



**STEC Southeast Brownsville Large
Load Transmission System
Improvements Project – ERCOT
Independent Review (EIR) Scope**

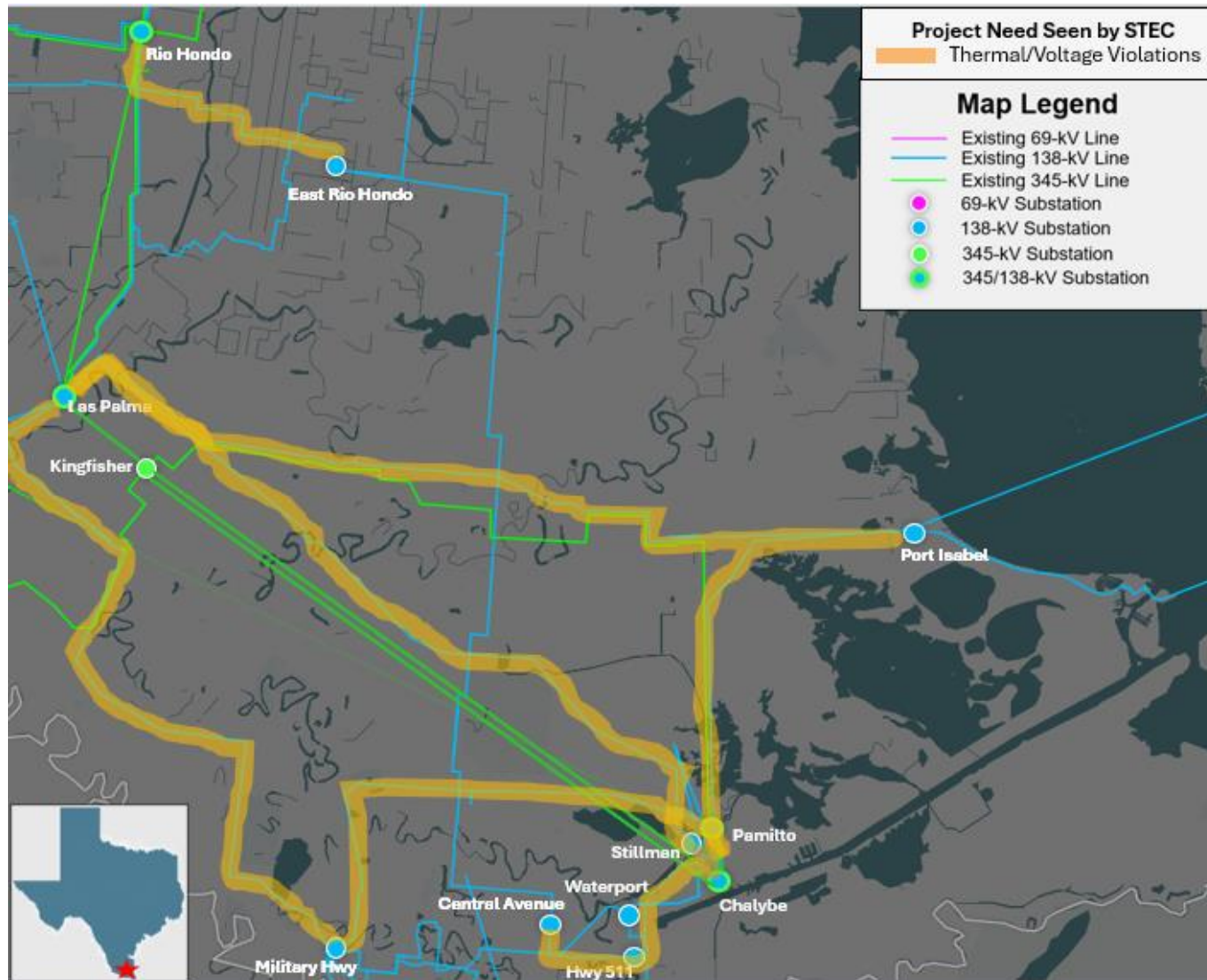
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RPG Meeting
February 2, 2026

Introduction

- STEC submitted the Southeast Brownsville Large Load Transmission System Improvements Project for Regional Planning Group (RPG) review in November 2025
 - This is a Tier 2 project with an estimated cost of \$96.35 million and will require a Certificate of Convenience and Necessity (CCN)
 - Estimated in-service date (ISD) is June 2028
 - This project is needed to address post-contingency thermal violations in the Cameron County
- STEC presented a project overview at the January 2026 RPG Meeting
 - <https://www.ercot.com/calendar/01162026-RPG-Meeting>
- This project is currently under ERCOT Independent Review (EIR)

