



SPP *Southwest
Power Pool*

***System Impact Study SPP-2002-028
For Transmission Service
Requested By
Utilicorp***

From WR To MPS

***For a Reserved Amount Of 178MW
From 1/1/2005
To 1/1/2020***

SPP Coordinated Planning

System Impact Study

Utilicorp (UCU) has requested a system impact study for long-term Firm Point-to-Point transmission service from WR to MPS. The period of the transaction is from 1/1/2005 to 1/1/2020. The request is for OASIS reservation 340009 for an amount of 178 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 178 MW of service requested.

The WR to MPS transfer was studied to determine the facility upgrades required based on the actual queue position of the request with only those higher priority requests in Facility Study mode included in the models. Higher priority requests still in study that have not gone to facility study were not included in the models. These results are documented in Table 1 of the report. The results given in Table 1 include upgrades that may be assigned to higher priority requests. The results of this study give the customer an estimated cost of facility upgrades that may be required in order to accommodate the 178 MW WR to MPS transfer.

SPP used four seasonal models to study the WR to MPS 178 MW transfer for the requested service period. The SPP 2002 Series Cases 2005 Summer Peak, 2005/06 Winter Peak, 2008 Summer Peak and 2008/2009 Winter Peak were used to study the impact of the 100 MW transfer on the SPP system during the requested service period of 1/1/2005 to 1/1/2020. 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 only the higher priority requests that have signed Facility Study Agreements included in the models, the study results of the WR to MPS 178 MW show that limiting constraints exist. 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 identified for the WR to MPS transfer

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cos
05SP	WERE-WERE	166Th Street - Jarbalo Jct Swi Station 115kV	97	Midland Jct - Pentagon 115kV	0	May be relieved due to Westar Transmission Operating Directive 1202	Not Available
05SP	WERE-WERE	29Th & Eveningside Jct - 29Th & Gage 115kV	141	Hoyt - Jeffery Energy Center 345kV	163	May be relieved due to Westar Transmission Operating Directive 400	Not Available
05SP	GRRD-GRRD	Afton 161/69kV Transformer	50	Miami - Afton 161kV	0	Replace 50 MVA Transformer with 84 MVA unit	\$ 833,000
05SP	AEPW-AEPW	Alumax Tap - Northwest Texarkana 138kV	261	Nw Texarkana-Bann T - Northwest Texarkana 138kV	0	Replace Switches Alumax Tap	\$ 30,000
05SP	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
05SP	SWPA-EES	Bull Shoals - Midway 161kV	162	Bull Shoals - Buford Tap 161kV	0	Replace disconnect switches, metering CTs and wave trap at Bull Shoals	\$ 150,000
05SP	SWPA-EES	Carthage - Reed Springs 69kV	36	Sub 124 - Aurora H.T. - Sub 383 - Monett 161kV	0	Third Party Facility	\$
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	Reconductor 3.25 miles of 666 ACSR with 1272 ACSR	\$ 981,000
05SP	AEPW-AEPW	Cherokee Rec - Tatum 138kV	209	Multiple Outage Contingency Southwest Shreveport - Longwood 345kV Southwest Shreveport to Diana 345kV	0	Reconductor 6.25 miles of 666 ACSR with 1272 ACSR	\$ 1,641,000
05SP	WERE-WERE	Circleville - Hoyt Hti Swi Jct 115kV	97	Hoyt - Stranger Creek 345kV	0	Replace 82 structures	\$ 742,000
05SP	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
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	Solution Undetermined	Not Available
05SP	AEPW-WFEC	Cornville - Corn Tap 138kV	105	Southwest Station - Anadarko 138kV	0	Solution Undetermined	Not Available
05SP	WERE-WERE	County Line - Hook Jct 115kV	92	Tecumseh Energy Center - Tecumseh Hill 115kV	0	May be relieved due to Westar Transmission Operating Directive 1203	Not Available
05SP	WERE-WERE	County Line - Rock Creek 69kV	41	Hoyt - Stranger Creek 345kV	113	May be relieved due to Westar Transmission Operating Directive 803	Not Available
05SP	AEPW-AEPW	East Centerton - Gentry Rec 161kV	353	Lowell 5 - Tontitown 161kV	0	Rebuild 19.16 miles of 2-397.5 ACSR with 2156 ACSR	\$ 8,000,000
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	Rebuild 1.09 miles of 2-397.5 ACSR with 2156 ACSR.	\$ 400,000
05SP	AEPW-AEPW	Flint Creek - Tontitown 161kV	312	East Centerton - Gentry Rec 161kV	0	Replace switch and jumpers	\$ 45,000
05SP	WERE-WERE	Gill Energy Center East - Macarthur 69kV	68	Gill Energy Center East - Oatville 69kV	0	Replace substation bus and jumpers at MacArthur 69 kV	\$ 22,000
05SP	WERE-WERE	Gill Energy Center East - Oatville 69kV	72	Gill Energy Center East - Macarthur 69kV	0	Replace disconnect switches at Gill 69 kV (use 800 A.), Replace line switch at Oatville 69 kV (use 800 A.)	\$ 45,000
05SP	KACY-KACY	Kaw 2 - Everett 2 69kV	68	Owens Corning 2 - Levee 2 69kV	0	Solution Undetermined	Not Available
05SP	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
05SP	WERE-WERE	Lawrence Hill - Wren 115kV	141	Bismark Jct Swi Sta - Farmer's Consumer Co-Op 115kV	0	May be relieved due to Westar Transmission Operating Directive 1210	Not Available
05SP	AEPW-AEPW	Longwood - Noram 138kV	234	Multiple Outage Contingency Southwest Shreveport - Longwood 345kV Southwest Shreveport to Diana 345kV	0	Reconductor 4.66 miles of bundled 266 ACSR with 1590 ACSR and replace jumpers & Bus Riser jumpers	\$ 1,577,000

