

PUBLIC



**LCRA Transmission Services Corporation
(LCRA TSC) and CenterPoint Energy
Houston Electric, LLC (CEHE) Euclid 765-
kV Substation and Transmission Line
Addition Project (26RPG001) – ERCOT
Independent Review (EIR)
Recommendation**

Ben Richardson

Regional Planning Group (RPG) Meeting
May 11, 2026

Introduction

LCRA Transmission Services Corporation (LCRA TSC) and CenterPoint Energy Houston Electric, LLC (CEHE) submitted the Euclid 765-kV Substation and Transmission Line Addition Project for Regional Planning Group (RPG) review in January 2026

- This Tier 1 project is estimated to cost \$1.831 billion and will require a Certificate of Convenience and Necessity (CCN) filing
- Estimated in-service date (ISD) is June 30, 2031
- This project was identified and included in 2025 Regional Transmission Plan (RTP) in Caldwell, Colorado, Gonzales, Lavaca, Wharton counties in the South Central and Coast Weather Zones
- This project aligns with the 2025 RTP Euclid 765-kV Station and Euclid to Hillje 765-kV Line Addition Project

This project is currently under ERCOT Independent Review (EIR) and ERCOT is presenting its recommendation

- LCRA TSC and CEHE presented the project overview and ERCOT provided the EIR scope at the [March 2026 RPG Meeting](#)
- ERCOT presented a status Update at the [April 2026 RPG Meeting](#)

Project Proposed by LCRA TSC and CEHE

Project Details

Construct a new Euclid 765-kV Substation

- Install adjacent to existing Euclid 345-kV Station expanding Euclid Station
- Install two (2) new 765/345-kV transformers rated to at least 2,403 MVA Normal and 2,772 MVA Emergency;
- Connect Euclid 765-kV as cut-in to planned Bell County East to Howard Road 765-kV transmission line; and
- Install 765-kV Switch Shunt Reactors sufficient to ensure voltage remains within acceptable operating limits.

At Planned Hillje 765/345-kV Substation

- Install or modify existing Switch Shunt Reactors sufficient to ensure voltage remains within acceptable operating limits; and
- Upgrade existing 345-kV circuit breakers to 80 kA interrupting capability.

Project Proposed by LCRA TSC and CEHE

Construct a new Euclid to Hillje 765-kV single-circuit transmission line, with normal and emergency ratings of at least 7,602 MVA, which will require a new ROW, approximately 131.4 miles

- LCRA TSC to construct approximately 65.7 miles segment from Euclid to point-of-interconnection with CEHE; and
- CEHE to construct approximately 65.7 miles segment from Hillje to point-of-interconnection with LCRA TSC.

