THIRD QUARTERLY PROJECT TRACKING REPORT 2019

July 2019

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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 SPP Open Access Transmission Tariff (OATT) 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 projects approved by the SPP Board of Directors (Board) or through a FERC-filed service agreement under the OATT.

Projects in the current portfolio include all Network Upgrades for which construction activities are ongoing or those for which construction has completed but not all close-out requirements have been fulfilled in accordance with Section 13 in Business Practice 7060[1].

[1] SPP OATT Business Practices

NTC PROJECT SUMMARY – REPORTING QUARTER

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

COMPLETED UPGRADES

Figure 1: Completed Upgrades

NTC ID	NTC Issue Date	UID	Network Upgrade Name	Owner	NTC Source Study	Cost Estimate
200320	2/18/2015	50745	Fremont 161/69 kV Transformer Ckt 1	OPPD	2015 ITPNT	$1,952,654
200320	2/18/2015	50746	Fremont - S991 E 69 kV Ckt 1	OPPD	2015 ITPNT	$4,854,430
200320	2/18/2015	50747	S1226 161kV Ckt 1	OPPD	2015 ITPNT	$20,690,401
200339	3/17/2015	51034	Ellerbe Road - Lucas 69 kV Ckt 1 Rebuild	AEP	DPA-2013-MAR-296	$9,905,114

NTC ID	NTC Issue Date	UID	Network Upgrade Name	Owner	NTC Source Study	Cost Estimate
200339	3/17/2015	51035	Ellerbe Road - Lucas 69 kV Terminal Upgrades	AEP	DPA-2013-MAR-296	$1,144,751
200446	5/12/2017	71945	Broken Arrow North - Lynn Lane East 138 kV Ckt 1 Reconductor	AEP	2017 ITPNT	$5,714,095
6 Upgrade(s) Completed						**$44,261,445**

Table 1: Completed Upgrades

NTCS ISSUED

Figure 2: NTCs Issued

NTC ID	NTC Issue Date	UID	Owner	Upgrade Name	Source Study	Estimated Cost of New Upgrades	Estimated Cost of Previously Approved Upgrades
210511	4/3/2019	112253	OGE	GEN-2016-020 Interconnection Costs	GEN-2016-020	$10,000	$0

NTC ID	NTC Issue Date	UID	Owner	Upgrade Name	Source Study	Estimated Cost of New Upgrades	Estimated Cost of Previously Approved Upgrades
210512	4/3/2019	82139	OGE	Kildare - White Eagle 138 kV Ckt 1 Rebuild	SUS-004 EDF Kildare - White Eagle Rebuild	$8,459,247	$0
210513	4/26/2019	82140	CUS	James River Power Station 161/69 kV Ckt 2 Transformer	SUS-005 CUS JRPS North Transformer	$4,020,198	$0
3 Upgrade(s) Issued						**$12,489,445**	**$0**

Table 2: NTCs Issued

NTCS WITHDRAWN

Figure 3: NTCs Withdrawn

NTC ID	NTC Withdrawn Date	UID	Upgrade Name	Owner	Source Study	Estimated Cost of Withdrawn Upgrades
210509	2/25/2019	50640	Potash Junction 230/115 kV Transformer Upgrade	SPS	SPP-2015-AG1-AFS-6	$6,655,500
210510	2/25/2019	50918	Plant X 230/115 kV Ckt 2 Transformer	SPS	SPP-2016-AG1-AFS-3	$18,785,647
2 Upgrade(s) Withdrawn						**$25,441,147**

Table 3 NTCs Withdrawn

PORTFOLIO SUMMARY

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 projects approved by the SPP Board of Directors (Board) or through a FERC filed service agreement under the SPP Open Access Transmission Tariff (OATT). Projects included in the portfolio are:

1. Upgrades required to satisfy requests for transmission service (TS)
2. Upgrades required to satisfy requests for generator interconnection (GI)
3. Approved projects from the Integrated Transmission Planning Assessment (ITP) (ITP20)
4. Upgrades within approved Balanced Portfolios[2] (BP)
5. Approved high priority upgrades (HP)
6. Endorsed Sponsored Upgrades (SP)
7. Approved Interregional Projects[2] (IR)

This report will document changes over the previous quarter to projects captured in the Quarterly Project Tracking Portfolio as well as new projects added from various processes listed above. A summary of the project portfolio is also included. Projects approved in ITP20 assessments are now reflected in this total.

