

**FOURTH QUARTERLY
PROJECT TRACKING
REPORT 2017**

October 2017

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EXECUTIVE SUMMARY

SPP actively monitors and supports the progress of transmission expansion projects, emphasizing the importance of maintaining accountability for areas such as regional grid reliability standards, firm transmission commitments, and Tariff cost recovery.

SPP staff solicits quarterly feedback from the project owners to determine the progress of each approved transmission project. This quarterly report charts the progress of all SPP Transmission Expansion Plan (STEP) projects approved by the SPP Board of Directors (Board) or through a FERC filed service agreement under the SPP Open Access Transmission Tariff (OATT).

The reporting period is May 1, 2017 through July 31, 2017. Table 1 provides a summary of all projects in the current Project Tracking Portfolio (PTP), which includes all Network Upgrades in which construction activities are ongoing, or construction has completed but not all the close-out requirements have been fulfilled in accordance with Section 13 of Business Practice 7060. The PTP includes all active Network Upgrades including transmission lines, transformers, substations, and devices.

Table 1 below summarizes the PTP for this quarter. Figure 1 reflects the percentage cost of each upgrade type in the PTP. Figure 2 shows the percentage cost of each project status in the PTP.

Upgrade Type	No. of Upgrades	Estimated Cost	Miles of New	Miles of Rebuild	Miles of Voltage Conversion
Economic	23	\$72,168,470	1.9	0.0	28.8
High Priority	61	\$1,133,752,612	757.7	5.1	0.0
Regional Reliability	345	\$3,192,074,746	1596.2	399.3	457.1
Transmission Service	19	\$102,266,895	12.9	15.3	0.0
Zonal Reliability	9	\$147,436,190	34.7	26.9	0.0
NTC Projects Subtotal	457	\$4,647,698,913	2403.4	446.6	485.9
Generation Interconnection	86	\$265,966,961	0.0	0.0	0.0
Regional Reliability - Non OATT	1	\$7,107,090	0.0	0.0	0.0
TO - Sponsored	3	\$16,719,000	10.7	0.0	0.0
Non-NTC Projects Subtotal	90	\$289,793,051	10.7	0.0	0.0
Total	547	\$4,937,491,964	2414.1	446.6	485.9