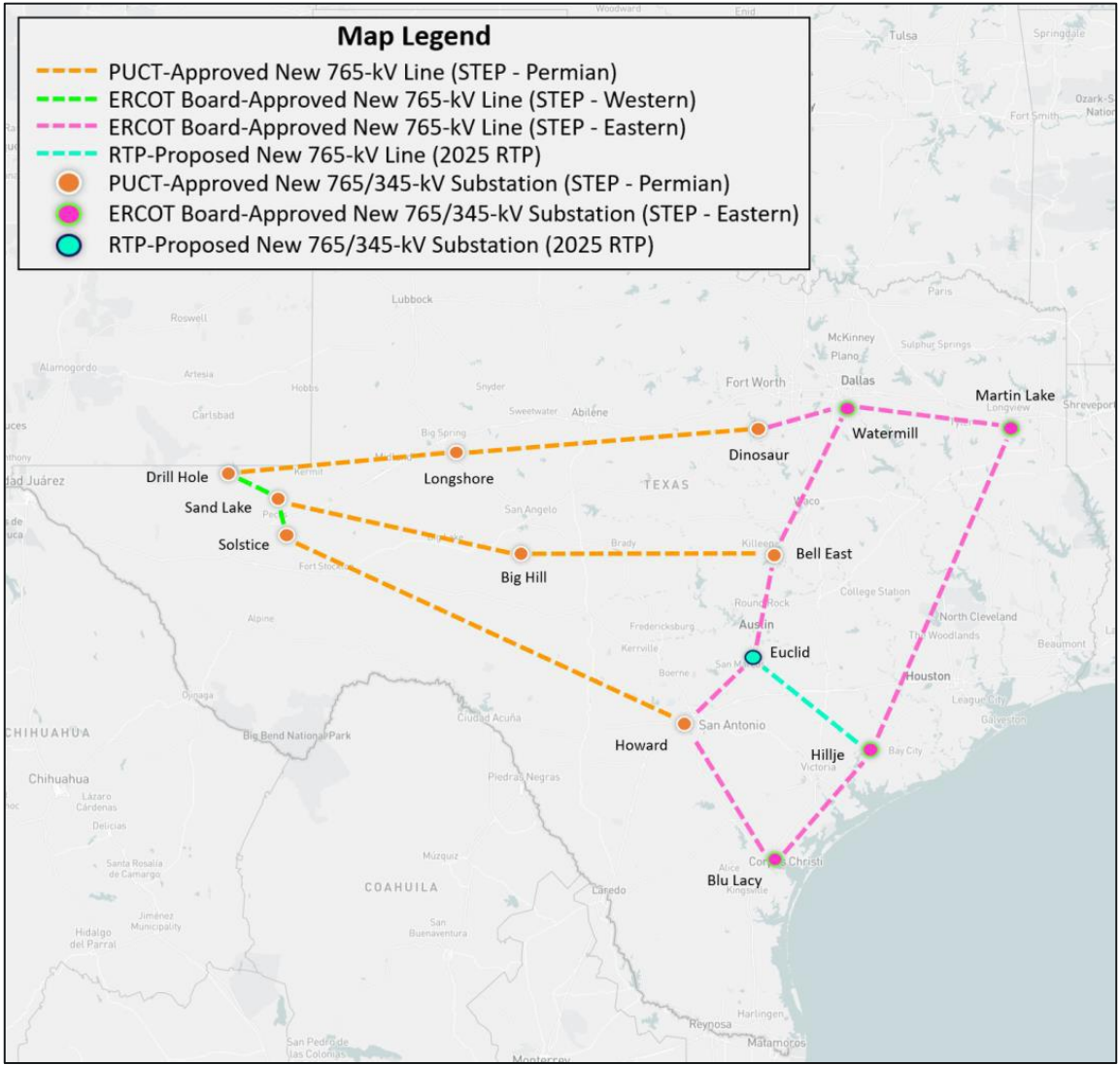
At Existing Euclid 345-kV Substation

- Connect Euclid 345-kV as Cut-in to the existing John Dumas to Hornsby 345-kV transmission line;
- Construct two (2) new Euclid to Misty 345-kV transmission lines rated to at least 2,988 MVA on separate structures, which will require a new ROW, approximately 2.0 miles;
- All equipment will be rated at 2,988 MVA (5000 Amps); and
- Install new 345-kV circuit breakers with 80 kA interrupting capability.

At Existing Misty 345-kV Substation

- All equipment will be rated at 2,988 MVA (5000 Amps); and
- Install new 345-kV circuit breakers with 80 kA interrupting capability.

Map of Euclid 765-kV Station and Euclid to Hillje 765-kV Line Addition Proposed in 2025 RTP



Study Assumptions and Methodology

- The reliability need of this RPG project was identified and included in the 2025 RTP
- This RPG project aligns with the 2025 RTP Euclid 765-kV Station and Euclid to Hillje 765-kV Line Addition
- ERCOT utilized the 2025 RTP study for this Independent Review and assessed the need for further analysis:
 - Steady-state reliability analysis
 - Dynamic stability reliability analysis
 - Congestion Analysis
- ERCOT performed additional evaluations in accordance with NERC TPL-001-5.1 and ERCOT Planning Criteria
 - Generation Addition and Load Scaling Sensitivity Analyses
 - Planning Guide Section 3.1.3(4)
 - Subsynchronous Oscillations (SSO) Assessment
 - Nodal Protocol Section 3.22.1.3(2)

