

**SECOND QUARTERLY
PROJECT TRACKING
REPORT 2018**

April 2018

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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 November 1, 2017 through January 31, 2018. 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	\$72,434,630	1.9	0.0	28.8
High Priority	61	\$1,113,331,383	757.7	5.1	0.0
Regional Reliability	337	\$2,941,421,149	1609.2	416.0	457.1
Transmission Service	14	\$96,362,826	12.9	14.0	0.0
Zonal Reliability	7	\$137,322,476	28.0	26.9	0.0
NTC Projects Subtotal	442	\$4,360,872,464	2409.7	462.1	485.9
Generation Interconnection	93	\$285,454,038	0.0	0.0	0.0
Regional Reliability - Non OATT	1	\$7,107,090	0.0	0.0	0.0
TO - Sponsored	4	\$23,815,402	10.7	0.0	0.0
Non-NTC Projects Subtotal	98	\$316,376,530	10.7	0.0	0.0
Total	540	\$4,677,248,994	2420.4	462.1	485.9

Table 1: Q2 2018 Portfolio Summary

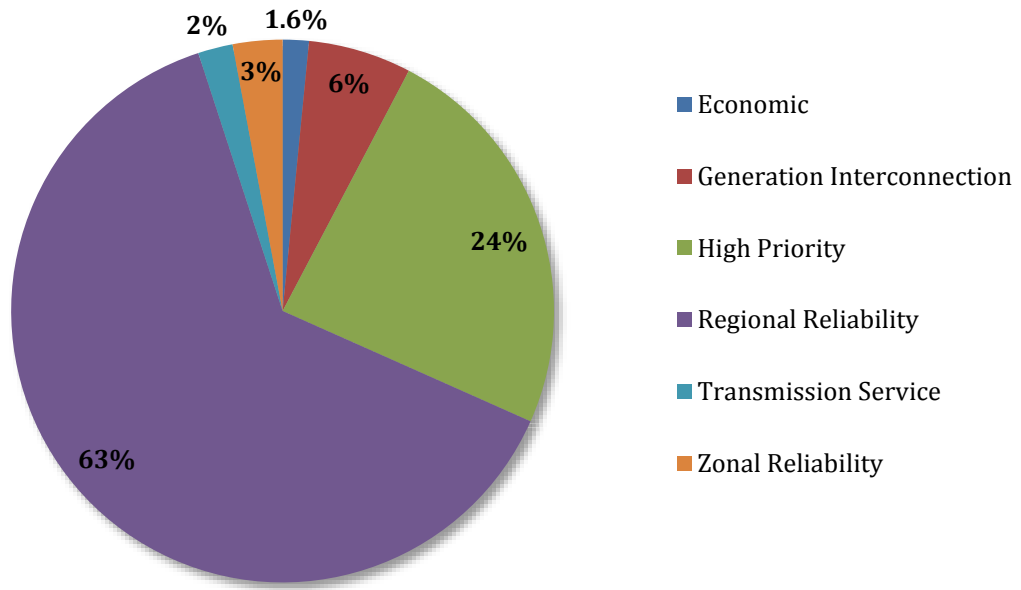


Figure 1: Percentage of Project Type on Cost Basis

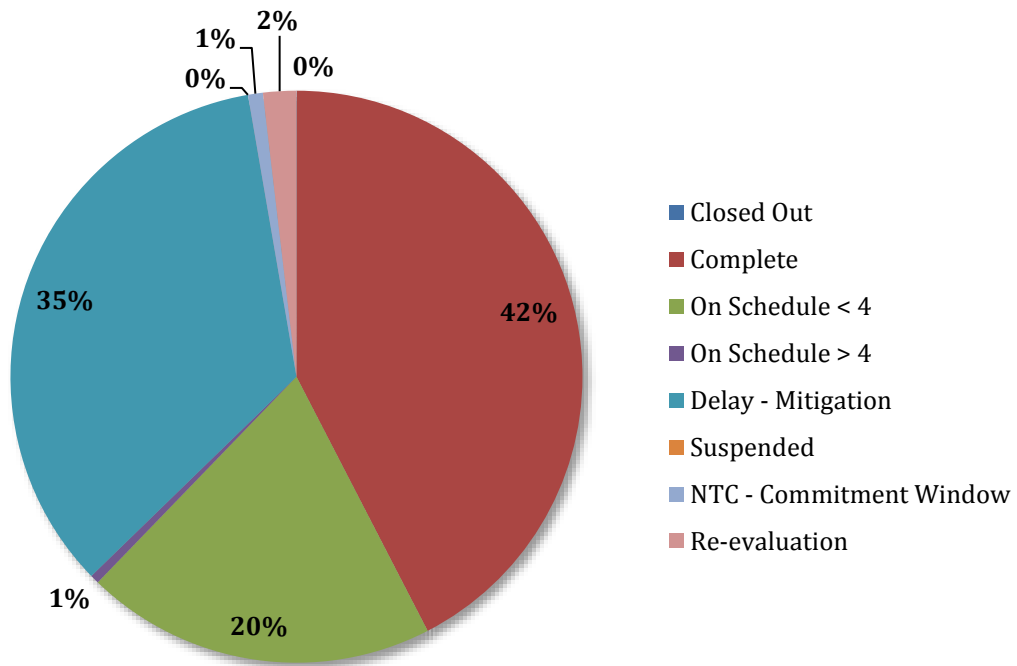


Figure 2: Percentage of Project Status on Cost Basis

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.**

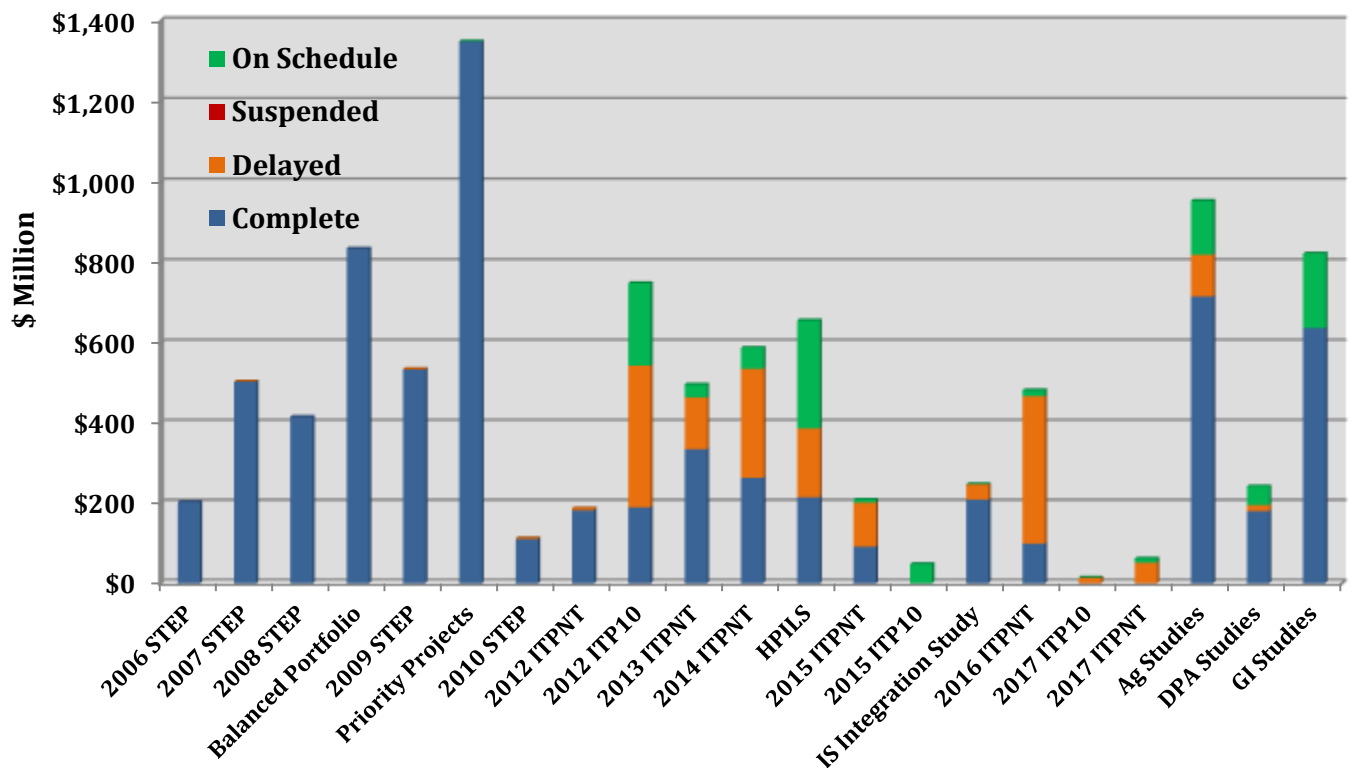


Figure 3: Project Status by NTC Source Study

Source Study	Complete	Delayed	Suspended	On Schedule	Total
2006 STEP	\$202,493,500	\$0	\$0	\$0	\$202,493,500
2007 STEP	\$503,517,735	\$0	\$0	\$0	\$503,517,735
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	\$2,039,917	\$0	\$0	\$112,008,699
2012 ITPNT	\$182,110,561	\$4,294,271	\$0	\$0	\$186,404,832
2012 ITP10	\$189,725,869	\$353,555,881	\$0	\$205,796,557	\$749,078,307
2013 ITPNT	\$334,756,795	\$129,476,622	\$0	\$31,668,055	\$495,901,471
2014 ITPNT	\$263,395,478	\$271,730,010	\$0	\$52,569,689	\$587,695,177
HPILS	\$214,658,160	\$171,500,068	\$0	\$270,062,570	\$656,220,798
2015 ITPNT	\$91,294,295	\$109,862,425	\$0	\$7,342,119	\$208,498,838
2015 ITP10	\$1,500,000	\$0	\$0	\$47,218,154	\$48,718,154
IS Integration Study	\$208,843,318	\$38,000,000	\$0	\$0	\$246,843,318
2016 ITPNT	\$98,966,636	\$368,038,414	\$0	\$14,819,338	\$481,824,388
2017 ITP10	\$0	\$13,686,764	\$0	\$0	\$13,686,764
2017 ITPNT	\$0	\$51,224,525	\$0	\$9,880,578	\$61,105,103
Ag Studies	\$715,841,984	\$104,151,430	\$0	\$133,362,070	\$953,355,484
DPA Studies	\$180,276,593	\$14,814,490	\$0	\$46,582,330	\$241,673,413
GI Studies	\$637,552,491	\$31,871,179	\$0	\$184,613,841	\$854,037,511
Total	\$7,066,979,055	\$1,665,687,045	\$0	\$1,003,915,299	\$9,736,581,400