Table 1 - continued – SPP facility upgrades identified for the WR to MPS transfer

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cos
05SP	WERE-WERE	Mockingbird Hill Swi Station - Stull Swi Station 115kV	92	Hoyt - Stranger Creek 345kV	0	May be relieved due to Westar Transmission Operating Directive 803	Not Available
05SP	KACY-KACY	Owens Corning 2 - Quindaro 2 69kV ckt 2	82	Owens Corning 2 - Quindaro 2 69kV Ckt 1	0	Solution Undetermined	Not Available
05SP	WEPL-WEPL	Phillipsburg - Smith Center 115kV	40	Knoll - Summit 230kV	0	Solution Undetermined	Not Available
05SP	AEPW-AEPW	Rock Hill - Tatum 138kV	209	Multiple Outage Contingency Southwest Shreveport - Longwood 345kV Southwest Shreveport to Diana 345kV	0	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
05SP	WERE-WERE	SW Lawrence - Wakarusa Jct Swi Station 115kV	92	Ku Campus - 19Th Street Jct 115kV	27	Solution Undetermined	Not Available
05SP	AEPW-WFEC	Southwest Station - Anadarko 138kV	203	Verden - Southwest Station 138kV	0	Replace bus, jumpers, switches, supports and foundations at Anadarko Switch Station	\$ 450,000
05SP	SWPA-SPRM	Springfield - Brookline 161kV	323	Jct - Brookline 161kV	0	Solution Undetermined	Not Available
05SP	WERE-WERE	Tecumseh Energy Center - Hook Jct 115kV	160	Tecumseh Energy Center - Tecumseh Hill 115kV	0	May be relieved due to Westar Transmission Operating Directive 1203	Not Available
05SP	WERE-WERE	Tecumseh Hill - Stull Swi Station 115kV	92	Hoyt - Stranger Creek 345kV	0	May be relieved due to Westar Transmission Operating Directive 803	Not Available
05WP	WERE-WERE	166Th Street - Jarbalo Jct Swi Station 115kV	97	Midland Jct - Pentagon 115kV	152	See Previous	See Previous
05WP	WERE-WERE	Auburn Road - Jeffery Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	See Previous	See Previous
05WP	WERE-WERE	Circleville - Hoyt Hti Swi Jct 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
05WP	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
05WP	AEPW-AEPW	Flint Creek - Tontitown 161kV	312	East Centerton - Bentonville J Street 161kV	0	See Previous	See Previous
05WP	WERE-WERE	Fort Jct Swi Sta - West Jct City Jct (East) 115kV ckt 1	68	Fort Jct Swi Sta - West Jct City Jct (East) 115kV Ckt 2	0	May be relieved due to Westar Transmission Operating Directive 1217	Not Available
05WP	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
05WP	WERE-WERE	Mockingbird Hill Swi Station - Stull Swi Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
05WP	WERE-WERE	Tecumseh Hill - Stull Swi Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
08SP	WERE-WERE	166Th Street - Jaggard Jct 115kV	97	Midland Jct - Pentagon 115kV	162	Solution Undetermined	Not Available
08SP	WERE-WERE	166Th Street - Jarbalo Jct Swi Station 115kV	97	Midland Jct - Pentagon 115kV	0	See Previous	See Previous
08SP	GRRD-GRRD	412Sub - Kansas Tap 161kV	338	Flint Creek - Grda1 345kV	0	Reconductor 9.7 miles with 1590MCM ACSR	\$ 1,488,000
08SP	GRRD-GRRD	Afton 161/69kV Transformer	50	Miami - Afton 161kV	0	See Previous	See Previous
08SP	AEPW-AEPW	Alumax Tap - Bann 138kV	261	Nw Texarkana-Bann T - Northwest Texarkana 138kV	0	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
08SP	AEPW-AEPW	Alumax Tap - Northwest Texarkana 138kV	261	Nw Texarkana-Bann T - Northwest Texarkana 138kV	0	See Previous	See Previous
08SP	WERE-WERE	Auburn Road - Indian Hills 115kV	223	Hoyt - Jeffery Energy Center 345kV	0	May be relieved due to Westar Transmission Operating Directive 400	Not Available
08SP	WERE-WERE	Auburn Road - Jeffery Energy Center 230kV	565	Hoyt - Jeffery Energy Center 345kV	0	See Previous	See Previous
08SP	AEPW-OKGE	Bonanza - Bonanza Tap 161kV	177	Aes - Tarby 161kV	0	Rebuild 0.06 miles of 397.5 ACSR with 795MCM ACSR	\$ 50,000
08SP	AEPW-AEPW	Broken Arrow North - Sth Tap - Lynn Lane Tap 138kV	235	Tulsa North - Northeast Station 345kV	0	Rebuild 4.63 miles of 795 ACSR with 1590 ACSR	\$ 2,600,000
08SP	AEPW-AEPW	Broken Arrow North - South Tap - Oneta 138kV	235	Tulsa North - Northeast Station 345kV	0	Rebuild 4.31 miles of 795 ACSR with 1590 ACSR.	\$ 2,370,500