Figure 4: Total Portfolio

[2] There are currently no Balanced Portfolio or Interregional projects included in Quarterly Project Tracking

Figure 5: Upgrade Type by Cost Summary[3]

Figure 6: Estimated Cost for All Projects per In-Service Year

3 Mileage not available for all upgrade categories

Figure 7: Completed Upgrades by Estimated Cost[4] Last Four Quarters

Figure 8: Completed Upgrades by Type Last Four Quarters

[4]Figures 8 and 9 include Network Upgrades not yet confirmed as completed. Note that the 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.

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:

- **Closed Out:** Upgrade is operation, all project activities are complete, & all close-out requirements fulfilled
- **Complete:** Upgrade is operation and all project activities are complete
- **Delayed:** Projected In-Service Date beyond Need Date; interim mitigation provided or project may change but time permits the implementation of project
- **In Service:** Upgrade is operational, but not all project activities are complete
- **On Schedule < 4:** On Schedule within 4-year horizon
- **On Schedule > 4:** On Schedule beyond 4-year horizon
- **Re-evaluation:** Project active; pending re-evaluation
- **Suspended:** Project suspended; pending re-evaluation
- **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

Figure 9: Portfolio Project 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 ±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 ±20% bandwidth requirement during the reporting period. Table 5 provides summary information and Table 6 lists cost detail for out-of-bandwidth projects identified during the reporting quarter.

PID	Project Name	Owner	NTC Source Study	Upgrade Type	In-Service Date
30850	Line - Iatan - Stranger 345 kV Ckt 1 Voltage Conversion	GMO/WR/ KCPL	2015 ITP10	Economic	6/1/2018
30692	XFR - Seminole 230/115 kV #1 and #2	SPS	2016 ITPNT	Regional Reliability	11/14/2019
30809	Line - Keystone Dam - Wekiwa 138 kV Ckt 1 Rebuild	AEP	Ag Studies	Regional Reliability	6/1/2021

Table 4: 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 %
30850	$37,510,000	2015	$40,394,167	$31,551,721	($8,842,446)	-21.9%
30692	$7,242,810	2016	$7,799,714	$6,189,849	($1,609,865)	-20.6%
30809	$4,319,501	2016	$4,651,630	$6,445,009	$1,793,379	38.6%

Table 5: Out-of-Bandwidth Project Cost Detail

RESPONSIVENESS REPORT

Table 7 and Figures 10 and 11 provide insight into the responsiveness of DTOs constructing Network Upgrades within SPP in the Quarterly Project Tracking Report. **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 %
AECC	1	1	100%	1	100%	0	0%
AEP	57	56	98%	5	9%	1	2%
BEPC	23	0	0%	0	0%	0	0%
CBPC	1	0	0%	0	0%	0	0%
CPEC	2	2	100%	0	0%	0	0%
CUS	2	2	100%	0	0%	0	0%
EDE	3	0	0%	0	0%	0	0%
EREC	3	3	100%	0	0%	1	33%
GHP	1	0	0%	0	0%	0	0%
GMO	2	1	50%	0	0%	1	50%
GRDA	5	0	0%	0	0%	0	0%
ITCGP	4	0	0%	0	0%	0	0%
KCPL	10	8	80%	0	0%	2	20%
KPP	1	0	0%	0	0%	0	0%
MIDW	5	5	100%	0	0%	0	0%
MKEC	7	7	100%	0	0%	7	100%
NIPCO	2	0	0%	0	0%	0	0%
NPPD	42	27	64%	0	0%	10	24%
OGE	41	11	27%	4	10%	7	17%
OPPD	15	15	100%	3	20%	1	7%
SEPC	14	13	93%	0	0%	3	21%
SPS	180	2	1%	1	1%	2	1%
TBD	10	0	0%	0	0%	0	0%
WAPA	9	6	67%	0	0%	0	0%
WFEC	63	30	48%	5	8%	0	0%
WR	31	30	97%	0	0%	4	13%
Total	**534**	**219**	**41%**	**19**	**4%**	**39**	**7%**