Table 2: Project Status by NTC Source Study

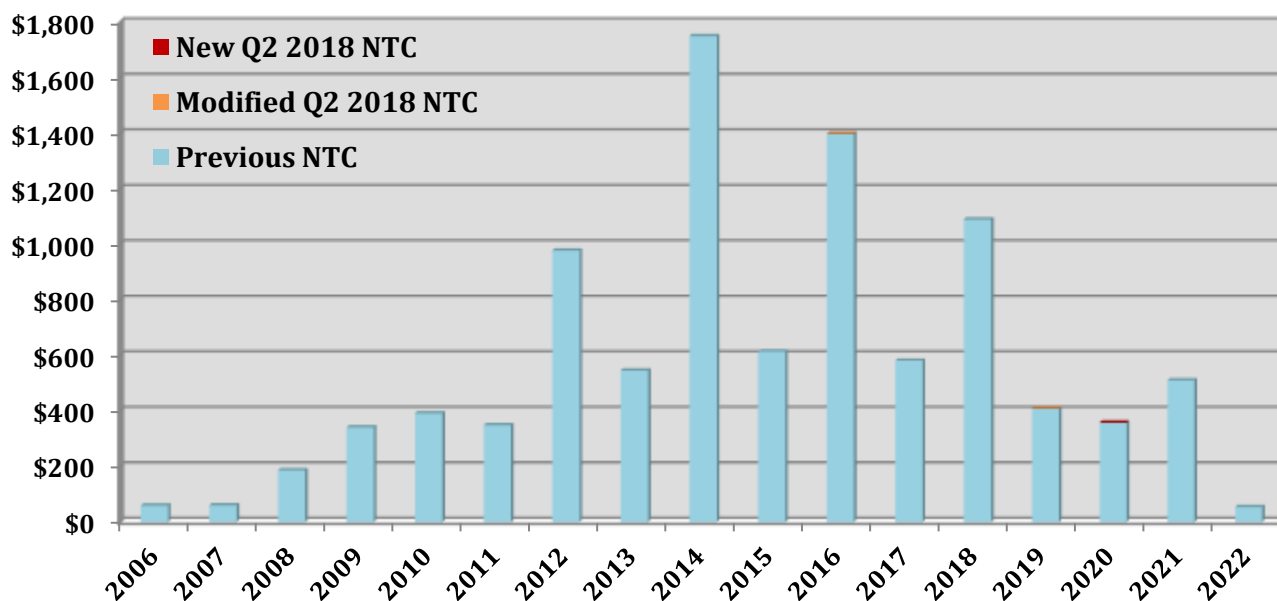


Figure 4: Estimated Cost for NTC Project per In-Service Year

NTC ISSUANCE

Two new NTCs were issued in the reporting period totaling an estimated \$1.5 million.

One new NTC was issued as a result of the Board's approval of the 2017 Integrated Transmission Planning Ten Year Assessment (ITP10). Total estimated cost of upgrades described in that NTCs are \$247 thousand.

One new NTC was issued as a result of Delivery Point Addition study 2017-March-735. Total estimated costs for upgrades resulting from this NTC are \$1.3 million.

NTC ID	Owner	NTC Issue Date	Upgrade Type	Source Study	No. of Upgrades	Estimated Cost of New Upgrades	Estimated Cost of Previously Approved Upgrades
200467	WR	11/14/2017	Economic	2017 ITP10	1		\$247,332
200470	CBPC	1/19/2018	Regional Reliability	DPA-2017-March-735	1	\$1,256,000	
Total					2	\$1,256,000	\$247,332

Table 3: NTC Issuance Summary

NTC WITHDRAW

Two NTC were withdrawn for two Network Upgrades during the reporting period, totaling an estimated \$2.9 million. These NTCs were issued out of Aggregate Studies SPP-2011-AG3-AFS-11 and SPP-2012-AG1-AFS-7. These upgrades 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
200471	OGE	1/29/2018	Regional Reliability	SPP-2011-AG3-AFS-11	1	\$1,720,000
200472	OGE	1/29/2018	Transmission Service	SPP-2012-AG1-AFS-7	1	\$1,131,409
Total					2	\$2,851,409

Table 4: NTC Withdraw Summary

COMPLETED UPGRADES

Eleven Network Upgrades with NTCs were verified as completed during the reporting period, totaling an estimated \$184.8 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
50168	FT SMITH 500/161KV TRANSFORMER CKT 5	OGE	Ag Studies	\$25,635,637
50413	Chisholm - Gracemont 345kV Ckt 1 (AEP)	AEP	2012 ITP10	\$65,082,311
50414	Chisholm 345/230 kV Substation	AEP	2012 ITP10	\$17,471,695
50513	Bushland Interchange - Deaf Smith Co Interchange 230 kV Ckt 1 Terminal Upgrade	SPS	Ag Studies	\$261,084
50719	Daingerfield - Jenkins REC T 69 kV Ckt 1 Rebuild	AEP	2014 ITPNT	\$2,819,806
50768	Chisholm 230 kV	AEP	2012 ITP10	\$1,270,623
51139	Cimarron - Draper 345 kV Terminal Upgrades	OGE	2015 ITP10	\$1,500,000
51146	Claremore 161 kV Terminal Upgrades	GRDA	2015 ITPNT	\$11,200
51215	Brooks Street - Edwards Street 69 kV Ckt 1 Rebuild	AEP	2015 ITPNT	\$4,294,228
51314	Judson - Tande 345 kV Ckt 1	BEPC	IS Integration	\$66,207,772
51508	Plaza 115 kV Cap Bank	BEPC	2016 ITPNT	\$283,000
Total				\$184,837,356