Reliability Analysis

- **Steady-state reliability analysis**
 - The LCRA TSC and CEHE Euclid 765-kV Substation and Transmission Line Addition Project addressed the reliability issues identified in the 2025 RTP
 - No need for additional steady-state evaluations identified (beyond requirements of ERCOT Planning Guide Section 3.1.3(4) discussed in following slide).
- **Dynamic stability analysis**
 - The results of the analysis indicate that the addition of the recommended Euclid – Hillje area 765-kV and 345-kV upgrades does not impact the West Texas Export stability limit of 16.2 GW identified under the approved full 765-kV STEP.

Additional Analyses

Congestion Analysis

- Congestion analysis was performed for the Euclid 765-kV Substation and Transmission Line Addition Project using the 2025 RTP 2030 sensitivity case. Findings:
 - New congestion identified on Misty to Lytton Spring 345-kV line, congested 4.52% of study year
 - New congestion will be evaluated in forthcoming studies
 - Decreased total system wide congestion

Generation Addition Sensitivity Analysis

- ERCOT performing a generation addition sensitivity, per ERCOT Planning Guide Section 3.1.3(4)(a). The additional resources were modeled following the 2025 RTP methodology. Findings:
 - The addition of these generators do not impact the Euclid project.

Load Scaling Sensitivity Analysis

- Planning Guide Section 3.1.3(4)(b) requires an evaluation of the potential impact of load scaling on the criteria violations seen in this EIR. Starting 2024, ERCOT RTP adopted a new methodology of having one summer peak case for each study year with non-coincident peaks for each of the Weather Zones, which would eliminate the load scaling impact. The study case did not include load scaling as such load scaling sensitivity analysis is no longer needed

Subsynchronous Oscillations (SSO) Assessment

- SSO Assessment was conducted for the Euclid 765-kV Substation and Transmission Line Addition Project per ERCOT Nodal Protocol Section 3.22.1.3. Findings:
 - No adverse SSO impacts resulting from Euclide Project.

ERCOT Recommendation

ERCOT recommends the project proposed by LCRA TSC and CEHE

- Estimated Cost: approximately \$1.831 billion
- Expected ISD: June 30, 2031
- CCN filling would be required
 - Construct a new Euclid to Hillje 765-kV single-circuit transmission line, with normal and emergency ratings of at least 7,602 MVA, which will require a new ROW, approximately 131.4 miles.

ERCOT Recommendation Component Summary

Construct approximately 131.4 miles of new 765-kV single-circuit transmission line;

Construct a new 765-kV Substation;

Install two (2) new 765/345-kV transformers;