Table 6: Responsiveness Summary

Figure 10: In-Service Date Changes

Figure 11: Cost Changes

ITP20 UPGRADES

ITP20 assessments were performed in 2010 and 2013. While the projects proposed by those studies are incorporated into the STEP Project List, they were not included in SPP's project tracking effort as part of the Quarterly Tracking Report prior to Q1 2019. A list of active ITP20 projects will be maintained in the STEP Report and Quarterly Project Tracking Report lists going forward. The current ITP20 projects are listed in the table below.

Project ID	Upgrade ID	Owner	Upgrade Name	RTO Determined Need Date	Latest Cost Estimate
30401	50492	TBD	Cass Co. - S.W. Omaha (aka S3454) 345 kV Ckt1	1/1/2033	$33,126,800
30402	50493	OPPD	S3459 345/161 kV Transformer Ckt 2	1/1/2033	$12,600,000
30599	50769	AEP	South Fayetteville 345/161 kV Transformer Ckt1	1/1/2033	$12,600,000
30599	50770	TBD	Chamber Springs - South Fayetteville 345 kV Ckt1	1/1/2033	$21,295,800
30600	50771	GMO	Maryville 345/161 kV Transformer Ckt1	1/1/2033	$12,600,000
30601	50772	KCPL	Nashua 345/161 kV Transformer Upgrade Ckt11	1/1/2033	$12,600,000
30602	50773	TBD	Keystone - Red Willow 345 kV Ckt1	1/1/2033	$130,141,000
30603	50774	TBD	Tolk - Tuco 345 kV Ckt1	1/1/2033	$75,718,400
30604	50775	SEPC	Holcomb 345/115 kV Transformer Ckt2	1/1/2033	$12,600,000
30605	50776	TBD	Neosho - Wolf Creek 345 kV Ckt1	1/1/2033	$117,126,900
30606	50777	TBD	Clinton - Truman 161 kV Ckt1 Reconductor	1/1/2033	$15,701,325
30606	50778	TBD	North Warsaw - Truman 161 kV Ckt1 Reconductor	1/1/2033	$1,082,850
30608	50779	WR	Auburn 345/115 kV Transformer Ckt2	1/1/2033	$12,600,000
30608	50780	TBD	Auburn - Swissvale 345 kV Ckt1 Voltage Conversion	1/1/2033	$20,112,700
30608	50781	TBD	Auburn - Jeffrey EC 345 kV Ckt1 Voltage Conversion	1/1/2033	$35,493,000
30607	50782	OGE	Muskogee/Pecan Creek 345 kV Terminal Upgrades	1/1/2033	$34,605,675

Table 7: ITP20 Upgrades

MORGAN TRANSFORMER PROJECT

Pursuant to a Joint Operating Agreement and resulting Joint Coordinated System Planning Process between AECI and SPP, SPP and AECI have agreed to share cost associated with the Morgan Transformer Project.

Project ID	Upgrade ID	Owner	Upgrade Name	Projected In-Service Date	Latest Cost Estimate
31132	51740	AECI	Morgan 345/161kV Transformer	TBD	TBD
31132	51832	AECI	Morgan Line Uprate	TBD	TBD

Table 8: Morgan Upgrades

APPENDIX 1

(See accompanying list of Quarterly Project Tracking Projects)