



**Rayburn Electric Cooperative Canton
Loop - ERCOT Independent Review Study
Scope**

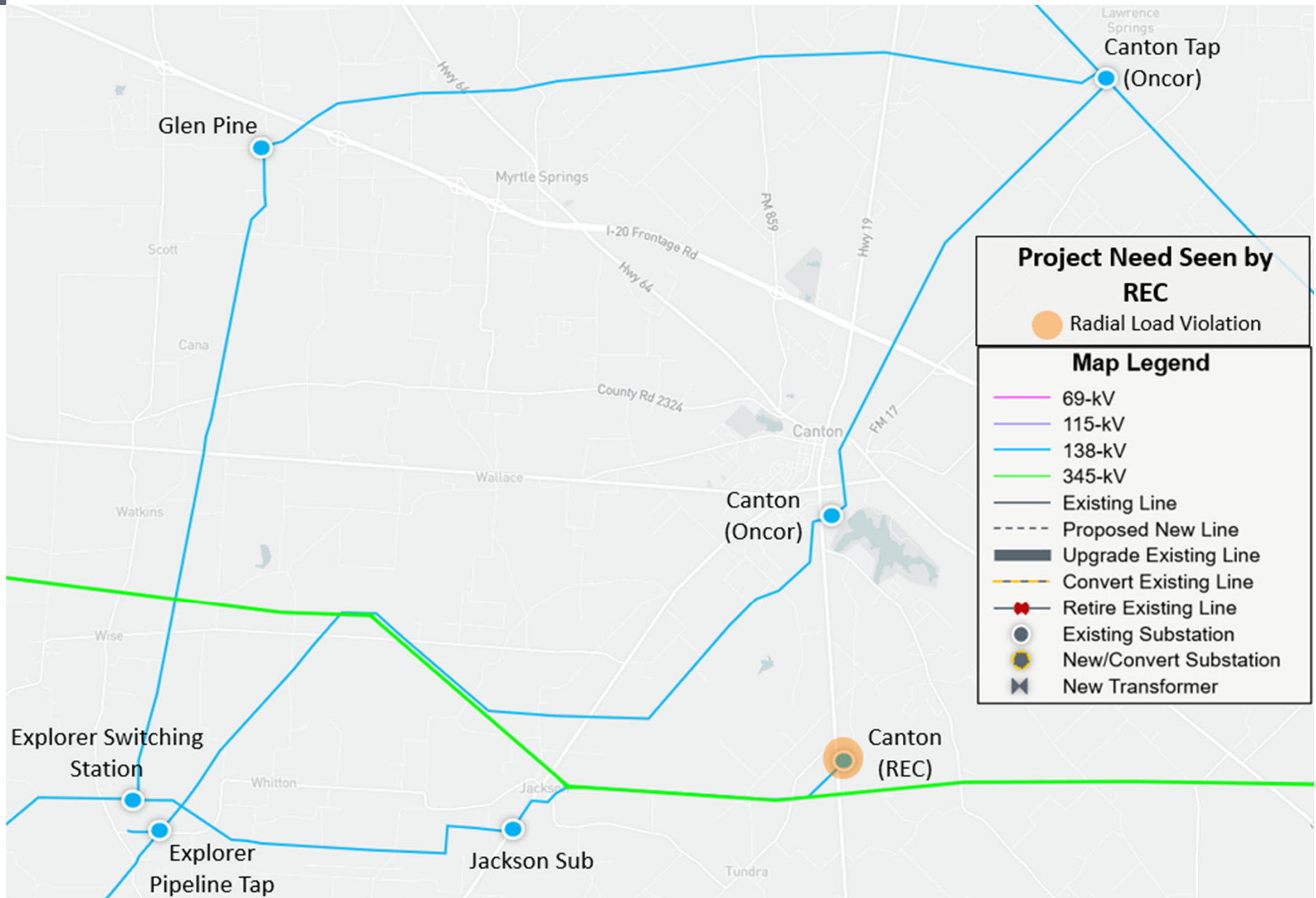
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RPG Meeting
May 14, 2024

