

Maintaining an economical, optimized transmission system

Each year, SPP and its member companies work together to evaluate the reliability of the future regional transmission system. The 2018 Integrated Transmission Plan Near Term (ITPNT) assessment determined 13 new transmission projects are needed to ensure electric reliability over the next five years. The ITPNT also determined six formerly approved projects are no longer needed.

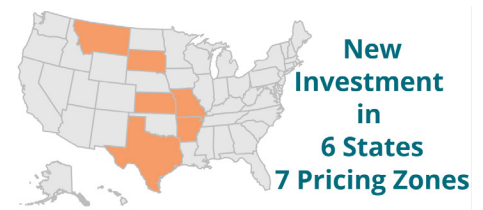
With input from stakeholders, SPP staff evaluated 464 solutions before arriving at the ITPNT project portfolio. We used four generation-dispatch scenarios built across multiple years and seasons.

We adjusted the project scope based on member feedback, including the addition of a persistent operational need in Missouri, alternate power flows across DC ties, high wind during summer peak and a “test run” of a dispatch scenario to be used in the 2019 ITP process.

While regional load growth is down, new projects are still needed to address pockets of local load growth and about 1.9 gigawatts of generation retirements in eastern Kansas and western Missouri.

The 2018 ITPNT is the last iteration of the three-year ITP process we’ve used since 2010. We’ve already started a new ITP process that, beginning in 2019, will produce an annual transmission plan assessing two-, five- and 10-year reliability, economic and policy needs.

Key Take-Aways



-\$37.2 M Net Cost

2018 ITPNT Value

- 1 Compliance with mandatory reliability standards
- 2 Address generation retirements & localized load growth
- 3 Improve interconnections with neighbors
- 4 Contribute to voltage stability
- 5 Reduce congestion

2018 ITPNT Project Portfolio

New Reliability Projects	Company	Cost	Need Date	Need Driver
New Lakeview 69-kV substation & new 14.4 MVAR capacitor bank	East River Electric Power	\$5.6M	6/1/19	Load
Reconductor 3 miles 115-kV line Richland-Lewis	W. Area Power/Basin	\$0.1M	6/1/19	DC Tie Bias
Replace 230/115-kV transformer at Lawrence Hill	Westar	\$4.9M	6/1/19	Load
Construct new 6-mile, 161-kV line Blue Valley-Crosstown	KCP&L	\$8.9M	6/1/20	Generator Retirement
Replace terminal equipment 161-kV line Olathe-Switzer	KCP&L	\$1.1M	6/1/19	De-Rate
Replace terminal equipment 161-kV line Brookridge-Overland Park	KCP&L	\$0.5M	6/1/19	De-Rate
New 50 MVAR reactor at Brookline 345 kV	City Utilities Springfield	\$4.2M	6/1/19	Operational
Rebuild 1.25 miles 69-kV line Nixa Downtown-Nixa Espy	South Central MCN	\$1.1M	6/1/19	Generator Retirement
Rebuild 4.2 miles 69-kV line VBI North-Figure Five	AEP	\$3.4M	6/1/19	Load
New McDowell substation & 230/115-kV transformer	SW Public Service	\$13.2M	6/1/19	Load
Replace terminal equipment 115-kV line Carlisle-Murphy	SW Public Service	\$0.3M	6/1/22	Load
Replace terminal equipment 115-kV line Clauene-Terry County	SW Public Service	\$0.5M	6/1/19	Generation Dispatch
Replace 230/115-kV transformer at Sundown	SW Public Service	\$3.4M	6/1/19	Load

Investment by State

State	Recommended for New NTC*	Withdrawn NTC	Net Investment
MT	\$0.1M	\$0	\$0.1M
MN	\$0	\$0	\$0
ND	\$0	\$0	\$0
SD	\$5.6M	\$0	\$5.6M
NE	\$0	\$0	\$0
WY	\$0	\$0	\$0
IA	\$0	\$0	\$0
KS	\$6.5M	(\$34.9M)	(\$28.3M)
MO	\$14.2M	\$0	\$14.2M
OK	\$0	(\$5.4M)	(\$5.4M)
AR	\$3.4M	\$0	\$3.4M
TX	\$17.5M	(\$44.3M)	(\$26.8M)
NM	\$0	\$0	\$0
LA	\$0	\$0	\$0
TOTAL	\$47.4M	(\$84.6M)	(\$37.2M)

* Notification to construct