Table 5: Network Upgrades Completed During Reporting Period

Upgrade Type	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Total
Regional Reliability	16	13	8	22	59
Regional Reliability	\$113,476,704	\$44,923,578	\$67,818,378	\$224,627,441	\$450,846,102
Transmission Service	1	0	0	1	2
Transmission Service	\$228,364	\$0	\$0	\$25,635,637	\$25,864,001
Balanced Portfolio	0	0	0	0	0
Balanced Portfolio	\$0	\$0	\$0	\$0	\$0
High Priority	0	5	0	1	6
High Priority	\$0	\$35,774,471	\$0	\$11,510,000	\$47,284,471
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	7	11	14	5	37
Generation Interconnection	\$12,742,083	\$38,872,518	\$39,126,045	\$14,624,837	\$105,365,482

Table 6: Completed Project Summary as of Q1 2018

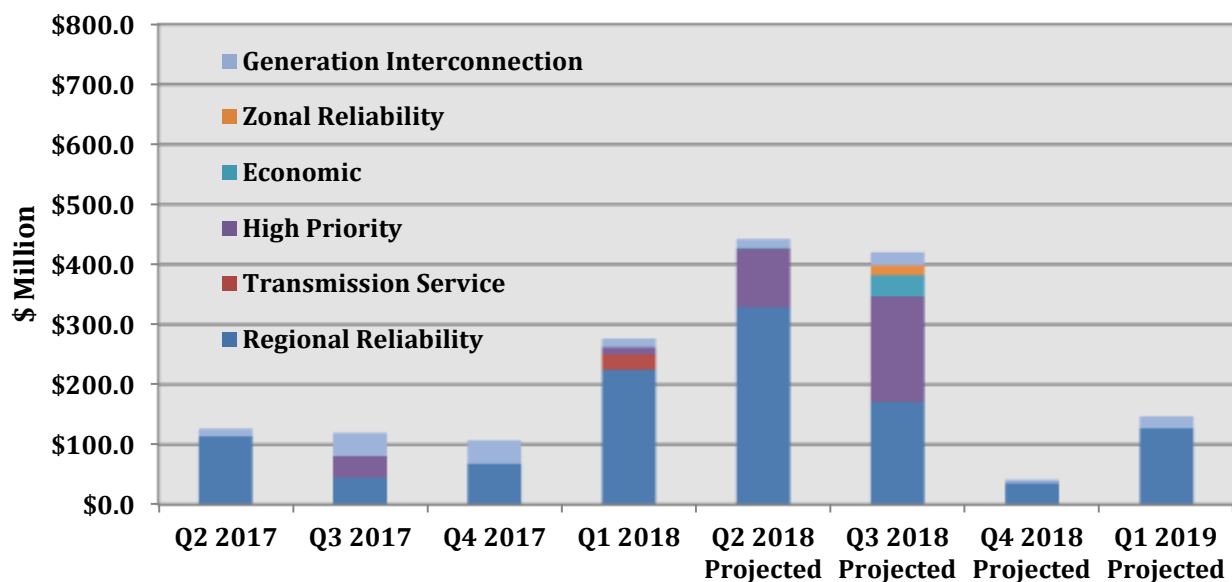


Figure 5: Completed Upgrades by Type per Quarter

Voltage Class	Number of Upgrades	New	Rebuild/ Reconductor	Voltage Conversion	Estimated Cost
69	7	4.7	29.4	0.0	\$53,254,635
115	16	77.0	46.6	13.0	\$107,815,619
138	2	14.3	16.5	138.0	\$21,049,418
161	1	0.0	11.1	0.0	\$12,705,537
230	2	32.0	0.0	0.0	\$42,370,623
345	2	133.2	0.0	0.0	\$131,290,083
Total	30	261.2	103.5	151.0	\$368,485,916