Table 1: Q4 2017 Portfolio Summary

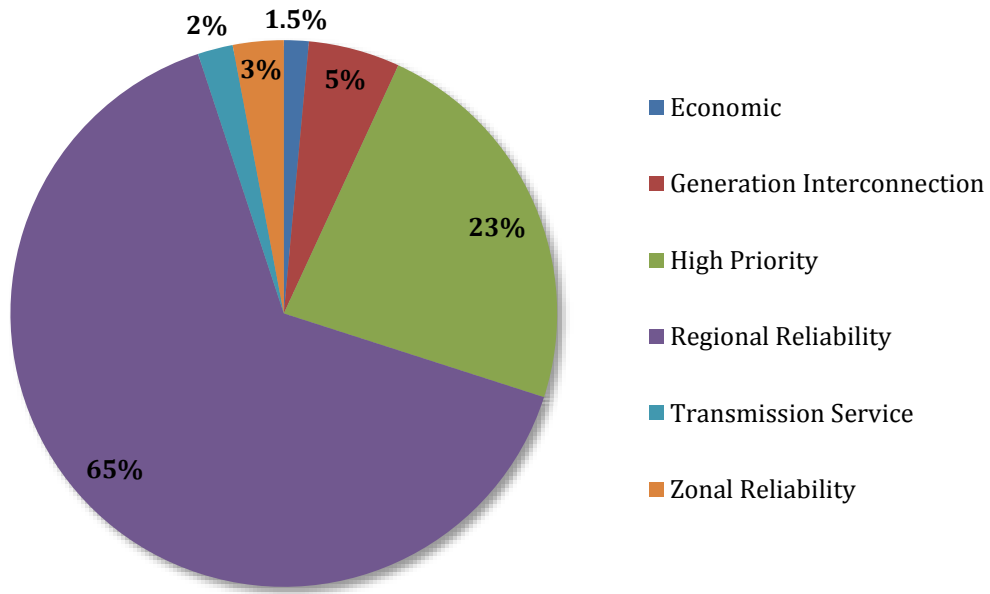


Figure 1: Percentage of Project Type on Cost Basis

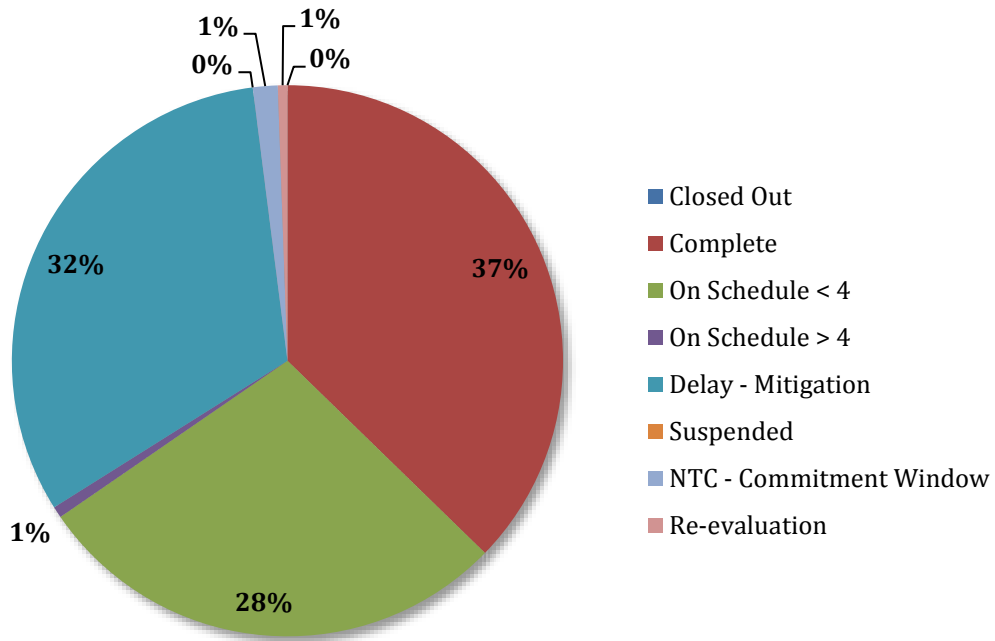


Figure 2: Percentage of Project Status on Cost Basis

NTC PROJECT SUMMARY

In adherence to the OATT and Business Practice 7060, SPP issues Notifications to Construct (NTCs) to Designated Transmission Owners (DTOs) to begin work on Network Upgrades that have been approved or endorsed by the SPP Board to meet the construction needs of the STEP, OATT, or Regional Transmission Organization (RTO).

Figure 3 reflects project status within each source study, and Table 2 provides the supporting data. Figure 4 shows the amount of estimated cost by in-service year for all Network Upgrades that have been issued an NTC or Notifications to Construct with Conditions (NTC-C). **Note: Figures 3 and 4, and Table 2 provide data for all projects for which SPP has issued an NTC or NTC-C, regardless of completion date, and therefore include data from Network Upgrades no longer included in PTP.**