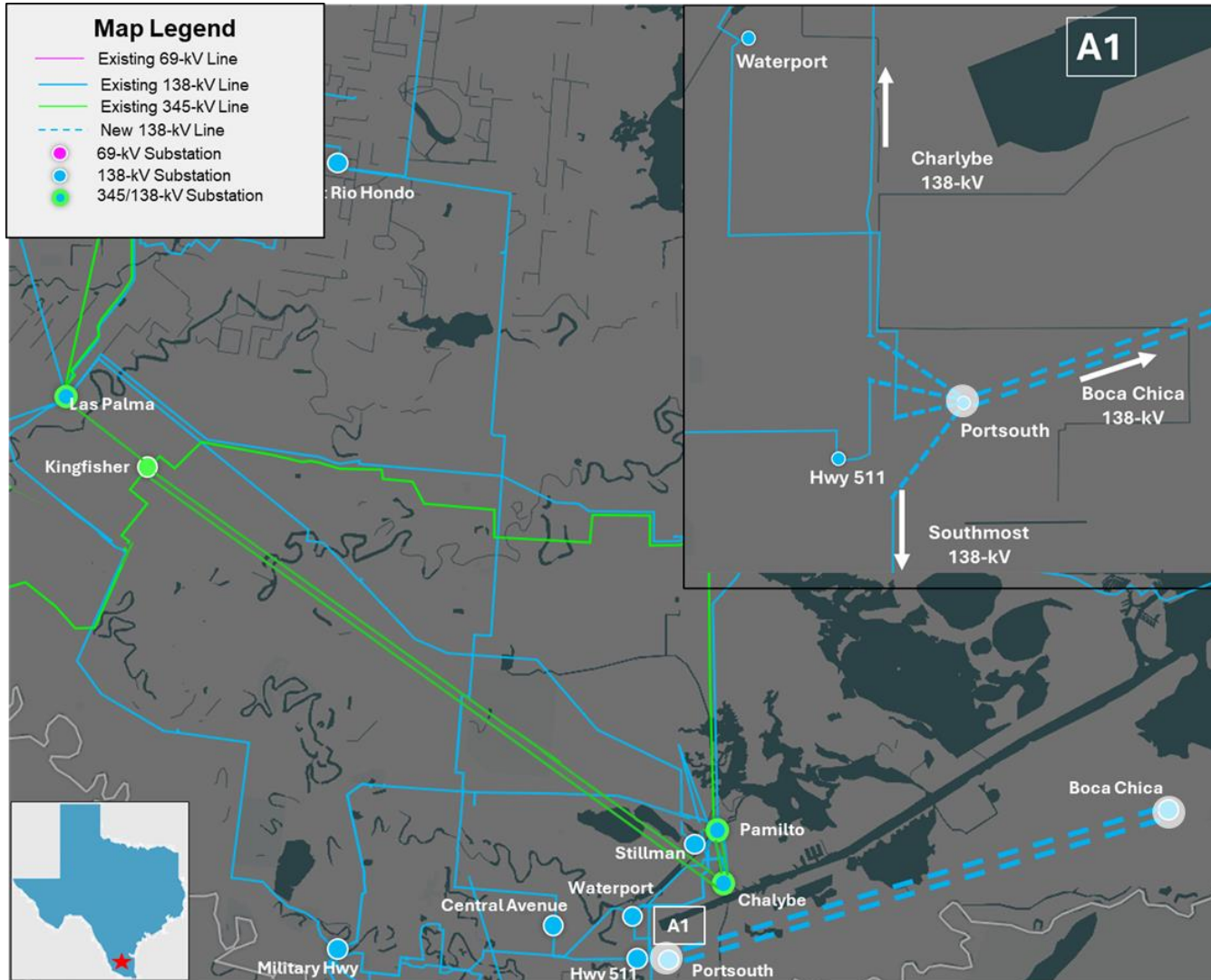
Study Area Map with Project Need Seen by STEC



Proposed Project by STEC

- Construct a new Portsouth 138-kV substation with six terminals;
- Hairpin the new Portsouth 138-kV substation onto the existing Hwy511 to South Carbide (Chalybe) 138-kV transmission line using single-circuit structures;
- Hairpin the new Portsouth 138-kV substation onto the existing Waterport to Southmost 138-kV transmission line using single-circuit structures;
- Construct a new Boca Chica 138-kV substation with six terminals as a Gas-Insulated substation;
- Construct a new Portsouth to Boca Chica 138-kV double-circuit transmission line using double-circuit structures, with normal and emergency ratings of at least 478 MVA and 485 MVA respectively, on a new right of way (ROW), approximately 19.1-mile; and
- Rebuild the existing South Carbide (Chalybe) to Portsouth to Hwy511 138-kV transmission line segments using single-circuit structures with normal and emergency ratings of at least 478 MVA and 485 MVA respectively, approximately 4.45-mile.