Table 7: Line Upgrade Summary for Previous 12 Months

Voltage Class	Number of Upgrades	New	Rebuild/ Reconductor	Voltage Conversion	Estimated Cost
69	7	3.9	37.8	69.0	\$57,231,707
115	18	145.9	31.0	0.0	\$146,893,515
138	13	159.7	2.4	0.0	\$149,395,213
161	1	19.4	0.0	0.0	\$20,690,401
230	1	16.8	0.0	0.0	\$30,279,364
345	11	257.5	0.0	28.8	\$332,839,795
Total	51	603.2	71.3	97.8	\$737,329,994

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.

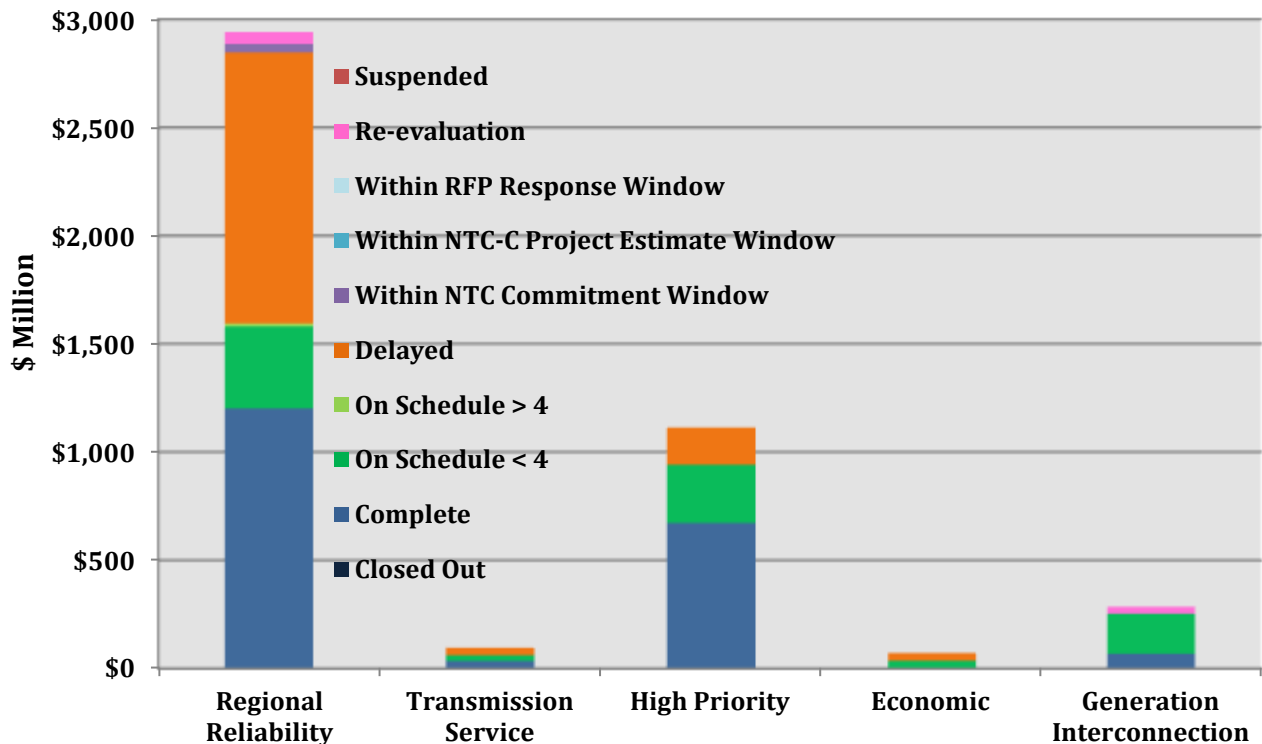


Figure 6: Project Status Summary by Cost

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.

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

Table 9 provides summary information and Table 10 lists cost detail for out-of-bandwidth projects for Q2 2018.