Table 1 - continued – SPP facility upgrades identified for the WR to MPS transfer

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cos
08SP	SWPA-EES	Bull Shoals - Midway 161kV	162	Bull Shoals - Buford Tap 161kV	0	See Previous	See Previous
08SP	SWPA-EES	Carthage - Jasper 69kV	47	Milo - Clark 69kV	0	Third Party Facility	\$
08SP	SWPA-EES	Carthage - Reed Springs 69kV	36	Sub 124 - Aurora H.T. - Sub 383 - Monett 161kV	0	See Previous	See Previous
08SP	SWPA-SWPA	Carthage 161/69kV Transformer ckt 1	84	Carthage 161/69kV Transformer Ckt 2	0	Third Party Facility	\$
08SP	SWPA-SWPA	Carthage 161/69kV Transformer ckt 2	84	Carthage 161/69kV Transformer Ckt 1	0	Transformers owned by City of Carthage and AECI	\$
08SP	AEPW-AEPW	Chamber Springs - Tontitown 161kV	244	Chamber Springs - Farmington Aecc 161kV	0	See Previous	See Previous
08SP	AEPW-AEPW	Chamber Springs 161/345kV Transformer	660	Flint Creek - Grda1 345kV	0	Install 2nd 345/161 kV Auto-transformer	\$ 4,000,000
08SP	AEPW-AEPW	Cherokee Rec - Knox Lee 138kV	209	Multiple Outage Contingency Southwest Shreveport - Longwood 345kV Southwest Shreveport to Diana 345kV	0	See Previous	See Previous
08SP	AEPW-AEPW	Cherokee Rec - Tatum 138kV	209	Multiple Outage Contingency Southwest Shreveport - Longwood 345kV Southwest Shreveport to Diana 345kV	0	See Previous	See Previous
08SP	WERE-WERE	Chisholm - Evans Energy Center North 138kV	382	Evans Energy Center South - Lakeridge 138kV	0	Solution Undetermined	Not Available
08SP	WERE-WERE	Circleville - Hoyt Hti Swi Jct 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
08SP	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
08SP	GRRD-GRRD	Claremore 161/69kV Transformer ckt 1	84	Claremore 161/69kV Transformer Ckt 2	0	See Previous	See Previous
08SP	GRRD-GRRD	Claremore 161/69kV Transformer ckt 2	84	Claremore 161/69kV Transformer Ckt 1	0	See Previous	See Previous
08SP	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
08SP	WERE-WERE	County Line - Hook Jct 115kV	92	Tecumseh Energy Center - Tecumseh Hill 115kV	0	See Previous	See Previous
08SP	WERE-WERE	County Line - Rock Creek 69kV	41	Stranger Creek 345/951kV Transformer Ckt 0	0	See Previous	See Previous
08SP	WERE-WERE	County Line - Tecumseh Hill 115kV	106	Tecumseh Energy Center - Tecumseh Hill 115kV	0	May be relieved due to Westar Transmission Operating Directive 1203	Not Available
08SP	KACP-KACP	Craig - College 161kV	335	Stilwell - Antioch 161kV	0	Solution Undetermined	Not Available
08SP	AEPW-AEPW	East Centerton - Gentry Rec 161kV	353	Flint Creek - East Centerton 345kV	0	See Previous	See Previous
08SP	INDN-AECI	Eckles 5 - PITTSV 161kV	163	Clinton - Holden 161kV	0	Solution Undetermined	Not Available
08SP	AEPW-AEPW	Elm Springs Rec - Tontitown 161kV	306	Chamber Springs - Farmington Aecc 161kV	0	See Previous	See Previous
08SP	KACY-KACY	Everett 2 - Kaw 2 69kV	68	Owens Corning 2 - Levee 2 69kV	0	Solution Undetermined	Not Available
08SP	WERE-WERE	Farmer's Consumer - Wakarusa Jct Swi Sta 115kV	92	SW Lawrence - Wakarusa Jct Swi Station 115kV	176	Solution Undetermined	Not Available
08SP	AEPW-AEPW	Flint Creek - Gentry Rec 161kV	353	Flint Creek - East Centerton 345kV	0	See Previous	See Previous
08SP	AEPW-AEPW	Flint Creek - Tontitown 161kV	312	Bentonville J Street - Bentonville SI 161kV	0	See Previous	See Previous
08SP	AEPW-EES	Fulton - Patmos 115kV	174	Lydia - Valliant 345kV	0	Using 1590MCM ACSR, reconductor 7.1 miles	\$ 2,300,000
08SP	WERE-WERE	Gill Energy Center East - Interstate 138kV	210	Evans Energy Center South - Lakeridge 138kV	0	Solution Undetermined	Not Available
08SP	WERE-WERE	Gill Energy Center East - Macarthur 69kV	68	Gill Energy Center East - Oatville 69kV	0	See Previous	See Previous
08SP	WERE-WERE	Gill Energy Center West - Haysville Jct 69kV	80	Canal 138/211kV Transformer	0	Solution Undetermined	Not Available
08SP	WERE-WERE	Hoyt - Jeffery Energy Center 345kV	1163	Auburn Road - Jeffrey Energy Center 230kV	177	Solution Undetermined	Not Available