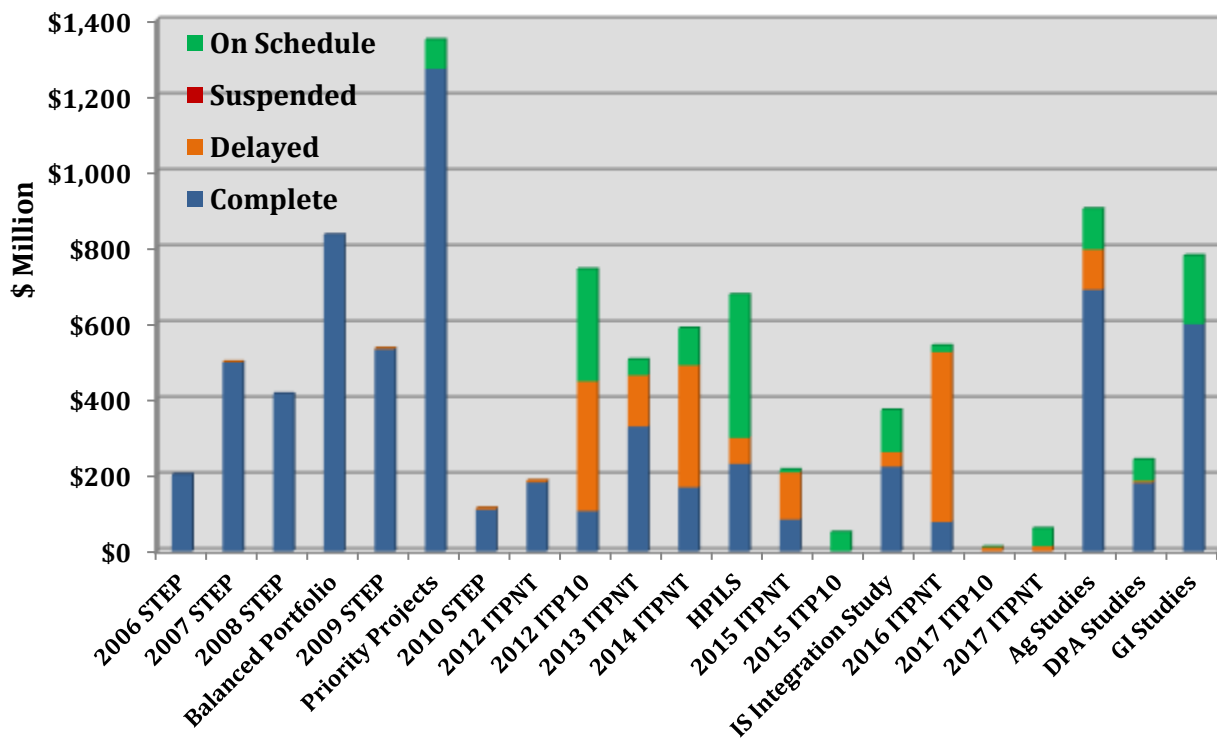


Figure 3: Project Status by NTC Source Study

Source Study	Complete	Delayed	Suspended	On Schedule	Total
2006 STEP	\$202,493,500	\$0	\$0	\$0	\$202,493,500
2007 STEP	\$498,422,962	\$1,050,000	\$0	\$0	\$499,472,962
2008 STEP	\$415,126,157	\$0	\$0	\$0	\$415,126,157
Balanced Portfolio	\$834,720,484	\$0	\$0	\$0	\$834,720,484
2009 STEP	\$533,469,214	\$1,441,050	\$0	\$0	\$534,910,264
Priority Projects	\$1,348,761,003	\$0	\$0	\$0	\$1,348,761,003
2010 STEP	\$109,968,782	\$4,041,273	\$0	\$0	\$114,010,055
2012 ITPNT	\$182,110,561	\$4,363,510	\$0	\$0	\$186,474,071
2012 ITP10	\$105,901,240	\$342,148,981	\$0	\$295,933,246	\$743,983,467
2013 ITPNT	\$328,870,289	\$135,192,389	\$0	\$41,462,612	\$505,525,290
2014 ITPNT	\$168,525,490	\$321,702,492	\$0	\$97,894,849	\$588,122,831
HPILS	\$230,217,560	\$68,972,022	\$0	\$377,452,445	\$676,642,027
2015 ITPNT	\$83,632,930	\$124,566,817	\$0	\$7,303,737	\$215,503,484
2015 ITP10	\$0	\$0	\$0	\$50,456,370	\$50,456,370
IS Integration Study	\$223,284,902	\$38,000,000	\$0	\$111,000,000	\$372,284,902
2016 ITPNT	\$77,047,608	\$448,089,751	\$0	\$17,209,675	\$542,347,034
2017 ITP10	\$0	\$10,814,852	\$0	\$500,000	\$11,314,852
2017 ITPNT	\$0	\$13,238,594	\$0	\$46,886,427	\$60,125,021
Ag Studies	\$689,969,089	\$105,516,856	\$0	\$107,182,375	\$902,668,320
DPA Studies	\$180,242,630	\$5,176,532	\$0	\$56,142,500	\$241,561,662
GI Studies	\$599,135,889	\$20,000	\$0	\$180,426,556	\$779,582,445
Total	\$6,735,400,291	\$1,624,335,120	\$0	\$1,466,350,790	\$9,826,086,200

Table 2: Project Status by NTC Source Study

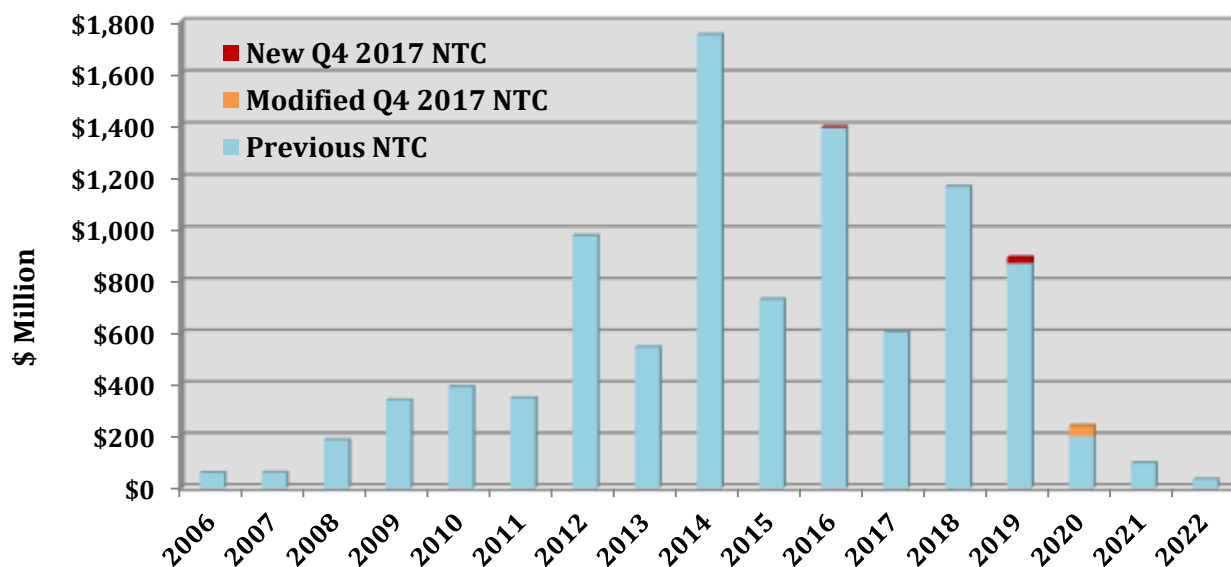


Figure 4: Estimated Cost for NTC Project per In-Service Year

NTC ISSUANCE

Thirteen new NTCs were issued since the last quarterly report totaling an estimated \$158 million.

Eight new NTCs were issued as a result of the Board's approval of the 2017 Integrated Transmission Planning Near-Term Assessment (ITPNT). Total estimated cost of upgrades described in those NTCs are \$82.3 million.

One new NTC was issued as a result of Aggregate Study 2016-AG1-AFS-3. Total estimated costs for upgrades resulting from this NTC are \$20.7 million.

Two new NTCs were issued per results of Delivery Point Addition studies under Attachment AQ. Total estimated cost of the Network Upgrades described in this NTC are \$55.1 million.

One NTC was issued resulting from Generation Interconnection study GEN-2015-016. Total estimated cost of the Network Upgrades are \$110 thousand.

