

Requested Board Action	Project ID	Upgrade ID	Project Name	Upgrade Name	State	Upgrade Description	2016 ITPNT Need Date	Upgrade Cost Estimate	Upgrade Cost Estimate Source	Upgrade Type	Voltage	New Miles Count	Rebuild/Reconductor Miles Count	Voltage Conversion Miles Count	Summer Rating (Normal/Emergency)
NTC	409	10533	XFR - Hereford Interchange 115/69 kV #1 and #2	Hereford Interchange 115/69 kV #1 Transformer	TX	Replace first existing 115/69 transformer at Hereford Interchange.	6/1/2017	\$2,468,463	SPS	Regional Reliability	115/69				83/95
NTC	409	10534	XFR - Hereford Interchange 115/69 kV #1 and #2	Hereford Interchange 115/69 kV #2 Transformer	TX	Replace second existing 115/69 transformer at Hereford Interchange.	6/1/2017	\$2,437,078	SPS	Regional Reliability	115/69				83/95
NTC	409	51459	XFR - Hereford Interchange 115/69 kV #1 and #2	Hereford Interchange 115 kV #1 Terminal Upgrades	TX	Install any 115 kV terminal upgrades needed to replace first existing 115/69 transformer at Hereford Interchange.	6/1/2017	\$457,209	SPS	Regional Reliability	115				83/95
NTC	409	51460	XFR - Hereford Interchange 115/69 kV #1 and #2	Hereford Interchange 115 kV #2 Terminal Upgrades	TX	Install any 115 kV terminal upgrades needed to replace second existing 115/69 transformer at Hereford Interchange.	6/1/2017	\$457,209	SPS	Regional Reliability	115				83/95
NTC	30597	51484	Multi - Knob Hill - Lane - Noel 138 kV Ckt 1	Cleo Junction 138 kV Terminal Upgrades	OK	Install 3-breaker ring bus at Cleo Junction to allow load to be moved from 69 kV to 138 kV.	6/1/2017	\$4,000,000	WFEC	Regional Reliability	138				
NTC	30597	51485	Multi - Knob Hill - Lane - Noel 138 kV Ckt 1	Ringwood 138 kV Terminal Upgrades	OK	Install 3-breaker ring bus at Ringwood to allow load to be moved from 69 kV to 138 kV.	6/1/2017	\$4,000,000	WFEC	Regional Reliability	138				
NTC	30692	50920	XFR - Seminole 230/115 kV #1 and #2	Seminole 230/115 kV #1 Transformer	TX	Replace first existing 230/115 transformer at Seminole.	6/1/2017	\$3,890,904	SPS	Regional Reliability	230/115				246/283
NTC	30692	50921	XFR - Seminole 230/115 kV #1 and #2	Seminole 230/115 kV #2 Transformer	TX	Replace second existing 230/115 transformer at Seminole.	6/1/2017	\$3,890,904	SPS	Regional Reliability	230/115				246/283
NTC	30995	51430	Device - Harrisburg 69 kV Cap Bank	Harrisburg 69 kV Cap Bank	OK	Install new 15-MVAR cap bank at Harrisburg 69 kV.	6/1/2017	\$450,000	WFEC	Regional Reliability	69				15 MVAR
NTC	30996	51431	Sub - Hobbs - Yoakum Tap 230 kV Substation and Transformer	Hobbs - Yoakum Tap 230 kV Substation	TX	Tap the existing 230 kV line from Hobbs to Yoakum and the existing 115 kV line from Allred Tap to Waits. Terminate all four end points into new substation.	6/1/2017	\$9,441,616	SPS	Regional Reliability	230/115				319/351
NTC	30996	51432	Sub - Hobbs - Yoakum Tap 230 kV Substation and Transformer	Hobbs - Yoakum Tap 230/115 kV Transformer	TX	Install 230/115 kV transformer at new Hobbs - Yoakum Tap substation.	6/1/2017	\$2,966,656	SPS	Regional Reliability	230/115				246/283
NTC	30997	51433	Device - Sayre 138 kV Cap Bank	Sayre 138 kV Cap Bank	OK	Install new 14.4-MVAR capacitor bank at Sayre 138 kV.	6/1/2017	\$758,441	AEP	Regional Reliability	138				14.4 MVAR
