	Carthage - Reed Springs 69kV	43	Carthage - Jasper 69kV	0	See Previous	\$ -
03WP	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03WP	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03WP	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03WP	WERE-WERE	Mockingbird Hill Sw Station - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
03WP	WFEC-WFEC	Paoli 69/138kV Transformer	42	Canadian Sw - Noble 69kV	0	Solution Undetermined	Not Available
03WP	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
04G	WERE-WERE	Athens Sw Station - Coffey County No. 4 69kV	45	Wolf Creek - Lacygne 345kV	0	See Previous	\$ -
04G	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
04G	WERE-WERE	Auburn Road - South Gage (West) 115kV	75	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
04G	WERE-WERE	Auburn Road - South Gage (West) 115kV ckt 2	97	Hoyt - Jeffery Energy Center 345kV Ckt 1	0	See Previous	\$ -
04G	SWPA-EES	Bull Shoals - Midway 161kV	162	Bull Shoals - Buford Tap 161kV	0	See Previous	\$ -
04G	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
04G	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
04G	WERE-WERE	Coffey County No. 4 Vernon - Green 69kV	45	Wolf Creek - Lacygne 345kV	0	See Previous	\$ -
04G	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
04G	WERE-WERE	Mockingbird Hill Sw Station - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
04G	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05SP	WERE-WERE	166Th Street - Jarbalo Junction Sw Station 115kV	97	Midland Junction - Pentagon 115kV	0	See Previous	\$ -
05SP	GRRD-GRRD	Afton 161/69kV Transformer	50	Miami - Afton 161kV	0	Replace 50 MVA Transformer with 84 MVA unit	\$ 833,000
05SP	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
05SP	AECI-AECI	Bristow 138/69kV Transformer ckt 1	56	Bristow 138/69kV Transformer Ckt 2	0	Solution Undetermined	Not Available
05SP	AECI-AECI	Bristow 138/69kV Transformer ckt 2	56	Bristow 138/69kV Transformer Ckt 1	0	Solution Undetermined	Not Available
05SP	SWPA-EES	Bull Shoals - Midway 161kV	162	Ises - Morefield 161kV	0	See Previous	\$ -

Table 2 - Continued – SPP facility upgrades required based on the actual queue position with higher priority requests included

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cost
05SP	SWPA-EES	Carthage - Jasper 69kV	47	Milo - Clark 69kV	0	See Previous	\$ -
05SP	SWPA-EES	Carthage - Reed Springs 69kV	36	Carthage - Jasper 69kV	0	See Previous	\$ -
05SP	SWPA-SWPA	Carthage 161/69kV Transformer ckt 1	84	Carthage 161/69kV Transformer Ckt 2	0	See Previous	\$ -
05SP	SWPA-SWPA	Carthage 161/69kV Transformer ckt 2	84	Carthage 161/69kV Transformer Ckt 1	0	See Previous	\$ -
05SP	AEPW-AEPW	Chamber Springs - Farmington Aecc 161kV	335	Chamber Springs - Tontitown 161kV	0	Replace Farmington switch	\$ 60,000
05SP	AEPW-AEPW	Chamber Springs - Tontitown 161kV	244	Chamber Springs - Farmington Aecc 161kV	0	Rebuild 12 miles with 2156ACSR	\$ 7,200,000
05SP	AEPW-AEPW	Cherokee Rec - Knox Lee 138kV	209	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	0	See Previous	\$ -
05SP	AEPW-AEPW	Cherokee Rec - Tatum 138kV	209	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	0	See Previous	\$ -
05SP	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05SP	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05SP	GRRD-GRRD	Claremore 161/69kV Transformer ckt 1	84	Claremore 161/69kV Transformer Ckt 2	0	See Previous	\$ -
05SP	GRRD-GRRD	Claremore 161/69kV Transformer ckt 2	84	Claremore 161/69kV Transformer Ckt 1	0	See Previous	\$ -
05SP	SPRM-AECI	Clay - Logan 161kV	185	Multiple Outage Contingency, Franks - Huben 345kV, Huben - Morgan 345kV	0	Replace transmission line structures to allow operation at 100C	\$ 250,000
05SP	AEPW-AEPW	Denver-West 138/13.8kV Transformer	33	Carson South - Kenosha West 138kV	0	See Previous	\$ -
05SP	OKGE-OKGE	Draper Lake 138/345kV Transformer ckt 1	493	Draper Lake 138/345kV Transformer Ckt 2	0	See Previous	\$ -
05SP	OKGE-OKGE	Draper Lake 138/345kV Transformer ckt 2	493	Draper Lake 138/345kV Transformer Ckt 1	0	See Previous	\$ -
05SP	AEPW-AEPW	East Centerton - Gentry Rec 161kV	353	Lowell 5 - Tontitown 161kV	0	See Previous	\$ -
05SP	AEPW-AEPW	Elm Springs Rec - Tontitown 161kV	306	Dyess - Tontitown 161kV	0	Replace Switch and Elm Springs Strain Bus	\$ 100,000
05SP	AEPW-AEPW	Flint Creek - Gentry Rec 161kV	353	Lowell 5 - Tontitown 161kV	0	See Previous	\$ -
05SP	AEPW-AEPW	Flint Creek - Tontitown 161kV	312	Flint Creek - Gentry Rec 161kV	0	Replace switch and jumpers	\$ 45,000
05SP	AEPW-AEPW	Hallsville - Longview Heights 69kV	48	Marshall - Marshall Auto 69kV	0	Rebuild 7.07 miles of 4/0 ACSR with 795 ACSR	\$ 3,000,000
05SP	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05SP	WERE-WERE	Lawrence Hill - Wren 115kV	141	Mockingbird Hill Sw Sta - SW Lawrence 115kV	0	May be relieved due to Westar Transmission Operating Directive 1210	Not Available
05SP	AEPW-AEPW	Lieberman - IPC Jefferson 138kV	136	Longwood - Wilkes 345kV	113	Reconductor 26.35 miles of 336 ACSR with 795 ACSR, Replace Switches @ Lieberman, Reset Relays @ Jefferson IPC, & Reconductor 0.65 miles 397MCM to 795MCM	\$ 7,411,000
05SP	AEPW-AEPW	Longwood - Noram 138kV	234	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	0	See Previous	\$ -