PID	Project Name	Owner	NTC Source Study	Upgrade Type	In-Service Date
30945	Multi - Judson - Tande - Neset 345/230 kV	BEPC	IS Integration Study	Regional Reliability	11/11/2017
30588	Multi - Fremont - S991 E 161/69 kV Ckt 1	OPPD	2015 ITPNT	Regional Reliability	10/1/2018
30427	XFR - Mingo 345/115 kV Ckt 2 Transformer	SEPC	2015 ITPNT	Regional Reliability	1/11/2017
1031	XFR - Crosby Co. 115/69 kV Transformers Ckt 1 and Ckt 2	SPS	2013 ITPNT	Regional Reliability	9/10/2015
1142	Line - Canyon East - Randall 115 kV Ckt 1 Rebuild	SPS	Ag Studies	Regional Reliability	12/31/2020
504	Line - Brownlee - North Market 69 kV	AEP	2013 ITPNT	Regional Reliability	3/22/2017
30644	Line - Anthony - Harper 138 kV Ckt 1	MKEC	HPILS	High Priority	2/18/2018

Table 9: 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 %
30945	\$111,000,000	2014	\$119,456,063	\$88,572,754	(\$30,883,308.5)	-25.85
30588	\$35,091,946	2015	\$37,790,188	\$27,497,485	(\$10,292,702.7)	-27.24
30427	\$9,842,317	2015	\$10,340,584	\$12,929,228	\$2,588,643.6	25.03
1031	\$4,679,798	2013	\$4,916,713	\$6,059,103	\$1,142,389.7	23.23
1142	\$12,806,065	2016	\$13,454,372	\$6,129,170	(\$7,325,202.0)	-54.44
504	\$12,424,849	2013	\$13,714,708	\$17,162,457	\$3,447,748.6	25.14
30644	\$13,253,238	2014	\$14,629,095	\$11,482,332	(\$3,146,763.0)	-21.51

Table 10: Out-of-Bandwidth Project Cost Detail

RESPONSIVENESS REPORT

Table 11 and Figures 7 and 8 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	61	61	100%	7	11%	2	3%
BEPC	22	22	100%	7	32%	7	32%
CBPC	1	1	100%	0	0%	0	0%
CPEC	2	2	100%	0	0%	0	0%
EDE	3	0	0%	0	0%	0	0%
EREC	1	1	100%	1	100%	0	0%
GMO	3	3	100%	0	0%	0	0%
GRDA	11	0	0%	0	0%	0	0%
ITCGP	7	0	0%	0	0%	0	0%
KCPL	6	6	100%	0	0%	0	0%
MIDW	11	11	100%	0	0%	0	0%
MKEC	7	7	100%	2	29%	7	100%
NIPCO	2	2	100%	0	0%	0	0%
NPPD	38	20	53%	6	16%	2	5%
OGE	49	15	31%	4	8%	9	18%
OPPD	14	14	100%	0	0%	3	21%
SEPC	11	6	55%	1	9%	5	45%
SPS	188	186	99%	9	5%	39	21%
TEXLA	1	0	0%	0	0%	0	0%
TSMO	7	7	100%	0	0%	1	14%
WAPA	3	3	100%	0	0%	0	0%
WFEC	37	0	0%	0	0%	3	8%
WR	28	24	86%	1	4%	4	14%
Total	513	391	76%	38	7%	82	16%