NTC	30999	51436	Sub - Potter Co. - Harrington 230 kV Terminal Upgrades	Potter Co. - Harrington 230 kV Terminal Upgrades	TX	Upgrade terminal equipment at both Potter Co. and Harrington 230 kV substations.	6/1/2019	\$1,033,584	SPS	Regional Reliability	230				497/547
NTC	31001	51438	Line - Road Runner - Agave Red Hills/Ochoa/Custer Mountain 115 kV New Line	Agave Red Hills - Road Runner 115 kV Ckt 1 New Line	NM	Construct new 115 kV line from Agave Red Hills to Road Runner.	4/1/2020	\$443,866	SPP	Regional Reliability	115	0.75			158/173
NTC	31001	51439	Line - Road Runner - Agave Red Hills/Ochoa/Custer Mountain 115 kV New Line	Ochoa - Road Runner 115 kV Ckt 1 New Line	NM	Construct new 115 kV line from Ochoa to Road Runner.	4/1/2020	\$519,061	SPP	Regional Reliability	115	1.125			158/173
NTC	31001	51440	Line - Road Runner - Agave Red Hills/Ochoa/Custer Mountain 115 kV New Line	Custer Mountain - Road Runner 115 kV Ckt 1 New Line	NM	Add new 1-mile segment to existing 115 kV line from Custer Mountain to Ochoa, re-terminating at Road Runner.	4/1/2020	\$759,610	SPP	Regional Reliability	115	1			141/141
NTC	31001	51441	Line - Road Runner - Agave Red Hills/Ochoa/Custer Mountain 115 kV New Line	Road Runner 115 kV Terminal Upgrades	NM	Install any terminal upgrades needed to accommodate new line terminals for Ochoa, Agave Red Hills, and Custer Mountain.	4/1/2020	\$4,580,864	SPS	Regional Reliability	115				141/141
NTC	31001	51442	Line - Road Runner - Agave Red Hills/Ochoa/Custer Mountain 115 kV New Line	Ochoa 115 kV Terminal Upgrades	NM	Install any terminal upgrades needed to accommodate new line terminal from Road Runner.	4/1/2020	\$25,280	SPS	Regional Reliability	115				141/141
NTC	31001	51443	Line - Road Runner - Agave Red Hills/Ochoa/Custer Mountain 115 kV New Line	Agave Red Hills 115 kV Terminal Upgrades	NM	Install any terminal upgrades needed to accommodate new line terminal from Road Runner.	4/1/2020	\$25,280	SPS	Regional Reliability	115				141/141
NTC	31002	51444	Line - Lincoln - Meeker 138 kV Ckt New Line	Lincoln - Meeker 138 kV Ckt New Line (OGE)	OK	Construct new 138 kV line from Lincoln to Meeker.	6/1/2017	\$750,000	OGE	Regional Reliability	138				268/308
NTC	31002	51445	Line - Lincoln - Meeker 138 kV Ckt New Line	Lincoln - Meeker 138 kV Ckt New Line (WFEC)	OK	Construct new 138 kV line from Lincoln to Meeker.	6/1/2017	\$6,000,000	WFEC	Regional Reliability	138	12			268/308
NTC	31003	51446	Sub - Northeastern Station 138 kV Terminal Upgrades	Northeastern Station 138 kV Terminal Upgrades	OK	Install terminal upgrades at Northeastern station 138 kV substation on terminal for 138 kV line to Oologah.	6/1/2017	\$518,011	AEP	Regional Reliability	138				191/216
NTC	31005	51448	Sub - Elk City 138 kV Move Load	Elk City 138 kV Move Load	OK	Move load from 69 kV bus to 138 kV bus at Elk City.	6/1/2017	\$2,904,911	AEP	Regional Reliability	138				
NTC	31006	51449	Device - Arco 138 kV SVC	Arco 138 kV SVC	OK	Install new SVC at Arco 138 kV substation with effective range of -20/+100 MVAR.	6/1/2017	\$20,500,000	SPP	Regional Reliability	138				-20/+100 MVAR
NTC	31008	51451	Multi - Artesia County 115 kV	Artesia Country Club 115 kV Voltage Conversion	NM	Convert the Artesia County Club 69 kV substation to 115 kV operation.	6/1/2017	\$5,201,175	SPS	Regional Reliability	115				273/301
NTC	31008	51452	Multi - Artesia County 115 kV	Artesia Country Club Tap 115 kV Line Tap	NM	Tap the 115 kV line from Atoka to Eagle Creek and install 3-way switch at tap point.	6/1/2017	\$336,134	SPS	Regional Reliability	115				273/301