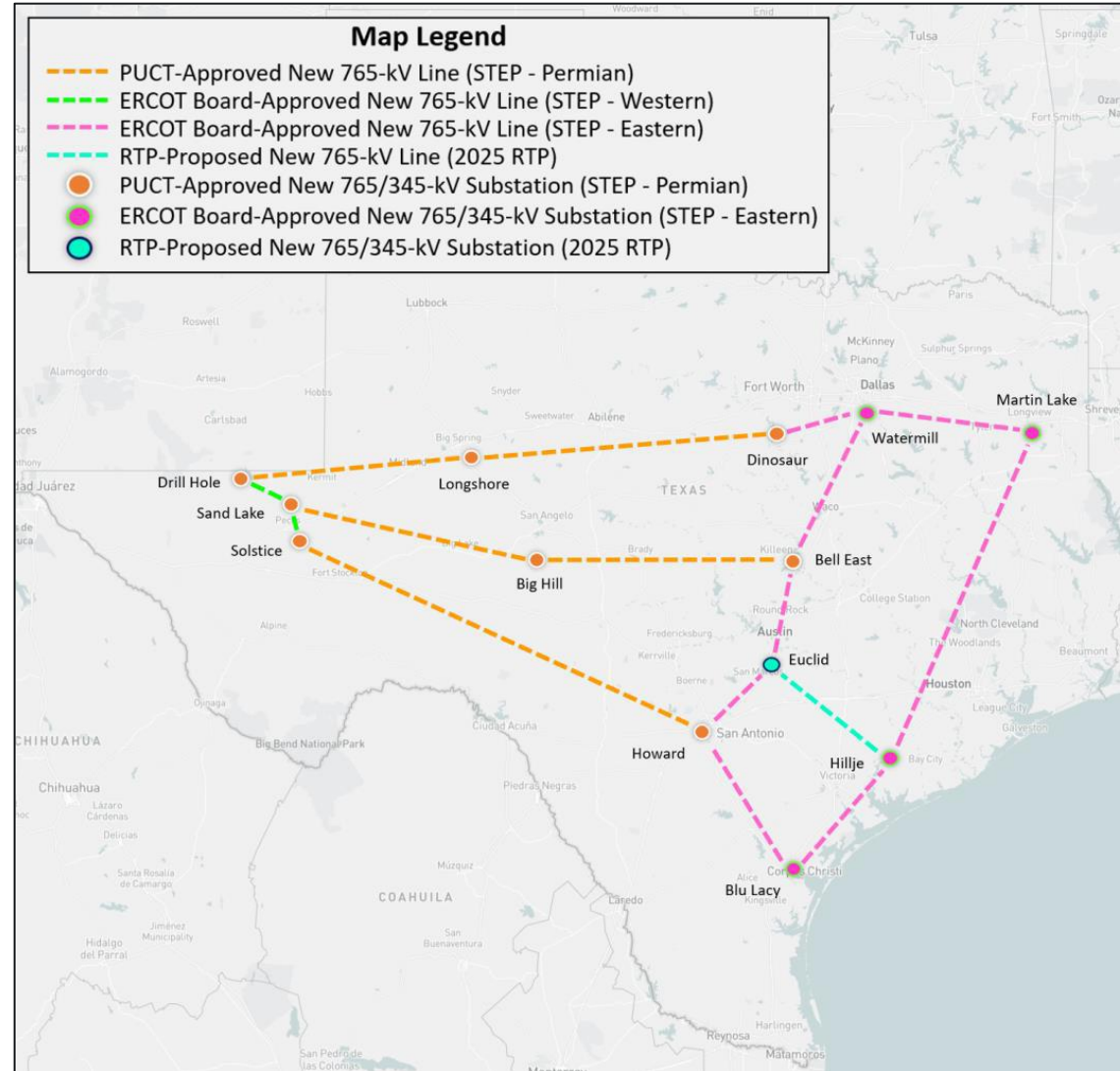
Install 765-kV Switch Shunt Reactors;

Upgrade existing 345-kV circuit breakers to 80 kA interrupting capability; and

Construct two new, approximately 2.0 miles, 345-kV transmission lines.

Full project details in [Appendix A](#)

Map of ERCOT Recommendation



Deliverables and Next Step

Timelines

- EIR report to be posted in the Market Information Service (MIS) in May 2026
- EIR recommendation to Technical Advisory Committee (TAC) in May 2026
 - Post TAC material on May 12, 2026
 - Collect and consolidate questions on May 14, 2026
 - Post consolidated questions and ERCOT responses on May 15, 2026
- Seek ERCOT Board of Directors (BOD) endorsement in June 2026

Key Takeaway: Seek ERCOT BOD endorsement in June 2026

Thank you! Questions/Comments?

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Appendix A: ERCOT Recommendation

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At Planned Hillje 765/345-kV Substation

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Appendix A: ERCOT Recommendation (cont.)

At Existing Euclid 345-kV Substation

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