



## **Far West Texas Transmission Project 2 - ERCOT Independent Review**

ERCOT Transmission Planning

Regional Planning Group  
March 27, 2018

# Overview

Oncor submitted Far West Texas Project 2 for Regional Planning Group review. This is a Tier 1 project that is estimated to cost \$ 194 million.

- Proposed for 2023 timeframe
- Addresses petroleum related load forecasts

The Culberson Loop Load	2018	2019	2020	2021	2022
Confirmed Total	580 MW	775 MW	893 MW	964 MW	1013 MW
Potential Total	670 MW	984 MW	1163 MW	1292 MW	1340 MW

- Reliability Issues
  - Voltage Collapse
  - Voltage violation
- Provide Operational Flexibility

# Study Assumptions

## Steady-State Study Case

- Constructed from latest 17RTP reliability case 17RTP\_2023\_SUM\_WFW
- Study Region will consist of Far-West and West Weather Zones
- Generator additions that meet Planning Guide Section 6.9 criteria in study region at time of study will be added to the case.
- Transmission Projects expected to be in-service within the study region by 2023 at the time of the study will be added to the case
- Apply 2023 petroleum related load forecasts
  - Culberson loop: potential load of 1339.8MW by 2023

# Contingencies and Criteria

## □ Initial Steady-State Reliability Analysis

### ○ Contingencies for Study Region

#### ▪ NERC TPL-001-4 and ERCOT Planning Criteria

([http://www.ercot.com/content/wcm/current\\_guides/53526/04\\_050115.doc](http://www.ercot.com/content/wcm/current_guides/53526/04_050115.doc)):

- P0
- P1-1, P1-2, P1-3, P1-4,
- P2-1, P2-2, P2-3 (All EHV only)
- P3-1, P3-2, P3-3, P3-4, G-1+P7 {G-1 worst case only}
- P4-1, P4-2, P4-3, P4-4, P4-5 (All EHV only)
- P5-1, P5-2, P5-3, P5-4, P5-5 (All EHV only)
- P6-2: X-1 + (P1-1, P1-2, P1-3, P1-4, P7-1) {X-1 is 345 kV Auto outages}
- P7-1

### ○ Criteria:

#### ▪ Thermal

- Monitor all transmission lines and transformers in study region (excluding GSU)
- Use Rate A for Normal Conditions
- Use Rate B for Emergency Conditions

#### ▪ Voltages

- Monitor all busses 100 kV and above
- 0.95 < 1.05 Normal
- 0.90 < 1.05 Emergency
- Voltage deviations exceeding 8% on non-radial load busses

# Study Procedure

## ❑ Scenarios to be evaluated:

1) Study Case

2) Zero Solar Scenario

- Same as study case but with 0 MW Solar dispatched in study region

3) Sensitivities based on Planning Guide 3.1.3(4):

- Generator additions with Signed Interconnection Agreements but that DO NOT meet Planning Guide Section 6.9 criteria in study region at time of study will be added to the case

# Dynamic Reliability Analysis

- ❑ Dynamic Stability Study Case
  - Constructed from latest DWG 2024SUMPEAK Flat Start case
  - Be consistent with steady state analysis assumptions
  - Criteria: NERC TPL and ERCOT Planning Guides

# Deliverables

## □ Tentative Timeline

- EIR update to RPG – April/May 2018
- EIR recommendation to TAC – May 2018
- BOD Endorsement – June 2018



Stakeholder Comments Also Welcomed Through:  
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