NTC	31008	51453	Multi - Artesia County 115 kV	Artesia Country Club - Artesia Country Club Tap 115 kV Ckt 1 New Line	NM	Construct new 115 kV line from Artesia Country Club to Artesia Country Club Tap.	6/1/2017	\$2,814,758	SPS	Regional Reliability	115	3			273/301
NTC	31009	51454	Line - Duncan - Tosco 69 kV Ckt 1 Rebuild	Duncan - Tosco 69 kV Ckt 1 Rebuild	OK	Rebuild 69 kV line from Duncan to Tosco. Replace wave trap at Duncan.	6/1/2018	\$5,974,766	AEP	Regional Reliability	69		3.86		72/79
NTC	31010	51455	Device - Blanchard 69 kV Cap Bank	Blanchard 69 kV Cap Bank	OK	Install 9-MVAR capacitor bank at Blanchard 69 kV.	6/1/2017	\$341,325	SPP	Regional Reliability	69				9 MVAR
NTC	31021	51478	Line - Mustang - Seminole 115 kV Ckt 1 New Line	Mustang - Seminole 115 kV Ckt 1 New Line	TX	Construct new 115 kV line from Mustang to Seminole.	6/1/2017	\$10,715,275	SPP	Regional Reliability	115	17			240/240
NTC	31021	51479	Line - Mustang - Seminole 115 kV Ckt 1 New Line	Mustang 115 kV Terminal Upgrades	TX	Install terminal upgrades at Mustang 115 kV substation needed to accommodate termination of new line from Seminole.	6/1/2017	\$1,591,690	SPS	Regional Reliability	115				240/240
NTC	31021	51480	Line - Mustang - Seminole 115 kV Ckt 1 New Line	Seminole 115 kV Terminal Upgrades	TX	Install terminal upgrades at Seminole 115 kV substation needed to accommodate termination of new line from Mustang.	6/1/2017	\$2,016,340	SPS	Regional Reliability	115				240/240
NTC	31022	51481	Line - Canyon East Tap - Randall 115 kV Ckt 1 Rebuild	Canyon East Tap - Randall 115 kV Ckt 1 Rebuild	TX	Rebuild 3-mile segment of 115 kV line from Canyon East Tap to Randall.	6/1/2017	\$4,960,481	SPS	Regional Reliability	115		3		240/240
NTC	31024	51486	Device - Skiatook 69 kV Cap Bank	Skiatook 69 kV Cap Bank	OK	Install new 9-MVAR cap bank at Skiatook 69 kV.	6/1/2017	\$1,134,600	GRDA	Regional Reliability	69				9 MVAR
NTC	31025	51487	Sub - Sallisaw 161 kV Terminal Upgrades	Sallisaw 161 kV Terminal Upgrades	OK	Install ring bus at Sallisaw 161 kV substation.	6/1/2017	\$2,266,000	GRDA	Regional Reliability	161				
NTC	31030	51500	Device - Latexo 138 kV Cap Bank	Latexo 138 kV Cap Bank	TX	Install new 28.8-MVAR capacitor bank at Latexo 138 kV.	12/1/2017	\$1,712,000	ETEC	Regional Reliability	138				28.8 MVAR

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NTC	31031	51501	Multi - Kummer Ridge - Roundup 115 kV New Line and Patent Gate and Roundup 345/115 kV Substations	Kummer Ridge - Roundup 115 kV Ckt 1 New Line	ND	Construct new 115 kV line from Kummer Ridge to Roundup.	6/1/2017	\$49,589,600	BEPC	Regional Reliability	115	32.4			240/240
NTC	31031	51503	Multi - Kummer Ridge - Roundup 115 kV New Line and Patent Gate and Roundup 345/115 kV Substations	Roundup 345/115 kV Transformer	ND	Install new 345/115 kV transformer at Roundup.	6/1/2017	\$6,662,000	BEPC	Regional Reliability	345/115				333/415
NTC	31031	51504	Multi - Kummer Ridge - Roundup 115 kV New Line and Patent Gate and Roundup 345/115 kV Substations	Patent Gate 345/115 kV Transformer	ND	Install new 345/115 kV transformer at Patent Gate.	6/1/2017	\$6,122,000	BEPC	Regional Reliability	345/115				332/415