NTC ID	Owner	NTC Issue Date	Upgrade Type	Source Study	No. of Upgrades	Estimated Cost of New Upgrades	Estimated Cost of Previously Approved Upgrades
200446	AEP	5/12/2017	Regional Reliability	2017 ITPNT	3	\$13,026,525	
200448	EDE	5/12/2017	Regional Reliability	2017 ITPNT	3	\$6,300,000	
200450	EREC	5/12/2017	Regional Reliability	2017 ITPNT	1	\$733,000	
200451	KCPL	5/12/2017	Regional Reliability	2017 ITPNT	1	\$147,500	
200452	WAPA	5/12/2017	Regional Reliability	2017 ITPNT	3	\$5,607,000	
200454	NIPCO	5/12/2017	Regional Reliability	2017 ITPNT	2	\$1,406,577	
200455	SPS	5/12/2017	Regional Reliability	2017 ITPNT	9	\$11,304,271	\$183,814
200456	CPEC	5/23/2017	Regional Reliability	2017 ITPNT	2	\$21,780,000	
200457	SPS	5/15/2017	Regional Reliability	SPP-2016-AG1-AFS-3	3	\$20,692,602	
200458	WR	6/23/2017	Regional Reliability	DPA-2016-March-596	2	\$15,808,157	
200460	NPPD	7/20/2017	Regional Reliability	DPA-2016-December-703	6	\$39,300,207	
200462	CPEC	8/2/2017	Regional Reliability	2017 ITPNT	2		\$21,780,000
200463	WR	8/16/2017	Generation Interconnection	GEN-2015-016	1	\$110,000	
Total						\$136,215,838	\$21,963,814

Table 3: NTC Issuance Summary

NTC WITHDRAW

Three NTCs were withdrawn for four Network Upgrades since the last quarterly report, totaling an estimated \$30.5 million.

Two upgrades included in NTCs listed in Table 4 were determined to no longer be needed as a part of the 2017 ITPNT Assessment. The Board approved the withdrawals at its April 2017 meeting.

Additionally, two upgrades issued out of Aggregate Study 2016-AG1-AFS-3 were determined to no longer be needed.

Table 4 lists the NTC Withdraw activity during the reporting period. NTC ID values in **bold** font indicate NTC-Cs.

NTC ID	Owner	NTC Withdraw Date	Upgrade Type	Source Study	No. of Upgrades	Estimated Cost of Withdrawn Upgrades
200449	ETEC	5/12/2017	Regional Reliability	2017 ITPNT	1	\$1,280,000
200453	WFEC	5/12/2017	Regional Reliability	2017 ITPNT	1	\$20,500,000
200459	BEPC	7/11/2017	Regional Reliability	SPP-2016-AG1-AFS-3	2	\$8,696,880
Total					4	\$30,476,880

Table 4: NTC Withdraw Summary

COMPLETED PROJECTS

Nine Network Upgrades with NTCs were verified as completed during the reporting period, totaling an estimated \$60.5 million.

Table 5 lists the Network Upgrades reported and confirmed as completed during the reporting period. Table 6 summarizes the completed projects over the previous year, including Network Upgrades not yet confirmed as completed. Figure 5 reflects the completed projects by upgrade type on a cost basis for the current year and the following year based on current projected in-service dates. Tables 7 and 8 summarize all Network Upgrades that include construction of transmission lines, both for the current year and the following year. **Note: Previous quarter's updated results are listed as the Transmission Owners may make adjustments to final costs and status of projects completed during the year.**

UID	Network Upgrade Name	Owner	NTC Source Study	Cost Estimate
50718	Broadmoor - Fort Humbug 69 kV Ckt 1 Rebuild	AEP	2014 ITPNT	\$6,695,986
50721	Hallsville - Marshall 69 kV Ckt 1 Rebuild	AEP	2014 ITPNT	\$16,571,092
50759	Letourneau 69 kV Cap Bank	AEP	2016 ITPNT	\$1,409,347
50802	Darlington - Roman Nose 138 kV Ckt 1 (AEP)	AEP	HPILS	\$11,652,107
51187	Southwestern Station - Carnegie 138 kV Ckt 1 Rebuild	AEP	2015 ITPNT	\$9,397,311
51396	Leonard 138kV Switching Station (TOIF)	AEP	GI Studies	\$668,626
51397	Leonard 138kV Switching Station (NU)	AEP	GI Studies	\$6,996,176
51398	Leonard 138kV Switching Station (NU - OGE)	OGE	GI Studies	\$20,000
51425	Woodward EHV 138kV Phase Shifting Transformer circuit #1	OGE	GI Studies	\$7,103,971
Total				\$60,514,617

Table 5: Completed Network Upgrades as of Q3 2017

Upgrade Type	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Total
Regional Reliability	13	9	16	16	54
Regional Reliability	\$157,785,107	\$98,219,377	\$111,095,477	\$90,462,899	\$457,562,861
Transmission Service	2	0	1	0	3
Transmission Service	\$550,758	\$0	\$229,690	\$0	\$780,448
Balanced Portfolio	0	0	0	0	0
Balanced Portfolio	\$0	\$0	\$0	\$0	\$0
High Priority	0	8	0	5	13
High Priority	\$0	\$522,781,551	\$0	\$41,095,660	\$563,877,211
Economic	0	0	0	0	0
Economic	\$0	\$0	\$0	\$0	\$0
Zonal Reliability	0	0	0	0	0
Zonal Reliability	\$0	\$0	\$0	\$0	\$0
Generation Interconnection	18	12	6	12	48
Generation Interconnection	\$57,766,836	\$27,576,830	\$11,442,689	\$41,767,883	\$138,554,238