Introduction

- Rayburn Electric Cooperative (REC) submitted the Canton Area Loop Project for Regional Planning Group (RPG) review in March 2024
 - This Tier 2 project is estimated at \$22.6 million and will require a Convenience and Necessity (CCN)
 - Estimated completion date is October 2026
 - To address REC planning criteria to limit radial load to less than 20 MW
 - Provide “Looped Service” for REC Canton Switchyard
 - This project is currently under ERCOT Independent Review (EIR)

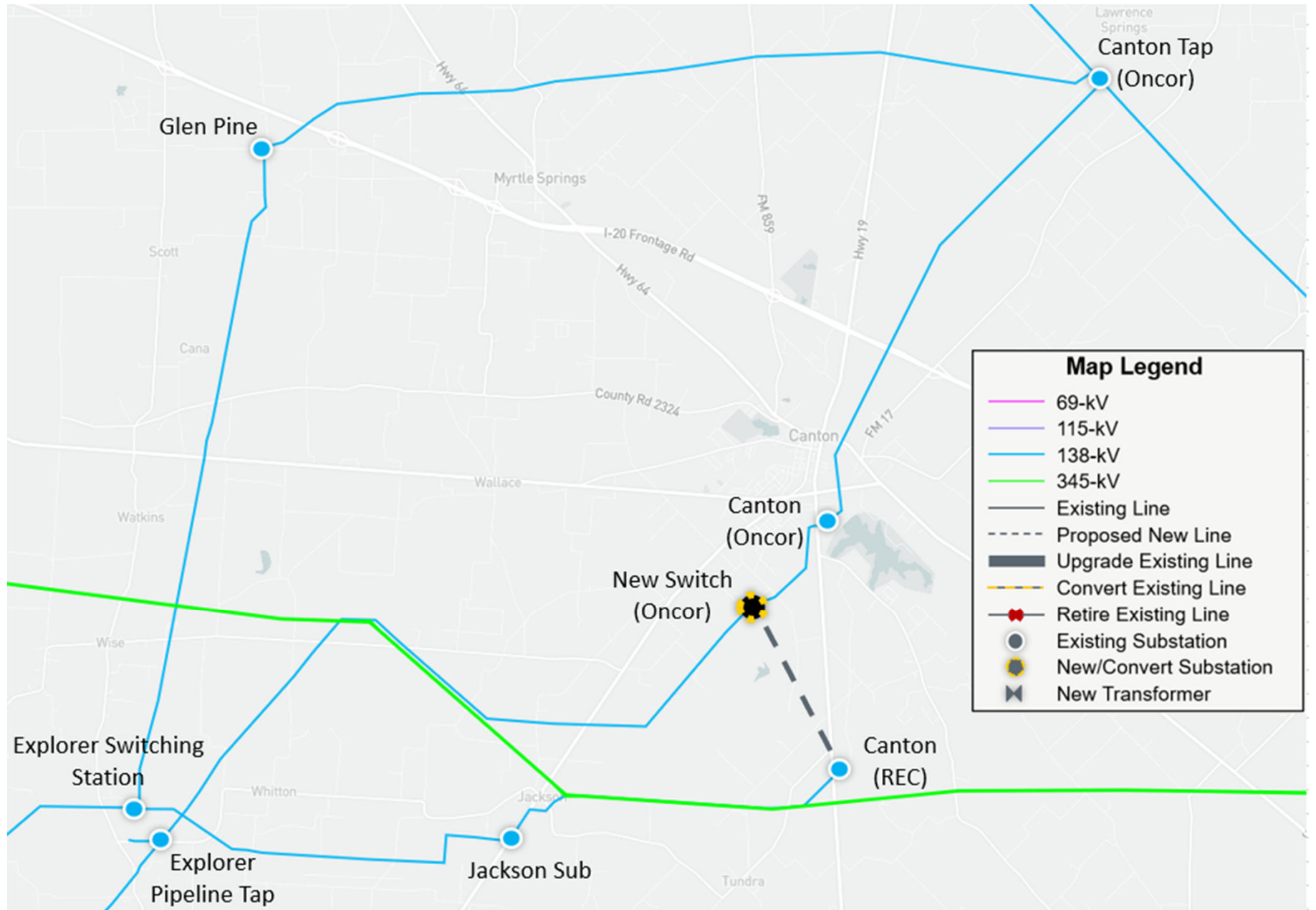
Study Area Map with Project Need Seen by REC