NTC	31031	51505	Multi - Kummer Ridge - Roundup 115 kV New Line and Patent Gate and Roundup 345/115 kV Substations	Roundup 13.8 kV Reactor	ND	Install new 25-MVAR reactor at Roundup 13.8 kV.	6/1/2017	\$172,821	BEPC	Regional Reliability	13.8				25 MVAR
NTC	31031	51543	Multi - Kummer Ridge - Roundup 115 kV New Line and Patent Gate and Roundup 345/115 kV Substations	Patent Gate 345 kV Substation	ND	Tap the 345 kV line from Charlie Creek to Jusdon to construct the new Patent Gate substation. Install any necessary 345 kV terminal upgrades needed for new 345/115 kV transformer at the new Patent Gate substation.	6/1/2017	\$30,000,000	BEPC	Regional Reliability	345				956/956
NTC	31031	51544	Multi - Kummer Ridge - Roundup 115 kV New Line and Patent Gate and Roundup 345/115 kV Substations	Roundup 345 kV Substation	ND	Tap the 345 kV line from Antelope Valley Station to Charlie Creek to construct the new Roundup substation. Install any necessary 345 kV terminal upgrades needed for new 345/115 kV transformer at the new Roundup substation.	6/1/2017	\$27,100,000	BEPC	Regional Reliability	345				956/956
NTC	31031	51545	Multi - Kummer Ridge - Roundup 115 kV New Line and Patent Gate and Roundup 345/115 kV Substations	Patent Gate 13.8 kV Reactor	ND	Install new 25-MVAR reactor at Patent Gate 13.8 kV.	6/1/2017	\$172,821	BEPC	Regional Reliability	13.8				25 MVAR
NTC	31031	51546	Multi - Kummer Ridge - Roundup 115 kV New Line and Patent Gate and Roundup 345/115 kV Substations	Kummer Ridge 115 kV Substation	ND	Tap the 115 kV line from Galaxy Tap Station to Fancy B Substation to construct the new Kummer Ridge substation.	6/1/2017	\$3,918,000	BEPC	Regional Reliability	115				120/120
NTC	31032	51506	Multi - Plaza 115 kV Substation and Blaisdell - Plaza 115 kV New Line	Plaza 115 kV Substation	ND	Tap the 115 kV line from Makoti to Parshall to create new Plaza substation.	6/1/2017	\$3,918,000	BEPC	Regional Reliability	115				183/183
NTC	31032	51507	Multi - Plaza 115 kV Substation and Blaisdell - Plaza 115 kV New Line	Blaisdell - Plaza 115 kV New Line	ND	Construct new 115 kV line from Blaisdell to new Plaza substation.	6/1/2017	\$14,841,308	BEPC	Regional Reliability	115	36			239/239
NTC	31032	51508	Multi - Plaza 115 kV Substation and Blaisdell - Plaza 115 kV New Line	Plaza 115 kV Cap Bank	ND	Install new 15-MVAR cap bank at new Plaza substation.	6/1/2017	\$283,000	BEPC	Regional Reliability	115				15 MVAR
NTC	31033	51509	Line - Berthold - Southwest Minot 115 kV Ckt 1 Reconductor	Berthold - Southwest Minot 115 kV Ckt 1 Reconductor	ND	Reconductor 115 kV line from Berthold to Southwest Minot.	6/1/2017	\$2,876,720	BEPC	Regional Reliability	115		26.44		212/212
NTC	31038	51521	Device - S964 69 kV Cap Bank	S964 69 kV Cap Bank	NE	Install new 10-MVAR capacitor bank at S964 69 kV.	6/1/2020	\$619,277	OPPD	Regional Reliability	69				10 MVAR
NTC	31039	51524	Line - Commanche Tap - Tosco 69 kV Ckt 1 Rebuild	Commanche Tap - Tosco 69 kV Ckt 1 Rebuild	OK	Rebuild 69 kV line from Commanche Tap to Tosco.	6/1/2020	\$4,365,864	AEP	Regional Reliability	69		3.2		156/173
NTC	31040	51525	Device - Ringwood 138 kV Cap Bank	Ringwood 138 kV Cap Bank	OK	Install 7-MVAR capacitor bank at Ringwood 138 kV.	6/1/2018	\$450,000	WFEC	Regional Reliability	138				7 MVAR