Table 6: Completed Project Summary as of Q3 2017

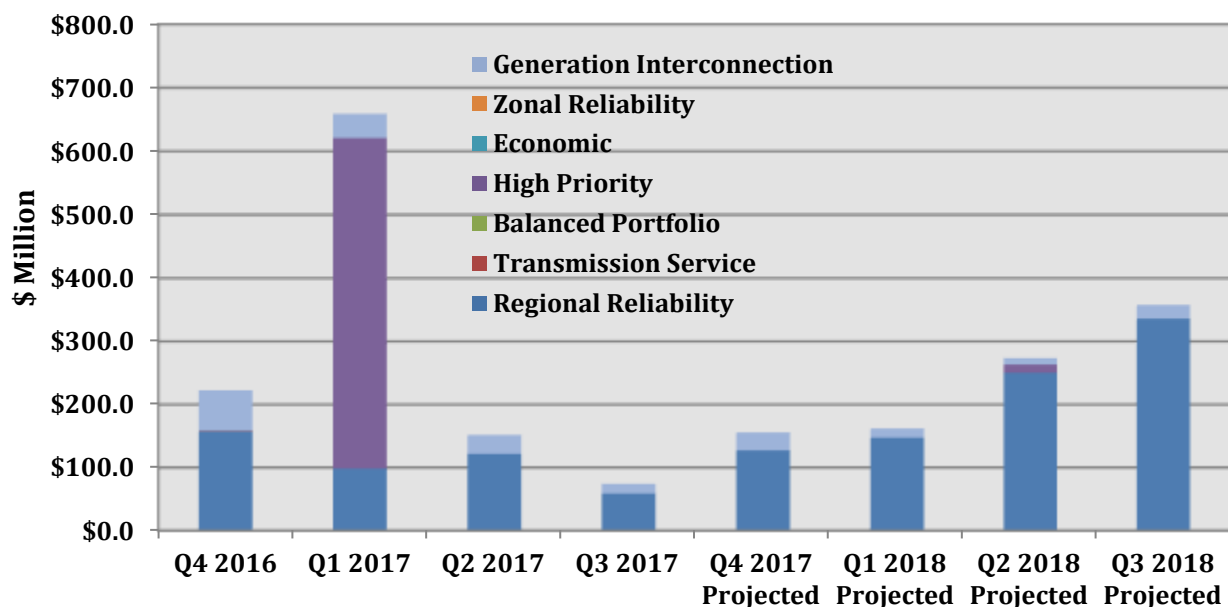


Figure 5: Completed Upgrades by Type per Quarter

Voltage Class	Number of Upgrades	New	Rebuild/Reconductor	Voltage Conversion	Estimated Cost
69	6	7.9	30.3	69.0	\$45,465,251
115	15	119.7	20.6	0.0	\$156,885,992
138	5	55.1	24.8	146.3	\$65,560,366
161	1	0.0	11.1	0.0	\$12,705,537
230	1	30.0	0.0	0.0	\$41,100,000
345	5	319.7	0.0	0.0	\$547,456,253
Total	33	532.4	86.8	215.3	\$869,173,400

Table 7: Line Upgrade Summary for Previous 12 Months

Voltage Class	Number of Upgrades	New	Rebuild/Reconductor	Voltage Conversion	Estimated Cost
69	8	3.9	47.8	69.0	\$58,025,663
115	21	143.0	56.4	13.0	\$158,418,688
138	11	110.0	2.4	0.0	\$104,377,851
161	0	0.0	0.0	0.0	\$0
230	3	20.8	0.0	0.0	\$33,470,623
345	11	387.5	0.0	0.0	\$466,176,513
Total	54	665.2	106.5	82.0	\$820,469,338

Table 8: Line Upgrade Projections for Next 12 Months

PROJECT STATUS SUMMARY

SPP assigns a project status to all Network Upgrades based on the projected in-service dates provided by the DTOs relative to the Need Date determined for the project. Project status definitions are provided below:

- **Complete:** Construction complete and in-service
- **Closed Out:** Construction complete and in-service; all close-out requirements fulfilled
- **On Schedule < 4:** On Schedule within 4-year horizon
- **On Schedule > 4:** On Schedule beyond 4-year horizon
- **Delayed:** Projected In-Service Date beyond Need Date; interim mitigation provided or project may change but time permits the implementation of project
- **Within NTC Commitment Window:** NTC/NTC-C issued, still within the 90-day written commitment to construct window and no commitment received
- **Within NTC-C Project Estimate Window:** Within the NTC-C Project Estimate (CPE) window
- **Within RFP Response Window:** RFP issued for the project
- **Re-evaluation:** Project active; pending re-evaluation
- **Suspended:** Project suspended; pending re-evaluation

Figure 6 reflects a summary of project status by upgrade type on a cost basis.