Project Proposed by REC

- Construct a new Oncor 138-kV Switchyard, with 3-breaker ring bus configuration, at a tap point between Canton (Oncor) and Explorer Pipeline Tap
- Upgrade Canton 138-kV (REC) to 3-breaker ring bus configuration
- Construct a new approximately 4.2-mile Canton (REC) to new Oncor Switchyard 138-kV transmission line with ratings of at least 669/752 MVA Normal/Emergency Rating

Project Proposed by REC



Study Assumptions – Base Case

- Study Area
 - East Weather Zones, focusing on transmission in the Canton area in Van Zandt, Rains, Hunt, Wood, Smith, Kaufman, and Henderson counties
- Steady-State Base Case
 - Final 2023 Regional Transmission Planning (RTP) 2026 summer peak case for East and Coast (EC) Weather Zones will be updated to construct the East and Coast (EC) study base case posted in Market Information System (MIS)
 - Case: 2023RTP_2026_SUM_EC_12222023
 - Link: <https://mis.ercot.com/secure/data-products/grid/regional-planning>

Study Assumption - Transmission

- Based on the Transmission Project and Information Tracking (TPIT) published on MIS in February 2024, Tier 2, 3, and 4 projects within the study area with in-service dates prior to October 2026 were added to the study base case if not already modeled in the case
 - TPIT Link: <https://www.ercot.com/gridinfo/planning>
 - See Appendix A for the list of transmission projects added
- Transmission projects identified in the 2023 RTP in the study area that have not been approved by RPG will be removed from the study base case
 - See Appendix B for the list transmission projects that have been backed out

Study Assumptions – Generation

- New generation that met Planning Guide Section 6.9(1) condition with Commercial Operation Date (COD) before the October 2026 in the study area at the time of the study, but not already modeled in the RTP cases, will be added to the case based on Generator Interconnection Status (GIS) report published in MIS in April 2024
 - Link: <https://www.ercot.com/gridinfo/resource>
 - See Appendix C for the list of generation projects added to the case
- All generation will be dispatched consistent with the RTP methodology
- All recent retired/indefinitely mothballed units will be reviewed and turned off, if not already reflected in the 2023 RTP Final cases

Study Assumptions – Load

- Loads in study area
 - Load level in the study area will be adjusted to reflect assumed Winter Peak conditions based on Real-Time ERCOT North-Central and East Weather Zone Data
 - Radial load into Canton (REC) will total 24.5 MW
 - Newly approved loads in the study area will be added to the study base case

Contingencies & Criteria

- Contingencies for study region
 - NERC TPL-001-5.1 and ERCOT Planning Criteria
 - Link: <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 (EHV only)
 - P3: G-1+N-1 (G-1: Trinidad Unit 6, and Glenpine Solar)
 - P6: X-1+N-1 (X-1: 345/138-kV transformers at Elkton, Tyler Grande, Forest Grove, Sulphur Springs)
- 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 Canton and the surrounding 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
 - The TSP will provide the Cost Estimate 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 2024

Thank you!



Stakeholder comments also welcomed through:

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Appendix A – Transmission Projects Added

TPIT/RPG No	Project Name	Tier	Project ISD	TSP	County(s)
75567	Create_Magness_Bus	Tier 4	10/1/2024	RYBRN	Hunt
75628	Poetry 345 kV Switch	Tier 4	10/1/2024	ONCOR	Kaufman
70550	Create_GP_Solar_POI_Bus	Tier 4	1/1/2025	RYBRN	Van Zandt
5982	Relocate existing Shamburger North - Shamburger 138 kV Line	Tier 4	5/1/2026	ONCOR	Smith

Appendix B – Transmission Backed Out

RTP Project ID	Project Name	TSP	County(s)
2023-E1	Big Brown Ses (3381) to Jewett (3391) 345-kV Double-Circuit Line Upgrade	ONCOR	Freestone
2023-E2	Canton Switch (3174) to Edgewood (3181) 138-kV Line Upgrade	ONCOR	Van Zandt

Appendix C – Generation Added

GINR	Project Name	Fuel	Project COD	Capacity (MW)	County
20INR0208	Signal Solar	SOL	3/15/2025	51.8	Hunt
21INR0368	Eliza Solar	SOL	11/01/2024	151.7	Kaufman
22INR0260	Eliza Storage	Other	09/27/2024	100.4	Kaufman