NTC	31041	51526	Multi - Driftwood 138/69 kV Substation and Transformer	Driftwood 138 kV Substation	OK	Tap the 138 kV line from Byron to Cherokee City to construct new Driftwood substation. Install any required 138 kV terminal upgrades required to install 138/69 kV transformer.	6/1/2017	\$550,000	WFEC	Regional Reliability	138				144/179
NTC	31041	51527	Multi - Driftwood 138/69 kV Substation and Transformer	Driftwood 138/69 kV Transformer	OK	Install new 138/69 kV transformer at new Driftwood substation. Install new 69 kV terminal for 69 kV line from Hazelton Junction.	6/1/2017	\$3,000,000	WFEC	Regional Reliability	138/69				55/70
NTC	31042	51528	Multi - DeGrasse - Knob Hill 138 kV New Line and DeGrasse 345/138 kV Transformer	DeGrasse 345 kV Substation	OK	Tap the double-circuit 345 kV line from Woodward to Thistle to construct the new DeGrasse substation. Install any 345 kV needed for new 345/138 kV transformer.	6/1/2017	\$15,000,000	OGE	Regional Reliability	345				1561/1793
NTC	31042	51529	Multi - DeGrasse - Knob Hill 138 kV New Line and DeGrasse 345/138 kV Transformer	DeGrasse 345/138 kV Transformer	OK	Install new 345/138 kV transformer at the new DeGrasse substation.	6/1/2017	\$6,000,000	OGE	Regional Reliability	345/138				493/493
NTC	31042	51530	Multi - DeGrasse - Knob Hill 138 kV New Line and DeGrasse 345/138 kV Transformer	DeGrasse - Knob Hill 138 kV New Line	OK	Construct new 138 kV line from the new DeGrasse substation to Knob Hill.	6/1/2017	\$8,300,000	OGE	Regional Reliability	138	12			287/287
NTC	31042	51531	Multi - DeGrasse - Knob Hill 138 kV New Line and DeGrasse 345/138 kV Transformer	DeGrasse 115 kV Substation	OK	Tap the existing 138 kV line from Mooreland to Rose Valley and terminate both end points into the new DeGrasse substation.	6/1/2017	\$1,200,000	WFEC	Regional Reliability	138				183/228
NTC	31049	51542	Device - Cedar Grove - Linwood 138 kV Reactor	Cedar Grove - Linwood 138 kV Reactor	LA	Install new 1% series line reactor on the 138 kV line from Cedar Grove to Linwood.	6/1/2020	\$3,534,979	AEP	Regional Reliability	138	0.1			
NTC	31051	51549	Sub - Terry Co. - Wolfforth 115 kV Terminal Upgrades	Terry Co. - Wolfforth 115 kV Terminal Upgrades	TX	Upgrade terminal equipment at Terry Co. and Wolfforth to increase the rating of the 115 kV line from Terry Co. to Wolfforth.	4/1/2020	\$1,700,000	SPS	Regional Reliability	115				210/230
NTC	31052	51550	Multi - Tolk Yoakum Tap 230/115 kV Substation and Transformer	Tolk - Yoakum Tap 230/115 kV Substation and Transformer	TX	Tap the intersection of the 230 kV line from Tolk to Yoakum and the 115 kV line from Cochran to Lehman Tap and terminate all four ends into new substation. Install new 230/115 kV transformer at new substation.	6/1/2018	\$11,672,566	SPP	Regional Reliability	230/115				280/308
NTC	31054	51552	Device - Bopco 115 kV Cap Bank	Bopco 115 kV Cap Bank	TX	Install 7.2-MVAR capacitor bank at Bopco 115 kV.	6/1/2017	\$273,060	SPP	Regional Reliability	115				7.2 MVAR
NTC	31056	51557	Device - Sunset 69 kV Cap Bank	Sunset 69 kV Cap Bank	KS	Install additional 9.6-MVAR capacitor bank at Sunset 69 kV.	6/1/2017	\$364,080	SPP	Zonal Reliability	69				9.6 MVAR
NTC	31057	51558	Line - Atoka - Atoka Pump - Pittsburg - Savanna - Army Ammo - McAlester City 69 kV Ckt 1 Rebuild	Army Ammo - McAlester 69 kV Ckt 1 Rebuild	OK	Rebuild 9.9-mile 69 kV line from Army Ammo to McAlester.	6/1/2017	\$7,458,042	SPP	Zonal Reliability	69		9.9		52/69