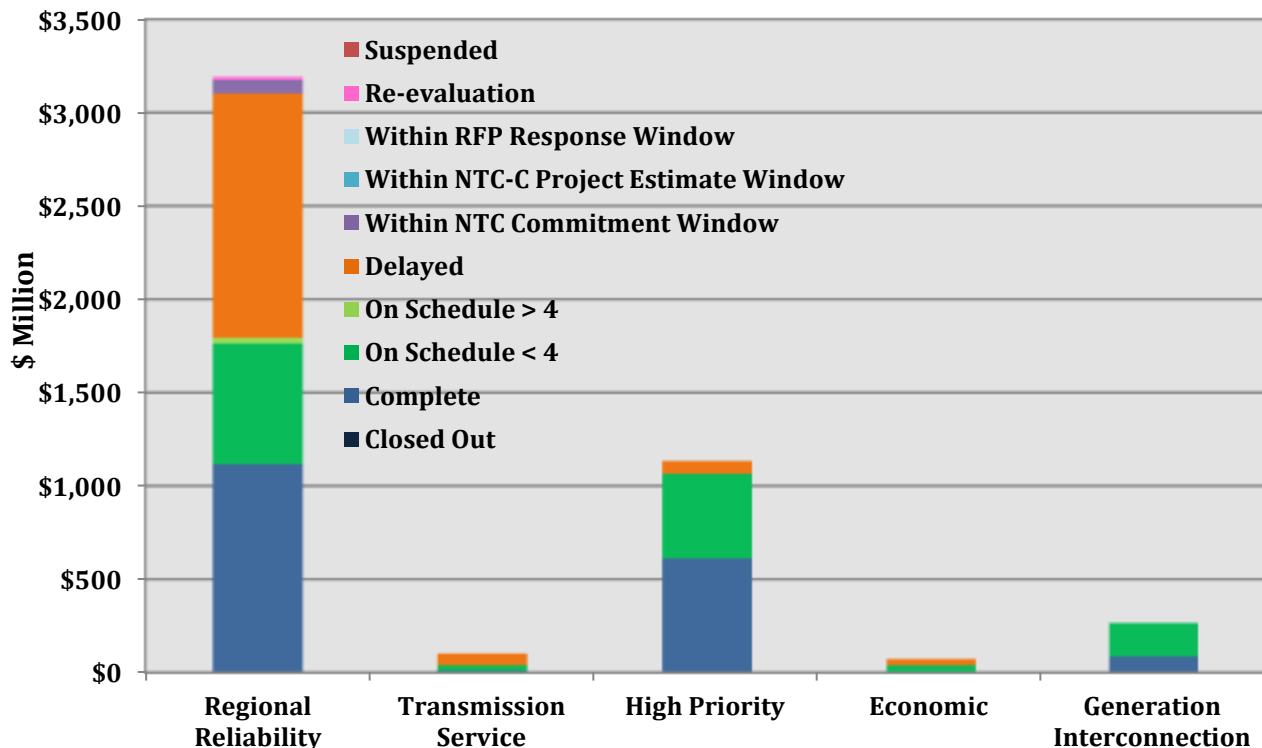


Figure 6: Project Status Summary on a Cost Basis

PRIORITY PROJECTS

In April 2010, the Board and Members Committee approved for construction a group of "priority" high voltage electric transmission projects estimated to bring benefits of at least \$3.7 billion to the SPP region over 40 years. The projects issued NTCs as a result of the study were estimated to add 291 miles of new single circuit 345 kV transmission line and 435 miles of double circuit 345 kV transmission to the SPP region.

In October 2010, the Board approved an overall cost increase for the Priority Projects due to line rerouting and addition costs for reactive compensation. The total cost estimate for the Priority Projects after the variances were approved was \$1.42 billion.

The total cost estimate of \$1.35 billion for the projects included in the Priority Projects report decreased by 0.8% from the previous quarter's total.

Figure 7 below depicts a historical view of the total estimated cost of the Priority Projects. Table 9 provides a project summary of the projects making up the Priority Projects. Table 10 lists construction status updates for Priority Projects just completed.