Table 2 - Continued – SPP facility upgrades required based on the actual queue position with higher priority requests included

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cost
05SP	AEPW-AEPW	Marshall - North Marshall 69kV	72	Flournoy 69/138kV Transformer	0	Replace 350 CU bus & jumpers @ North Marshall.	\$ 23,000
05SP	AEPW-AEPW	Marshall 138/69kV Transformer ckt 1	107	Marshall 138/69kV Transformer Ckt 2	0	See Previous	\$ -
05SP	AEPW-AEPW	Marshall 138/69kV Transformer ckt 2	107	Marshall 138/69kV Transformer Ckt 1	0	See Previous	\$ -
05SP	WERE-WERE	Mockingbird Hill Sw Station - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05SP	AEPW-AEPW	North Marshall - Woodlawn 69kV	51	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV, Southwest Shreveport to Diana 345kV	65	Replace 3/0 CU jumpers @ North Marshall	\$ 15,000
05SP	AEPW-AEPW	Northwest Henderson - Poynter 69kV	72	Evenside - Northwest Henderson 69kV	0	Solution Undetermined	Not Available
05SP	OKGE-OKGE	Pecan Creek 161/345kV Transformer	369	Muskogee - Ft Smith 345kV	0	Add 2nd 345/161 kV 369MVA transformer.	\$ 3,000,000
05SP	AEPW-AEPW	Raines - Noram 138kV	234	Multiple Outage Contingency , Southwest Shreveport - Longwood 345kV , Southwest Shreveport to Diana 345kV	0	Rebuild 5.58 miles of 2-266 ACSR with 1590 ACSR	\$ 2,000,000
05SP	MIDW-WEPL	Seward 69/115kV Transformer	44	Heizer 115/230kV Transformer	0	See Previous	\$ -
05SP	WERE-WERE	SW Lawrence - Wakarusa Junction Sw Station 115kV	92	Ku Campus - 19Th Street Junction 115kV	6	Solution Undetermined	Not Available
05SP	AEPW-WFEC	Southwest Station - Anadarko 138kV	203	Fort Cobb - Southwest Station 138kV	0	Replace bus, jumpers, switches, supports and foundations at Anadarko Switch Station	\$ 450,000
05SP	SWPA-SPRM	Springfield - Brookline 161kV	323	Junction - Brookline 161kV	169	Solution Undetermined	Not Available
05SP	KACP-KACP	Stilwell - Lacygne 345kV	1251	West Gardner - Lacygne 345kV	0	See Previous	\$ -
05SP	EMDE-EMDE	Oronogo Jct. - Joplin Oakland North 161kV	214	Sub 292 - Tipton Ford - Sub 389 - Joplin Southwest 161kV	0	Reconstruct and replace 1.4 miles of 556 ACSR with Bundled 556 ACSR	\$ 800,000
05SP	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05SP	OKGE-OKGE	Tinker #4 - Tinker #2 138kV	100	Horseshoe Lake - Midway 138kV	0	See Previous	\$ -
05WP	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	See Previous	\$ -
05WP	SWPA-EES	Carthage - Reed Springs 69kV	43	Carthage - Jasper 69kV	0	See Previous	\$ -
05WP	WERE-WERE	Circleville - Hoyt Hti Sw Junction 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05WP	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05WP	SPRM-AECI	Clay - Logan 161kV	232	Multiple Outage Contingency, Franks - Huben 345kV, Huben - Morgan 345kV	0	See Previous	\$ -
05WP	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05WP	WERE-WERE	Mockingbird Hill Sw Station - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
05WP	AEPW-AEPW	South Shreveport - Wallace Lake 138kV	210	Dolet Hills 345/230kV Transformer	163	Dolet Hills Operating Guide	\$ -
05WP	SWPA-SPRM	Springfield - Clay 161kV	167	Multiple Outage Contingency, Franks - Huben 345kV, Huben - Morgan 345kV	0	Replace disconnect switches at Springfield	\$ 200,000
05WP	WERE-WERE	Tecumseh Hill - Stull Sw Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	\$ -
Total (Excludes Costs Not Available)							\$ 46,225,970