NTC	31057	51559	Line - Atoka - Atoka Pump - Pittsburg - Savanna - Army Ammo - McAlester City 69 kV Ckt 1 Rebuild	Army Ammo - Savanna - Pittsburg 69 kV Ckt 1 Rebuild	OK	Rebuild 9.6-mile 69 kV line from Army Ammo to Savanna to Pittsburg.	6/1/2017	\$7,232,496	SPP	Zonal Reliability	69		9.6		78/86
NTC	31057	51560	Line - Atoka - Atoka Pump - Pittsburg - Savanna - Army Ammo - McAlester City 69 kV Ckt 1 Rebuild	Atoka - Atoka Pump - Pittsburg 69 kV Ckt 1 Rebuild	OK	Rebuild 27.1-mile 69 kV line from Atoka to Atoka Pump to Pittsburg.	6/1/2017	\$20,404,361	SPP	Zonal Reliability	69		27.1		48/53
NTC	31058	51561	Line - Fort Towson - Kiamichi Pump Tap - Valliant 69 kV Ckt 1 Rebuild	Fort Towson - Kiamichi Pump Tap 69 kV Ckt 1 Rebuild	OK	Rebuild 9.0-mile 69 kV line from Fort Towson to Kiamichi Pump Tap.	6/1/2018	\$8,119,642	SPP	Regional Reliability	69		9		104/115

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NTC	31058	51562	Line - Fort Towson - Kiamichi Pump Tap - Valliant 69 kV Ckt 1 Rebuild	Kiamichi Pump Tap - Valliant 69 kV Ckt 1 Rebuild	OK	Rebuild 4.8-mile portion of 69 kV line from Kiamichi Pump Tap to Valliant.	6/1/2018	\$4,330,476	SPP	Regional Reliability	69		4.8		48/54
NTC - Modify	242	10308	Line - Elmore - Paoli 69 kV	Elmore - Paoli 69 kV Ckt 1 Rebuild	OK	Rebuild 69 kV line from Elmore to Paoli.	6/1/2017	\$3,240,000	WFEC	Regional Reliability	69		10.8		91/114
NTC - Modify	756	10998	XFR - Baldwin Creek 230/115 kV Ckt 1 Transformer	Baldwin Creek 230/115 kV Ckt 1 Transformer	KS	Tap the Lawrence Hill - Swissvale 230 kV line into the Baldwin Creek 115 kV substation. Install a new 230/115 kV transformer at Baldwin Creek.	6/1/2019	\$21,742,624	WR	Regional Reliability	230/115	1			280/308
NTC - Modify	844	11113	Line - Mustang - Sunshine Canyon 69 kV Ckt 1	Mustang - Sunshine Canyon 69 kV Ckt 1 Reconductor	OK	Reconductor 9.9-mile 69 kV line from Mustang to Sunshine Canyon upgrading conductor from 4/0 to 556.	6/1/2020	\$4,725,000	WFEC	Regional Reliability	69		10		89/89
NTC - Modify	30376	50447	Multi - Tuco - Yoakum - Hobbs 345/230 kV Ckt 1	Tuco - Yoakum 345 kV Ckt 1	TX	Construct new 107-mile 345 kV line from Tuco to Yoakum. Install any necessary 345 kV terminal equipment at Yoakum associated with new 345/230 kV transformer.	6/1/2017	\$128,473,352	SPS	Regional Reliability	345	107			1792/1792
NTC - Modify	30376	50451	Multi - Tuco - Yoakum - Hobbs 345/230 kV Ckt 1	Yoakum 345/230 kV Ckt 1 Transformer	TX	Install new 345/230 kV 644 MVA transformer at Yoakum substation. Install any necessary 230 kV terminal equipment.	6/1/2017	\$5,138,920	SPS	Regional Reliability	345/230				560/644
NTC - Modify	30526	50657	Line - Hobart - Roosevelt Tap - Snyder 69 kV Ckt 1 Rebuild	Hobart - Roosevelt Tap 69 kV Ckt 1 Rebuild	OK	Rebuild 10-mile 69 kV line from Hobart to Roosevelt Tap. Upgrade jumpers, switches, CTs, and relay settings at Hobart.	6/1/2017	\$10,389,072	AEP	Regional Reliability	69		10		136/143
NTC - Modify	30526	50658	Line - Hobart - Roosevelt Tap - Snyder 69 kV Ckt 1 Rebuild	Roosevelt Tap - Snyder 69 kV Ckt 1 Rebuild	OK	Rebuild 18.7-mile 69 kV line from Roosevelt Tap to Snyder. Upgrade jumpers, switches, CTs, and relay settings at Snyder.	6/1/2017	\$20,643,085	AEP	Regional Reliability	69		19.87		143/158