Table 1 - continued – SPP facility upgrades identified for the WR to MPS transfer

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cos
08SP	AEPW-AEPW	Jacksonville (Swe-Rc-Etec) - Overton 138kV	235	Crockett - Tenaska Rusk County 345kV	0	Reset relays at Jacksonville & Overton	\$ 15,000
08SP	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
08SP	GRRD-GRRD	Kerr - 412Sub 161kV	338	Flint Creek - Grda1 345kV	0	Reconductor 12.5 miles with 1590MCM ACSR.	\$ 1,918,000
08SP	WERE-WERE	Lawrence Hill - Wren 115kV	141	Bismark Jct Swi Sta - Farmer's Consumer Co-Op 115kV	0	See Previous	See Previous
08SP	AEPW-AEPW	Lieberman - IPC Jefferson 138kV	136	Longwood - Wilkes 345kV	0	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
08SP	AEPW-AEPW	Longwood - Noram 138kV	234	Multiple Outage Contingency Southwest Shreveport - Longwood 345kV Southwest Shreveport to Diana 345kV	0	See Previous	See Previous
08SP	OKGE-WFEC	Midwest Tap - Franklin Sw 138kV	215	Anadarko - Pocassett 138kV	0	Replace 600A metering CTs with 1200A	\$ 55,000
08SP	WERE-WERE	Mockingbird Hill Swi Station - Stull Swi Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
08SP	WERE-WERE	NA Philips Jct (South) - West Mcpherson 115kV	68	East Mcpherson - Summit 230kV	35	May be relieved due to Westar Transmission Operating Directive 613	Not Available
08SP	KACY-KACY	Owens Corning 2 - Quindaro 2 69kV ckt 2	82	Owens Corning 2 - Quindaro 2 69kV Ckt 1	0	See Previous	See Previous
08SP	OKGE-OKGE	Pecan Creek 161/345kV Transformer	369	Muskogee - Ft Smith 345kV	0	Add 2nd 345/161 kV 369MVA transformer.	\$ 3,000,000
08SP	WEPL-WEPL	Phillipsburg - Smith Center 115kV	40	Knoll - Summit 230kV	0	See Previous	See Previous
08SP	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
08SP	AEPW-AEPW	Rock Hill - Tatum 138kV	209	Multiple Outage Contingency Southwest Shreveport - Longwood 345kV Southwest Shreveport to Diana 345kV	0	See Previous	See Previous
08SP	AEPW-AEPW	South Fayetteville - Farmington Aecc 161kV	313	Chamber Springs - Tontitown 161kV	0	Solution Undetermined	Not Available
08SP	WERE-WERE	SW Lawrence - Wakarusa Jct Swi Station 115kV	92	Ku Campus - 19Th Street Jct 115kV	0	See Previous	See Previous
08SP	SWPA-SPRM	Springfield - Brookline 161kV	323	Jct - Brookline 161kV	0	See Previous	See Previous
08SP	EMDE-AECI	Sub 446 - Chesapeake - 2MTVRN 69kV	36	Sub 124 - Aurora H.T. - Sub 355 - Aurora West 69kV	0	Solution Undetermined	Not Available
08SP	WERE-WERE	Tecumseh Energy Center - Hook Jct 115kV	160	Tecumseh Energy Center - Tecumseh Hill 115kV	0	See Previous	See Previous
