Oncor – Peck to Driver 138-kV Line Project
ERCOT Independent Review Study Scope

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RPG Meeting
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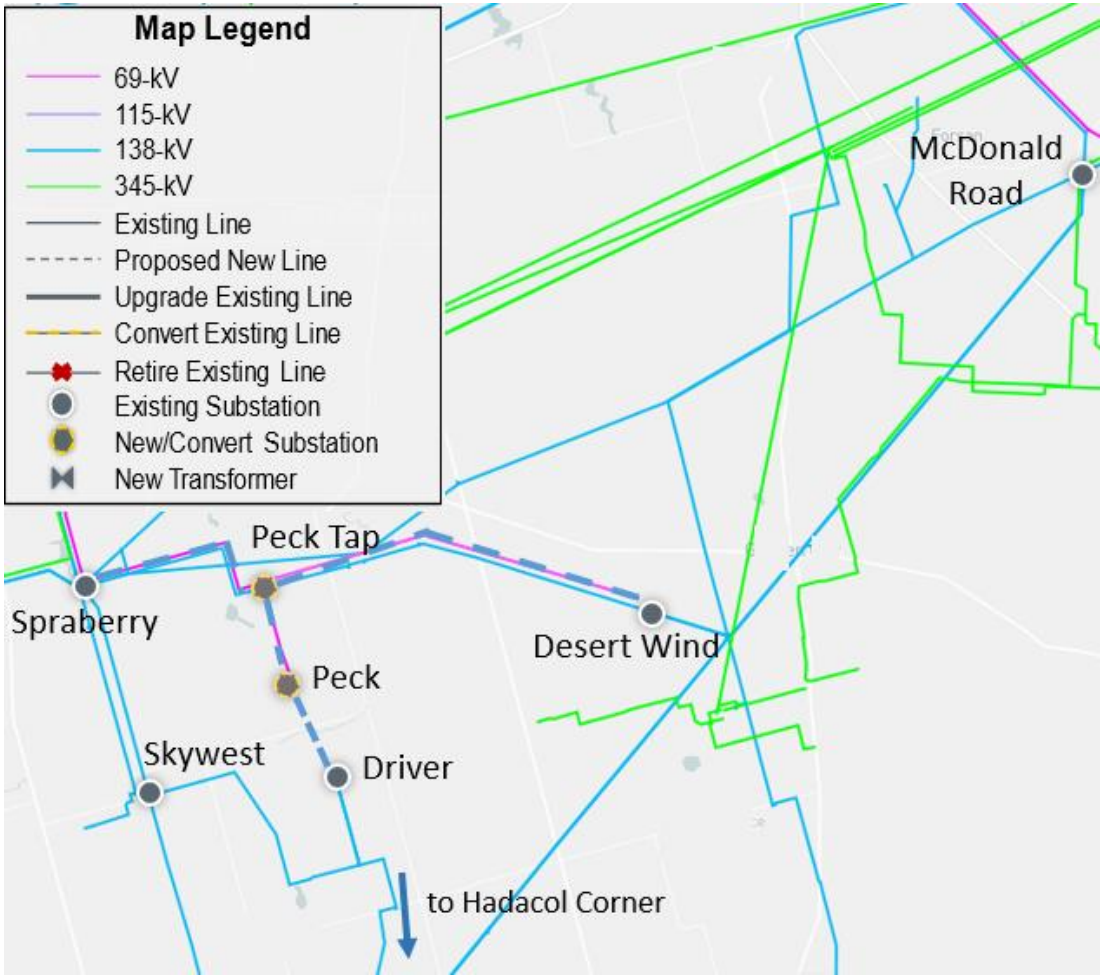
Introduction

- Oncor submitted the Peck to Driver 138-kV Line Project for Regional Planning Group (RPG) review in December 2022
  - This Tier 2 project is estimated to cost $36.2 million and will require a Certificate of Convenience and Necessity (CCN)
  - The project was submitted to address
    - Reliability need driven by new confirmed load additions primarily in the oil and gas industry under maintenance outage condition
      - ✓ Voltage violations on multiple 138-kV buses
    - Improve system operational flexibility
  - Estimated in-service date
    - Summer 2024
  - The reliability issues may appear before the project in service. If necessary, Oncor will develop and implement Constraint Management Plans (CMPs) such as line sectionalizing or mobile equipment/capacitor installation
- This project is currently under ERCOT Independent Review (EIR)

Study Area Map – Oncor Proposed Project

- Construct the new 138-kV Peck Tap Switch
- Convert the existing 25.4-mile Spraberry – Peck Tap – Desert Wind 69-kV line section to operate at 138-kV
- Construct an approximately 0.1-mile loop of the existing Spraberry – McDonald Road 138-kV line into the new Peck Tap Switch
- Convert the existing 4.0-mile Peck Tap – Peck 69-kV line to 138-kV
- Construct a new 4.1-mile Peck – Driver 138-kV line
- Reconfigure the existing Desert Wind 138-kV substation from a single-tap configuration to a double-tap configuration so the substation is served from the Peck Tap – Midkiff/McDonald Road 138-kV double-circuit line