NTC - Modify	30597	50758	Multi - Knob Hill - Lane - Noel 138 kV Ckt 1	Knob Hill - Lane - Noel 138 kV Ckt 1	OK	Build new Lane 138 kV substation adjacent to existing Knob Hill substation. Install a new 138 kV terminal at Knob Hill. Tie the Knob Hill and Lane substations together with one span of 138 kV line. Build new 1.5-mile 138 line from Lane to Noel. Install fiber optics on 138 kV circuit connecting Knob Hill to Lane to Noel.	6/1/2017	\$4,009,000	OGE	Regional Reliability	138	0.09			268/286
NTC - Modify	30597	51030	Multi - Knob Hill - Lane - Noel 138 kV Ckt 1	Knob Hill - Noel 138 kV Ckt 1 Terminal Upgrades	OK	Install fiber optics on existing 138 kV line from Noel to Knob Hill. Install a new 138 kV breaker and metering equipment at Noel to accommodate new circuit from new Lane substation.	6/1/2017	\$450,000	WFEC	Regional Reliability	138				268/286
NTC - Modify	30628	50813	Device - Freedom 69 kV	Freedom 69 kV Cap Bank	OK	Install new 9.6-Mvar capacitor bank at Freedom 69 kV.	6/1/2017	\$237,000	WFEC	Regional Reliability	69				9.6 MVAR
NTC - Modify	30695	50924	Multi - Livingston Ridge - Sage Brush - Lagarto - Cardinal 115 kV	Livingston Ridge 115 kV Substation Conversion	NM	Convert Livingston Ridge from 69 kV to 115 kV. Install any necessary 115 kV terminal equipment.	6/1/2017	\$5,283,323	SPS	Regional Reliability	115				276/304
NTC - Modify	30817	51109	Line - Canyon West - Dawn - Panda - Deaf Smith 115 kV Ckt 1 Rebuild	Canyon West - Dawn 115 kV Ckt 1 Rebuild	TX	Rebuild 13.7-mile 115 kV line from Canyon West to Dawn.	6/1/2017	\$9,006,562	SPS	Regional Reliability	115		13.7		249/274
NTC - Modify	30817	51110	Line - Canyon West - Dawn - Panda - Deaf Smith 115 kV Ckt 1 Rebuild	Dawn - Panda 115 kV Ckt 1 Rebuild	TX	Rebuild 8.4-mile 115 kV line from Dawn to Panda.	6/1/2017	\$5,447,497	SPS	Regional Reliability	115		8.4		249/274
NTC - Modify	30817	51111	Line - Canyon West - Dawn - Panda - Deaf Smith 115 kV Ckt 1 Rebuild	Deaf Smith - Panda 115 kV Ckt 1 Rebuild	TX	Rebuild 3.5-mile 115 kV line from Deaf Smith to Panda.	6/1/2017	\$3,232,285	SPS	Regional Reliability	115		3.5		245/265
NTC - Modify	30844	51140	Sub - Amoco - Sundown 230 kV Terminal Upgrades	Amoco - Sundown 230 kV Terminal Upgrades	TX	Upgrade wave traps at Sundown and Amoco to increase the rating of the 230 kV line from Amoco to Sundown.	4/1/2020	\$2,200,956	SPP	Regional Reliability	230				497/547
NTC - Modify	30892	51212	Sub - CPPXF#22 69 kV Terminal Upgrades	CPPXF#22 69 kV Terminal Upgrades	OK	Upgrade breaker and relay(s) at CPPXF#22 69 kV substation.	6/1/2017	\$134,800	SPP	Regional Reliability	69	2			102/123
NTC - Modify	30909	51230	Sub - Collinsville - Skiatook 69 kV Terminal Upgrades	Collinsville - Skiatook 69 kV Terminal Upgrades	OK	Replace CTs and relays at both Collinsville and Skiatook substations to increase the rating of the 69 kV line from Collinsville to Skiatook. Upgrade breaker at Collinsville.	6/1/2017	\$160,200	GRDA	Regional Reliability	69				51/61
NTC - Modify	30917	51271	Device - Ellsworth 115 kV Cap Bank	Ellsworth 115 kV Cap Bank	KS	Install two stages of 12-MVAR capacitor banks (24 total MVAR) at Ellsworth 115 kV.	6/1/2017	\$1,909,424	SEPC	Regional Reliability	115				24 MVAR
NTC - Withdraw	136	10174	Line - Meeker - Hammett 138 kV	HAMMETT - MEEKER 138KV CKT 1	OK	Build new 10 mile Meeker - Hammett 138 kV and install terminal equipment.		\$6,674,000	SPP	Regional Reliability	138	10			219/235