Table 11: Responsiveness Summary by Project Owner

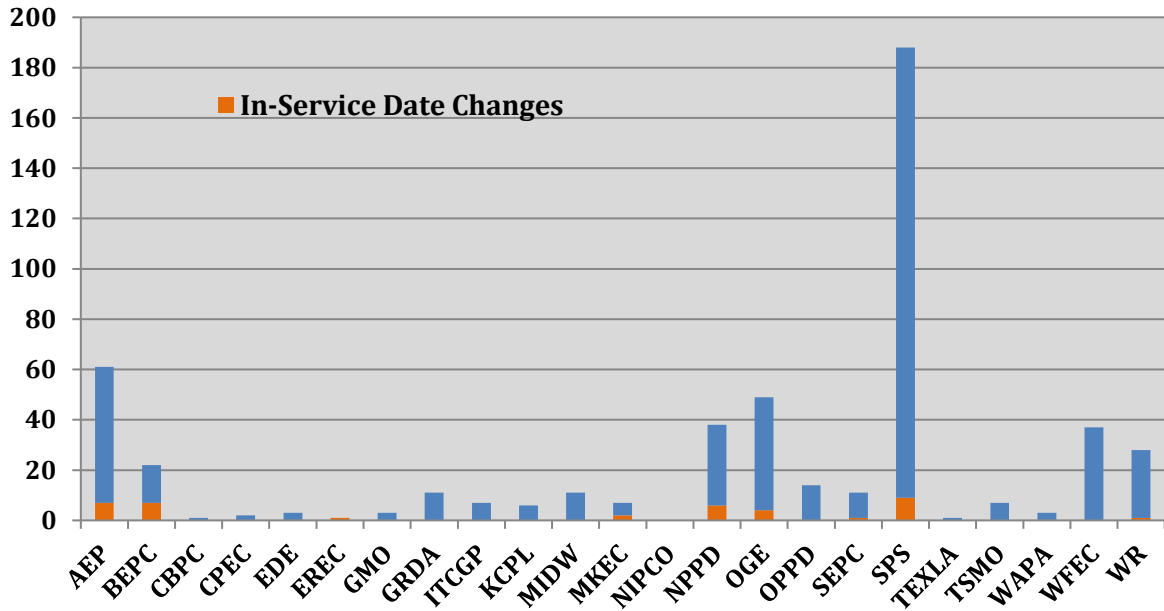


Figure 7: In-Service Date Changes by Project Owner

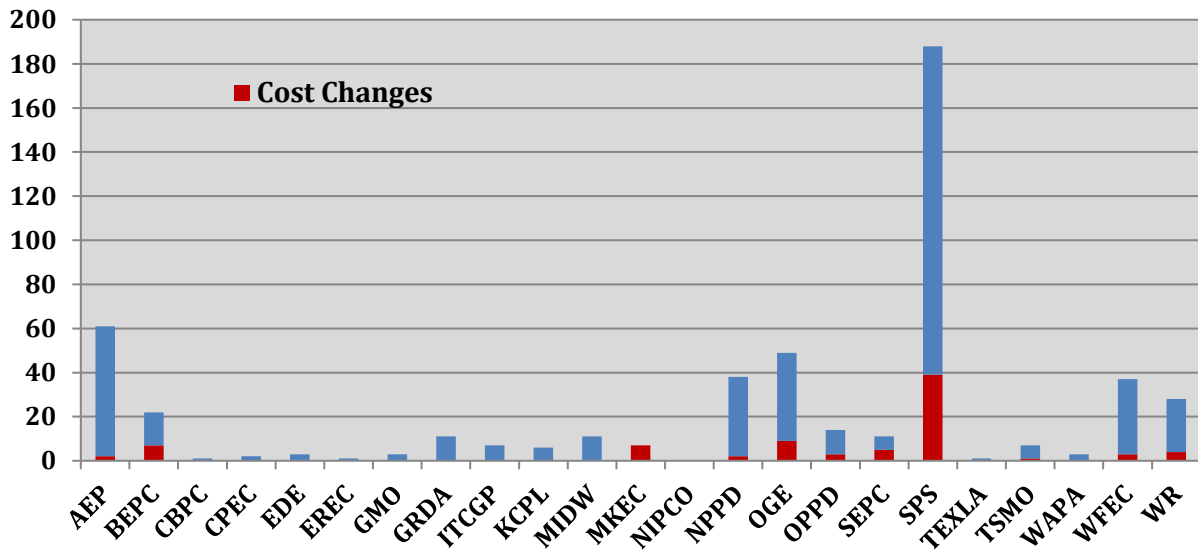


Figure 8: Cost Changes by Project Owner

APPENDIX 1

{See accompanying list of active Applicable Projects}