Study Assumptions – Base Case

- Study Area
  - Far West weather zone, focusing on the transmission elements in Glasscock and surrounding counties
  - Monitor surrounding counties that are electrically close to the area
- Steady-State Base Case
  - Final 2022 Regional Transmission Plan (RTP) 2024 summer peak case for West and Far West (WFW) weather zones, posted in Market Information System (MIS), will be updated to construct the study base case :
    - Case: 2022RTP_2024_SUM_WFW_12222022
    - Link: https://mis.ercot.com/secure/data-products/grid/regional-planning?id=PG3-2787-M

Study Assumptions - Transmission

- New projects added
  - Based on the October 2022 Transmission Project and Information Tracking (TPIT) published in October 2022, a list of the transmission projects within the study area will be added to the study base case if not already modeled in the case
    - Link: https://www.ercot.com/gridinfo/planning
  - See table on the next slide for the list of transmission projects
- Projects removed
  - Transmission projects that serve as placeholder to Peck – Driver 138-kV Line Project will be removed
  - None

Study Assumptions - Transmission

- List of transmission projects to be added

TPIT No	Project Name	Tier	Project ISD	TSP	County
68793	Expanse 345/138-kV Switch	Tier 3	May-23	Oncor	Martin
70596	LCRATSC_CraneEast_CB_Sub_Upgrade	Tier 4	May-23	LCRA TSC	Upton
45670	East Stiles - Rocky Road 138-kV Line	Tier 4	Dec-23	Oncor	Reagan
45689	Pronghorn - Salt Flat Road 138-kV Line	Tier 4	Dec-23	Oncor	Midland
66571	Texaco Mabee Tap - Midland East 138-kV Line Rebuild	Tier 4	Dec-23	Oncor	Midland
68780	Triangle - Yosemite 138-kV Line	Tier 4	Dec-23	Oncor	Midland
71190	Einstein - St Lawrence 138-kV Line	Tier 4	Dec-23	Oncor	Glasscock
71193	Blue Acres - Yosemite 138-kV Line	Tier 4	Dec-23	Oncor	Midland
71196	Grey Well Draw - Pecan Grove 138-kV Line	Tier 4	Dec-23	Oncor	Midland
70305	Camp Elizabeth: Build new 69-kV station	Tier 4	Mar-24	AEP TNC	Sterling
48587	Tesoro 345/138-kV Switch	Tier 3	May-24	Oncor	Midland
51225	Driver - Hadacol Corner 138-kV Line	Tier 4	May-24	Oncor	Midland
71175	Tall City - Pecan Grove 138-kV Line	Tier 4	May-24	Oncor	Midland

Study Assumptions - Generation

- New generation that met Planning Guide Section 6.9(1) condition with Commercial Operation Date (COD) before June 2024 in the study area at the time of the study, but not already modeled in the RTP cases, will be added to the study case based on December 2022 Generator Interconnection Status (GIS) report published in January 2023
  - Link: https://www.ercot.com/mp/data-products/data-product-details?id=PG7-200-ER

GINR	Project Name	Fuel	Project COD	Capacity (MW)	County
18INR0043	Lacy Creek wind	Wind	3/9/2023	301.3	Glasscock
20INR0249	Appaloosa Run Wind	Wind	4/29/2023	175	Upton
20INR0296	Sand Bluff Wind Repower	Wind	2/22/2023	89.5	Glasscock

  - All new generation added will be dispatched consistent with the 2022 RTP methodology
  - All recent retired/indefinitely mothballed units will be reviewed and turned off, if not already reflected in the 2022RTP Final case

Study Assumptions – Load & Reserve

- Loads in the study area
  - Load additions submitted by the relevant TSP will be reviewed and updated as needed, remaining load level will be consistent with the study case

- Reserve
  - If necessary, load outside of study weather zone will be adjusted to maintain the reserve consistent with the 2022 RTP assumptions

Contingencies and Criteria

- Contingencies
  - NERC TPL-001-5 and ERCOT Planning Criteria
  - Link: https://www.ercot.com/mktrules/guides/planning/current
    - P0 (System Intact)
    - P1, P2-1, P7 (N-1 condition)
    - P2-2, P2-3, P4, and P5 (EHV only)
    - P3-1: G-1 + N-1 (G-1: Odessa Combined Cycle Train 1 outage)
    - P6-2: X-1 + N-1 (X-1: Einstein 345/138-kV transformer outage)
- Criteria
  - Monitor all 60-kV and above buses, transmission lines, and transformers in the study area (excluding generator step-up transformers)
  - Thermal
    - Use Rate A for pre-contingency conditions
    - Use Rate B for post-contingency conditions
  - Voltage
    - Voltages exceeding their pre-contingency and post-contingency limits
    - Voltage deviations exceeding 8% on non-radial load busses

Study Procedure

- Need analysis
  - The reliability analysis (including maintenance outage condition) 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 study:
    - 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 2023

Thank you!

Stakeholder comments also welcomed through:

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