



Baytown Area Load Addition Project

High Voltage Planning
CenterPoint Energy Houston Electric

11/12/2024



Project Background

- A Customer has submitted a load addition request to CenterPoint Energy, proposing to construct a new 138 kV customer-owned substation in Baytown, Texas in Harris County.
- This is a blue hydrogen production plant.
- The new sub is scheduled to be energized by January 2028, serving a proposed new load of 500.5 MVA at a 0.95 power factor.

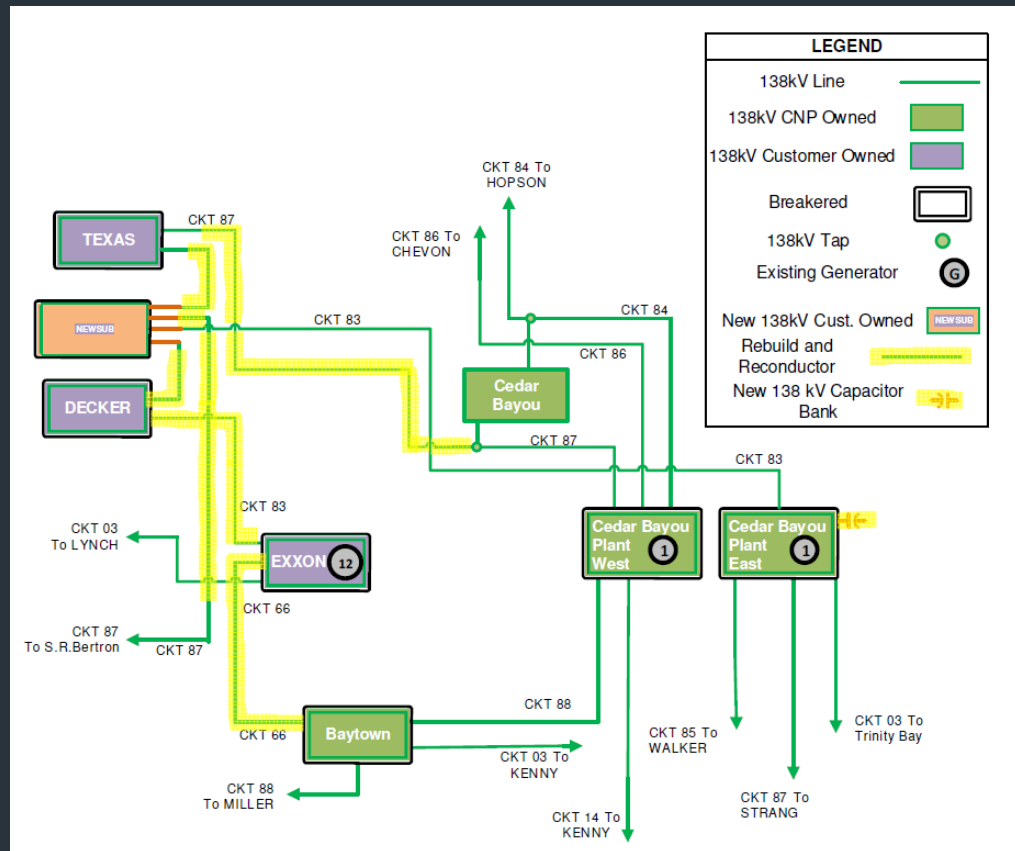
Project Background

- There are two 138 kV transmission lines on a shared common tower near the new substation. To serve the new substation and its 500.5 MVA load, CenterPoint Energy has evaluated the three most feasible interconnection options:
 - Option 1: Loop 138 kV Cedar Bayou East to DECKER circuit 83 into NEWSUB
 - Option 2: Loop 138 kV TEXAS – S.R. Bertron circuit 87 into NEWSUB
 - Option 3: Loop 138 kV Cedar Bayou East to DECKER circuit 83 and TEXAS – S.R. Bertron circuit 87 into NEWSUB

Study Analysis

- CenterPoint Energy studied three options to resolve the thermal loading and low voltage concerns seen under CEHE Planning Events P1-P7 due to the load addition.
- CenterPoint Energy recommends proceeding with Option 3 as the most cost-effective solution that provides greater reliability and maintenance flexibility and resolves potential thermal loading and voltage concerns seen under CEHE Planning Events P1-P7.

Option 3 Configuration with upgrades



Project Overview

- Loop 138 kV S.R. Bertron to TEXAS circuit 87 into NEWSUB
- Loop 138 kV Cedar Bayou East to DECKER circuit 83 into NEWSUB
- Add a 100 MVAR capacitor bank at Cedar Bayou East 138 kV substation
- Upgrade S.R. Bertron 138 kV bus to an 80 kA fault duty rating
- Normal/Emergency ratings will be upgraded to the following:
 - 600/600 MVA for 138 kV S.R. Bertron to NEWSUB to TEXAS circuit 87
 - 838/893 MVA for 138 kV TEXAS to Cedar Bayou tap circuit 87
 - 636/636 MVA for 138 kV DECKER to EXXON circuit 83
 - 838/893 MVA for 138 kV NEWSUB to DCKRMC01_83 circuit 83
 - 567/626 MVA for 138 kV DCKRMC01_83 to DECKER circuit 83
 - 838/893 MVA for 138 kV Baytown to EXXON circuit 66
 - 478/525 MVA for 138 kV Hermann to Grant circuit 08
 - 440/561 MVA for 138 kV Channelview to Lyondell tap circuit 03
- Total cost of the proposed RPG Project - \$141.649 million (\$26.476 Customer Pay)
- This cost includes the assumption of temporary construction to minimize the outages necessary to interconnect the new customer-owned NEWSUB and upgrade the CEHE transmission system.

Project Timeline

- This is a Tier 1 project that does not require a certificate of convenience and necessity (CCN) from the Public Utility Commission of Texas (PUCT) to construct.
- RPG Review: Sept 3 – 24, 2024
- ERCOT IR Complete: Q1 2025
- The proposed project is expected to be complete to meet a January 2028 load addition in-service date.

Questions?