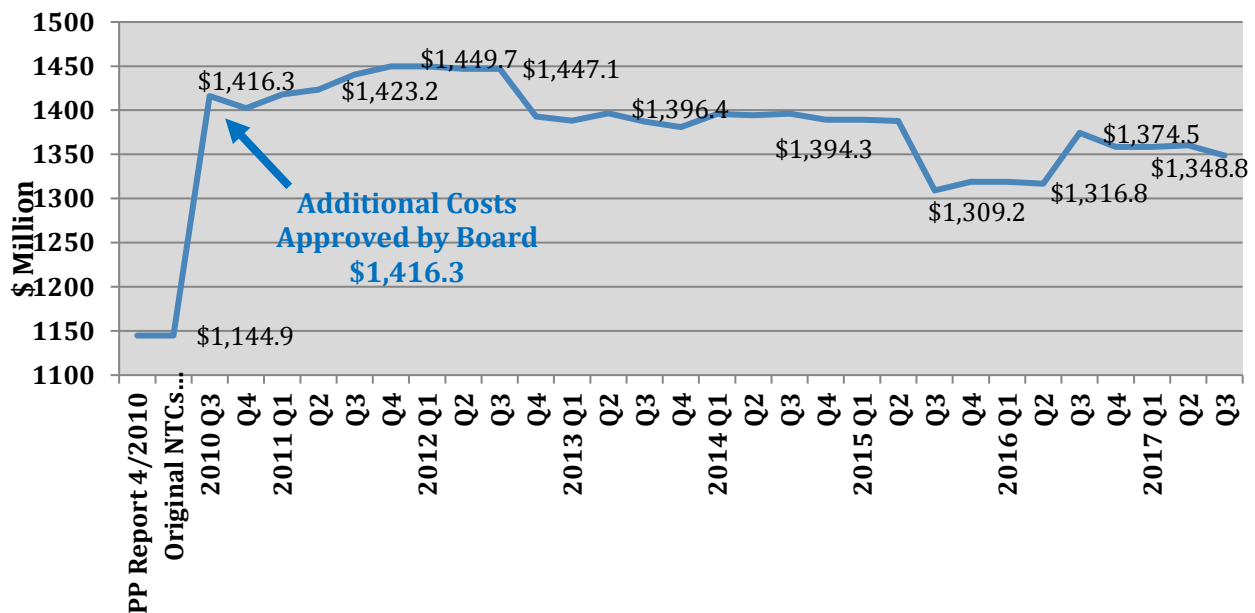


Figure 7: Priority Project Cost Estimate Trend

Project ID(s)	Project Owner (s)	Project	Est. Line Length	BOD Approved Estimates (10/2010)	Q2 2017 Cost Estimates	Q3 2017 Cost Estimates	Var. %
937	AEP	Tulsa Power Station 138 kV Reactor	N/A	\$842,847	\$614,753	\$614,753	0.0%
940/941	SPS/OGE	Hitchland - Woodward District 345 kV Dbl Ckt	128.8	\$221,572,283	\$229,797,229	\$229,797,229	0.0%
942/943	PW/OGE	Thistle - Woodward District 345 kV Dbl Ckt	106.6	\$201,940,759	\$185,403,885	\$185,403,885	0.0%
945	ITCGP	Spearville - Ironwood - Clark Co. - Thistle 345 kV Dbl Ckt	122.5	\$293,235,000	\$318,469,400	\$318,469,400	0.0%
946	PW/WR	Thistle - Wichita 345 kV Dbl Ckt	77.5	\$163,488,000	\$120,016,474	\$120,016,474	0.0%
936	AEP	Valliant - NW Texarkana 345 kV	76.3	\$131,451,250	\$185,751,250	\$185,751,250	0.0%
938/939	OPPD/GMO	Nebraska City - Mullin Creek - Sibley 345 kV	215	\$403,740,000	\$320,361,776	\$308,708,013	-3.6%
Total			726.7	\$1,416,270,139	\$1,360,414,766	\$1,348,761,003	-0.9%

Table 9: Priority Projects Summary

Project ID	Project Name	Projected In-Service Date	Engineering	Siting and Routing	Environmental Studies	Permits	Material Procurement	Construction	
936	Valliant - NW Texarkana 345 kV	12/16/2016	C	C	C	C	C	C	C Complete
938	Nebraska City - Mullin Creek - Sibley 345 kV (TSMO)	12/31/2016	C	C	C	C	C	C	IP In Progress
939	Nebraska City - Mullin Creek - Sibley 345 kV (OPPD)	12/31/2016	C	C	C	C	C	C	NS Not Started
									N/A Not Applicable

Table 10: Priority Projects Construction Status

OUT-OF-BANDWIDTH PROJECTS

In adherence to the Business Practice 7060, SPP reports projects that have updated cost values that exceed their established baseline values based upon a $\pm 20\%$ bandwidth. Variances are determined by total project cost.

Three projects with a cost estimate greater than \$5 million were identified as having exceeded the $\pm 20\%$ bandwidth requirement during the reporting period.

Table 12 provides summary information and Table 13 lists cost detail for out-of-bandwidth projects for Q3 2017.

PID	Project Name	Owner	NTC Source Study	Upgrade Type	In-Service Date
30873	Line - Southwestern Station - Carnegie 138kV Ckt 1 Rebuild	AEP	2015 ITPNT	Regional Reliability	7/6/2017
30497	Line - Buffalo - Buffalo Bear - Ft. Supply 69 kV	WFEC	DPA Studies	Regional Reliability	12/19/2014
909	Multi - Payne Switching Station - OU 138 kV conversion	WFEC	2013 ITPNT	Regional Reliability	7/1/2016

Table 11: Out-of-Bandwidth Project Summary

PID	Baseline Cost Estimate	Baseline Cost Estimate Year	Baseline Cost Estimate with Escalation	Latest Estimate or Final Cost	Variance	Variance %
30873	\$15,821,763	2015	\$16,622,740	\$9,397,311	(\$7,225,429)	-43.47%
30497	\$7,500,000	2013	\$7,687,500	\$5,054,787	(\$2,632,713)	-34.25%
909	\$6,355,000	2013	\$6,758,277	\$8,192,637	\$1,434,360	21.22%

Table 12: Out-of-Bandwidth Project Cost Detail

RESPONSIVENESS REPORT

Table 14 and Figures 9 and 10 provide insight into the responsiveness of DTOs constructing Network Upgrades within SPP in the Quarterly Project Tracking Report for Q3 2017. **Note: Network Upgrades with statuses of “Suspended”, “Re-evaluation”, “Within NTC Commitment Window”, “Within NTC-C Project Estimate Window”, and “Within RFP Response Window” were excluded from this analysis.**

