



Item 10: Lubbock Power and Light Impact Study

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ERCOT Public

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Lubbock Power and Light Impact Study

In June 2016, ERCOT completed Lubbock Power and Light (LP&L) Integration Study (filed in PUCT Project 45633)

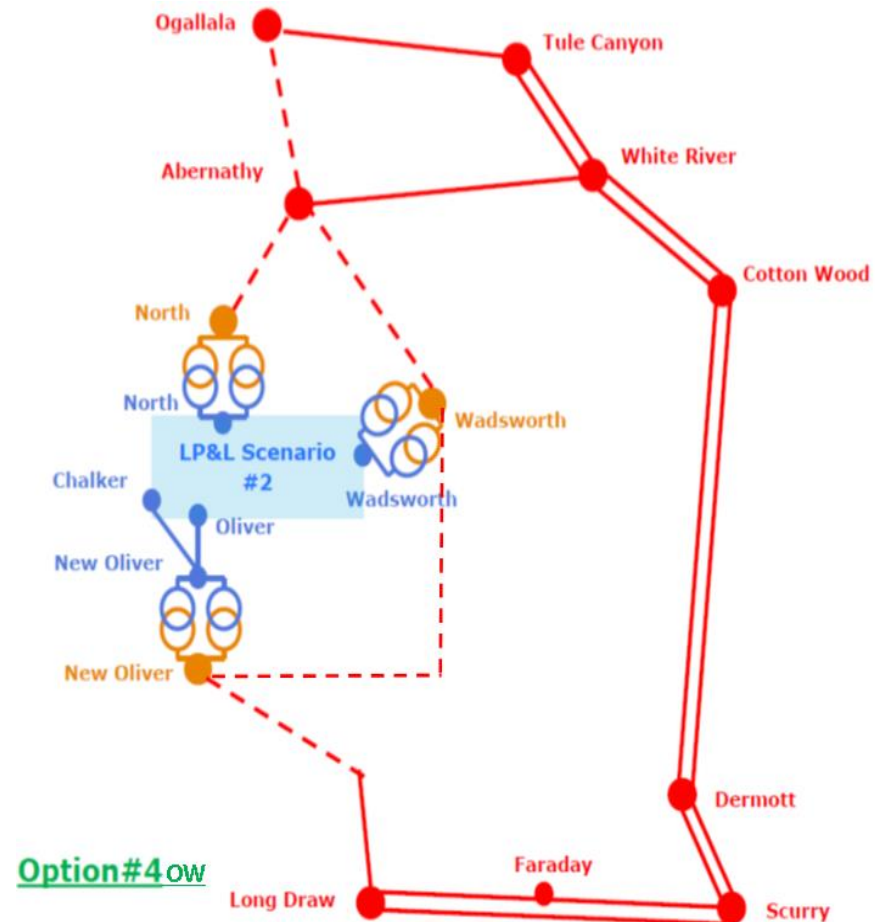
In July 2016, memo from Former Chairman Nelson asked for ERCOT-SPP coordinated study of the impacts of an LP&L transition to ERCOT

In February 2017, SPP and ERCOT finalized the study scope (filed in PUCT Project 45633)

This presentation is presented to the Board for informational purposes

ERCOT LP&L Integration Study (June 2016)

- ERCOT preferred Option 4ow for integrating the LP&L system.
- \$364 million capital cost estimate for transmission facilities
- Option 4ow, if implemented, would supersede need for proposed \$251 million South Plains Regional Planning Group Project.



SPP-ERCOT Coordinated Study Results

- The following slides will summarize the draft results of the analysis performed as part of the study scope.
- Final and detailed information will be available in the study report ERCOT will file with the PUCT.
- SPP is expected to file a separate report for its portion of the study scope.

ERCOT Production Cost Results

Year	ERCOT Production cost increase due to the addition of LP&L System	SPP Production cost decrease due to the subtraction of LP&L System	Total Production Cost Impact
2020	\$74 million	TBD	TBD
2025	\$77 million	TBD	TBD

- Addition of load to ERCOT system causes increase in ERCOT production cost. *(Note: Production cost numbers do not take into account payment from load.)*
- Production cost increase from load is partially offset by decrease in Panhandle export congestion due to transmission assumed to connect LP&L.

ERCOT Consumer Impact

Payments from LP&L (LMP times Load (MW))

Year	LP&L Load Included in the West Load Zone	LP&L Load Included in an LP&L Load Zone
2020	\$78 million	\$76 million
2025	\$99 million	\$99 million

Impact on non-LP&L ERCOT Consumers (Load-weighted Average Annual LMP)

Year	Without LP&L	With LP&L
2020	\$35.25/MWh	\$35.28/MWh
2025	\$44.61/MWh	\$44.66/MWh

Subsynchronous Resonance Impact

- 23 generators had an increase in the number of outages required to be radial to a series capacitor.
 - These generators would have less SSR risk.
 - None of these generators went from less than or equal to 6 outages to more than 6 outages from vulnerability condition.
- 5 generators went from 20 outages to 14 outages to be radial to Edison/Oersted series capacitors.
 - All 5 are significantly far away from Edison/Oersted series capacitors and are not considered at risk.
 - All of these generators (Panhandle) already have SSR mitigation and/or protection in place.

Other ERCOT Impacts

- ERCOT found minor to negligible impacts in the following areas:
 - The need for already planned transmission projects
 - Operational and reliability impacts
 - Ancillary Services
 - Congestion Revenue Rights (CRR)

Conclusion

- ERCOT will file the final report with the Public Utility Commission of Texas (PUCT) by the end of the month
- Questions?