08SP	WERE-WERE	Tecumseh Energy Center - Tecumseh Hill 115kV	236	Hoyt - Stranger Creek 345kV	0	May be relieved due to Westar Transmission Operating Directive 803	Not Available
08SP	WERE-WERE	Tecumseh Hill - 27Th & Croco 115kV ckt 1	68	Tecumseh Hill - 27Th & Croco 115kV Ckt 2	2	May be relieved due to Westar Transmission Operating Directive 618	Not Available
08SP	WERE-WERE	Tecumseh Hill - Stull Swi Station 115kV	92	Stranger Creek 345/951kV Transformer Ckt 0	0	See Previous	See Previous
08SP	WERE-WERE	West Mcpherson - Wheatland 115kV	70	Circle - Rice County 115kV	0	Solution Undetermined	Not Available
08WP	WERE-WERE	166Th Street - Jarbalo Jct Swi Station 115kV	97	Midland Jct - Pentagon 115kV	0	See Previous	See Previous
08WP	WERE-WERE	Auburn Road - Jeffrey Energy Center 230kV	565	Hoyt - Jeffrey Energy Center 345kV	0	See Previous	See Previous
08WP	SWPA-EES	Carthage - Reed Springs 69kV	43	Carthage - Jasper 69kV	0	See Previous	See Previous
08WP	AEPW-AEPW	Chamber Springs - Tontitown 161kV	275	Chamber Springs - Farmington Aecc 161kV	0	See Previous	See Previous
08WP	WERE-WERE	Circleville - Hoyt Hti Swi Jct 115kV	97	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
08WP	WERE-WERE	Circleville - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous

Table 1 - continued – SPP facility upgrades identified for the WR to MPS transfer

Study Year	From Area - To Area	Branch Over 100% Rate B	Rate B	Outaged Branch Causing Overload	ATC	Solution	Estimated Cos
08WP	WERE-WERE	County Line - Hook Jct 115kV	92	Tecumseh Energy Center - Tecumseh Hill 115kV	0	See Previous	See Previous
08WP	WERE-WERE	Fort Jct Swi Sta - West Jct City Jct (East) 115kV ckt 1	68	Fort Jct Swi Sta - West Jct City Jct (East) 115kV Ckt 2	0	See Previous	See Previous
08WP	AEPW-AEPW	Jacksonville (Swe-Rc-Etec) - Overton 138kV	265	Crockett - Tenaska Rusk County 345kV	0	See Previous	See Previous
08WP	WERE-WERE	Kelly - King Hill N.M. Coop 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
08WP	WERE-WERE	Mead - Plaza 69kV	72	Evans Energy Ctr Nth - Evans Energy Ctr Sth 138kV	0	Solution Undetermined	Not Available
08WP	WERE-WERE	Mockingbird Hill Swi Station - Stull Swi Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
08WP	WERE-WERE	SW Lawrence - Wakarusa Jct Swi Station 115kV	92	Ku Campus - 19Th Street Jct 115kV	0	See Previous	See Previous
08WP	WERE-WERE	Tecumseh Energy Center - Hook Jct 115kV	160	Tecumseh Energy Center - Tecumseh Hill 115kV	0	See Previous	See Previous
08WP	WERE-WERE	Tecumseh Hill - Stull Swi Station 115kV	92	Hoyt - Stranger Creek 345kV	0	See Previous	See Previous
						Total (Excludes Costs Not Available)	\$50,706,470