Project Owner	Number of Upgrades	Number of Upgrades Reviewed	Reviewed %	In-Service Date Changes	ISD Change %	Cost Changes	Cost Change %
AEP	63	63	100%	10	16%	3	5%
BEPC	24	0	0%	0	0%	0	0%
GMO	2	2	100%	0	0%	0	0%
GRDA	10	5	50%	0	0%	2	20%
ITCGP	8	2	25%	2	25%	2	25%
KCPL	8	8	100%	0	0%	0	0%
LES	0	0	0%	0	0%	0	0%
MIDW	12	12	100%	3	25%	3	25%
MKEC	7	7	100%	0	0%	0	0%
NPPD	36	20	56%	0	0%	0	0%
OGE	55	11	20%	7	13%	6	11%
OPPD	14	14	100%	0	0%	0	0%
SPS	186	184	99%	17	9%	27	15%
TSMO	7	7	100%	3	43%	2	29%
WFEC	37	0	0%	0	0%	8	22%
WR	36	35	97%	0	0%	6	17%
Total	518	382	74%	42	8%	60	12%

Table 13: Responsiveness Summary by Project Owner

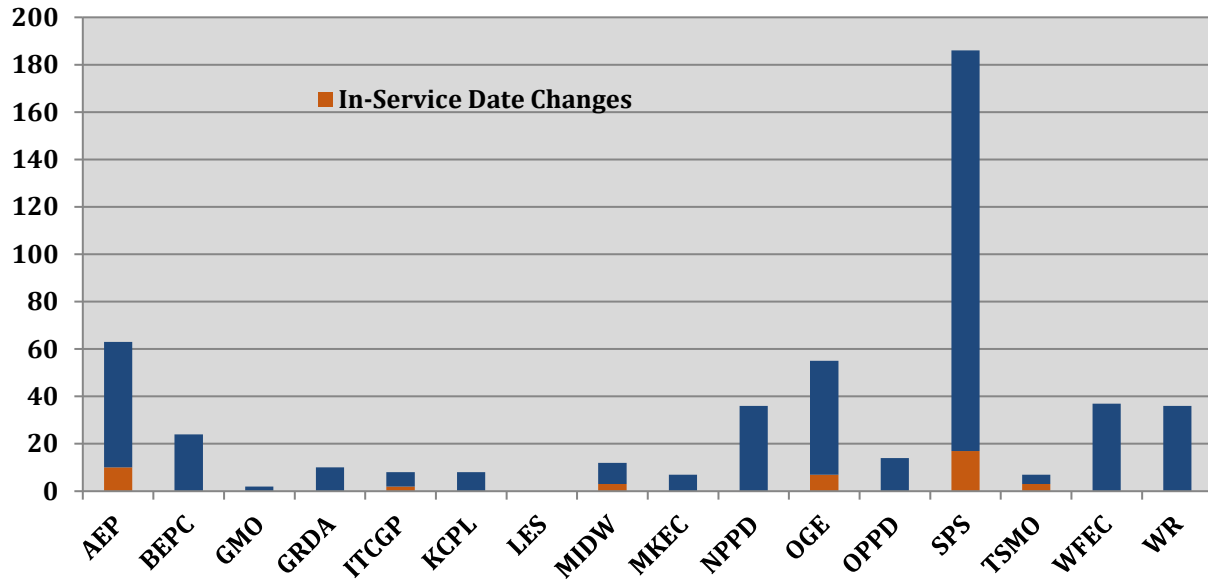


Figure 8: In-Service Date Changes by Project Owner

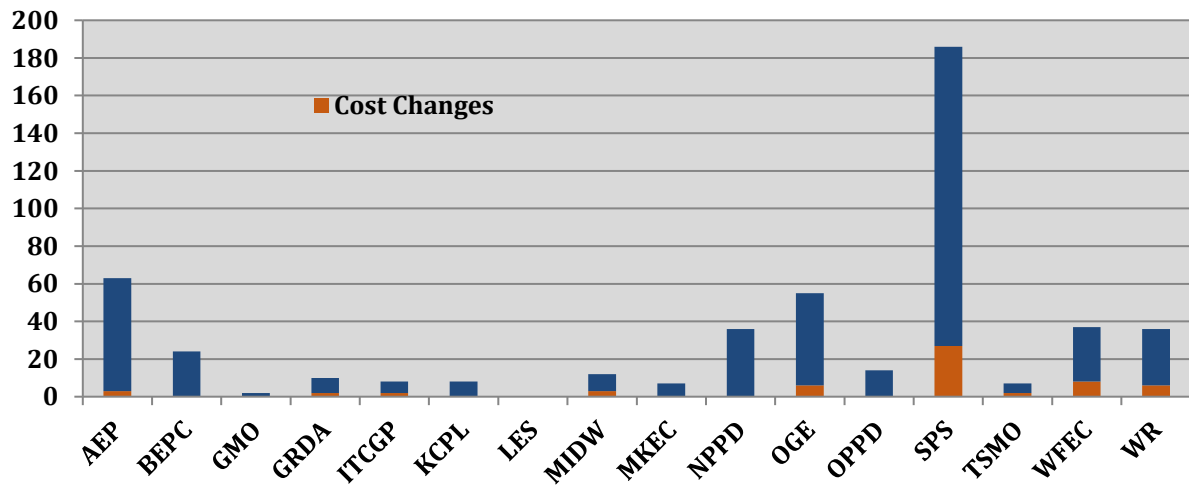


Figure 9: Cost Changes by Project Owner

APPENDIX 1

{See accompanying list of active Applicable Projects}