NTC - Withdraw	241	10307	Line - Anadarko - Georgia Tap 138 kV	ANADARKO - GEORGIA 138KV CKT 1	OK	Rebuild 2 mile Anadarko - Georgia 138 kV line from 556 to 1113 ACSR.		\$2,000,000	WFEC	Regional Reliability	138		2		212/264
NTC - Withdraw	846	11115	Multi - Anadarko - Blanchard - OU SW 138 kV Ckt 1	Anadarko - Blanchard 138 kV Ckt 1	OK	Rebuild 25.2-mile Anadarko - Blanchard 69 kV line as 138 kV.		\$14,737,500	WFEC	Regional Reliability	138			25.2	212/264
NTC - Withdraw	846	11116	Multi - Anadarko - Blanchard - OU SW 138 kV Ckt 1	BLANCHARD - OU SW 138 KV CKT 1	OK	Rebuild 2-mile Blanchard - OU Switchyard 69 kV line as 138 kV.		\$1,125,000	WFEC	Regional Reliability	138			2	212/264
NTC - Withdraw	30661	50835	Multi - Carmen - Cherokee Junction 138 kV	Carmen 138 kV Ckt 1 Terminal Upgrades	OK	Install any necessary 138 kV terminal equipment at Carmen associated with new 138/69 kV transformer.		\$2,068,000	WFEC	High Priority	138				70/70
NTC - Withdraw	30661	50855	Multi - Carmen - Cherokee Junction 138 kV	Carmen 138/69 kV Ckt 1 Transformer	OK	Install new 138/69 kV 70 MVA transformer at Carmen substation. Install any necessary 69 kV terminal equipment.		\$2,475,000	SPP	High Priority	138/69				70/70
NTC - Withdraw	30661	50856	Multi - Carmen - Cherokee Junction 138 kV	Cherokee Junction Tap 138/69 kV Ckt 1 Transformer	OK	Install new 138/69 kV 70 MVA transformer at new Cherokee Junction Tap substation. Install any necessary 69 kV terminal equipment.		\$2,680,000	SPP	High Priority	138/69				70/70
NTC - Withdraw	30661	50857	Multi - Carmen - Cherokee Junction 138 kV	Carmen - Cherokee Junction 69 kV Ckt 1 Rebuild	OK	Tear down the existing 69 kV line from Cherokee Junction to Carmen. Construct new 11.5-mile 138 kV line Cherokee Junction Tap to Carmen.		\$6,300,000	WFEC	High Priority	138		11.5		183/228
NTC - Withdraw	30661	50888	Multi - Carmen - Cherokee Junction 138 kV	Cherokee Junction Tap 138 kV Substation	OK	Tap the existing 138 kV line from Noel Switch to Cherokee City to construct the new Cherokee Junction Tap substation. Install any necessary 138 kV terminal equipment.		\$3,945,000	SPP	High Priority	138				183/228
NTC - Withdraw	30841	51137	Line - Gracemont - Anadarko 138 kV Ckt 1 Reconductor	Anadarko - Gracemont 138 kV Ckt 1 Reconductor	OK	Reconductor 5.3-mile 138 kV line from Anadarko to Gracemont.		\$0	SPP	Regional Reliability	138		5.3		286/286

Requested Board Action	Project ID	Upgrade ID	Project Name	Upgrade Name	State	Upgrade Description	2016 ITPNT Need Date	Upgrade Cost Estimate	Upgrade Cost Estimate Source	Upgrade Type	Voltage	New Miles Count	Rebuild/Reconductor Miles Count	Voltage Conversion Miles Count	Summer Rating (Normal/Emergency)
NTC - Withdraw	30889	51207	Line - Linwood - South Shreveport 138kV Ckt 1 Rebuild	Linwood - South Shreveport 138 kV Ckt 1 Rebuild	LA	Rebuild the 2.4-mile 138kV line from Linwood to Cedar Grove to South Shreveport. Upgrade the jumpers at Linwood.		\$5,699,679	AEP	Regional Reliability	138		2.42		272/376
NTC - Withdraw	30903	51223	Device - Winchester 69 kV Cap Bank	Winchester 69 kV Cap Bank	OK	Install one (1) 5-MVAR capacitor bank at Winchester 69 kV substation.		\$224,900	SPP	Regional Reliability	69				5 MVAR
NTC - Withdraw	30905	51225	Device - Thackerville 69 kV Cap Bank	Thackerville 69 kV Cap Bank	OK	Install one (1) 3-MVAR capacitor bank at the Thackerville 69 kV substation.		\$160,241	SPP	Regional Reliability	69				3 MVAR