Map with Proposed Project by STEC



Study Assumptions – Base Case

- Study Area
 - Cameron County in South Weather Zone is considered for this study
 - Hidalgo and Willacy which are electrically close to project location
- Steady-State Base Case
 - Final 2025 Regional Transmission Planning (RTP) 2031 summer peak load case published on Market Information System (MIS) in December 2025, will be updated to construct the study base case
 - Case: 2025RTP_2031_SUM_12222025
 - Link: <https://mis.ercot.com/secure/data-products/grid/regional-planning>

Study Assumptions – Transmission

- Based on the October 2025 Transmission Project and Information Tracking (TPIT) posted on the ERCOT website, there are no new projects within the study area with in-service dates before June 2028 that are not already modeled in the case
 - TPIT Link: <https://www.ercot.com/gridinfo/planning>
- There are no transmission projects identified in the 2025 RTP in the study area that have not been approved by RPG

Study Assumptions – Generation

- No new generation that met the Planning Guide Section 6.9(1) condition with Commercial Operation Date (COD) before June 2028 in the study area at the time of the study will be added to the case if not already modeled in the RTP case based on December 2025 Generator Interconnection Status (GIS) report published in MIS in January 2026
 - Link: <https://www.ercot.com/gridinfo/resource>
- All generation will be dispatched consistent with the 2025 RTP methodology
- All recent retired/indefinitely mothballed units will be reviewed and opened (turned off), if not already reflected in the 2025 RTP Final cases

Study Assumptions – Load & Reserve

- Loads in study area
 - New confirmed loads in the study area will be added to the study base case
- Reserve
 - The reserve will be maintained consistent with the 2025 RTP

Contingencies & Criteria

- Contingencies

- NERC TPL-001-5.1 and ERCOT Planning Criteria
- (<http://www.ercot.com/mktrules/guides/planning/current>)
 - P0 (System Intact)
 - P1, P2-1, P7 (N-1 conditions)
 - P2-2, P2-3, P4, and P5 (345-kV only)
 - P3 (G-1+N-1: G-1 of San Roman Wind, Silas Ray Ctg 10, and Chalupa Wind)
 - P6-2 (X-1+N-1: X-1 of Palmito X1, Chalybe X1, and La Palma X1 345/138-kV transformers)

- Criteria

- Monitor all 60-kV and above busses, transmission lines, and transformers in the study region (excluding generator step-up transformers)
- Thermal
 - Use Rate A for normal conditions
 - Use Rate B for emergency conditions
- Voltage
 - Voltages exceeding their pre-contingency and post-contingency limits
 - Voltage deviations exceeding 8% on non-radial load buses

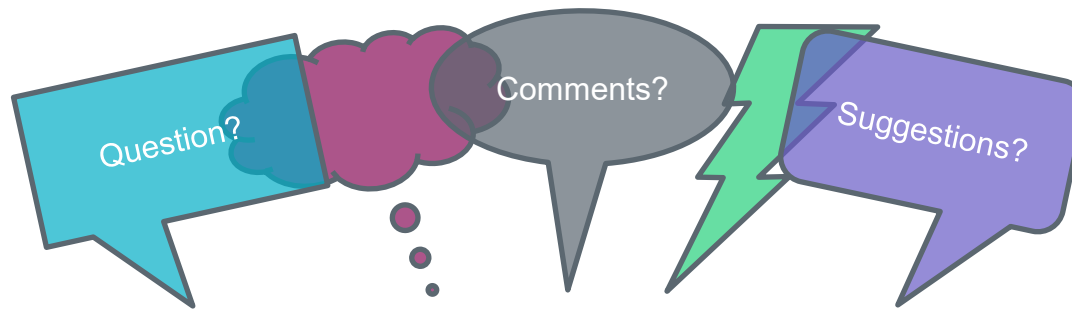
Study Procedure

- Need Analysis
 - The reliability analysis will be performed to identify the need to serve the projected area load using the study base case
- Project Evaluation
 - Project alternatives will be tested to satisfy the NERC and ERCOT reliability requirements
 - ERCOT may also perform the following studies
 - Planned maintenance outage
 - Long-Term Load-Serving Capability Assessment
 - TSP(s) will provide Cost and Feasibility Assessment
- Congestion Analysis
 - Congestion analysis may be performed based on the recommended transmission upgrades to ensure that the identified transmission upgrades do not result in new congestion within the study area

Deliverables

- Tentative Timelines
 - Status updates at the future RPG meetings
 - Final recommendation – Q2 2026

Thank you!



Stakeholder comments also welcomed through:

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