



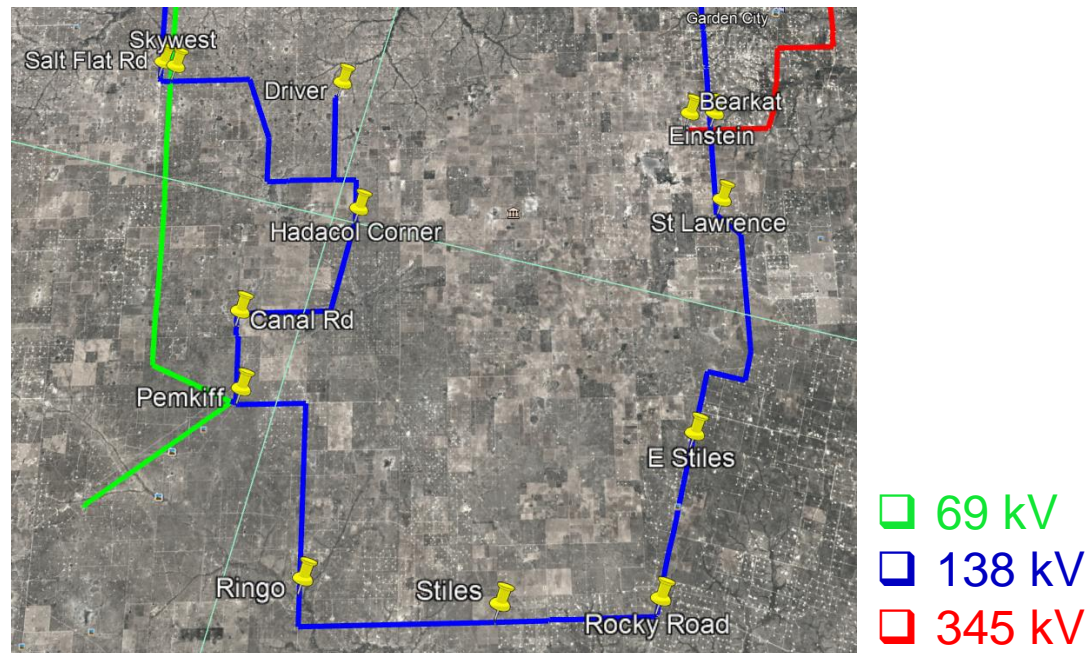
**Sharyland Driver to Einstein 138 kV Line Project –
ERCOT Independent Review Scope**

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Introduction

- ❑ **Sharyland submitted Driver to Einstein 138 kV Line Project for Regional Planning Group review in September 2018.**
 - ❑ Sharyland's proposed RPG upgrades are to address voltage violations and voltage recovery issues under NERC Category P1 conditions (outage of 138 kV Driver – Skywest) due to load growth on the Sharyland 138 kV system in Stanton.



*Exhibit 1: Study region in Sharyland ERCOT RPG submittal

Voltage Stability and Dynamic Stability Analysis

- Study Seed Case: 2024 DWG Summer Peak Flat Start
- Topology and Area Load: 2023 condition
- Study Region: West and Far West
- Criteria: NERC TPL and ERCOT Planning Guides

Steady State and Economic Analysis

- May be performed on the ERCOT recommended option

Study Base Case Development

- Update the seed case to reflect 2023 condition in the study region
- Notable transmission addition
 - Far West 2 Project in service
 - Bearkat Project in service
- New Generation projects that meet PG 6.9(1) prior to case building in the study region will be added

Dynamic Load Model

- The dynamic load model(s) provided by TSP(s) will be incorporated

Contingencies and Criteria

Planning Events: NERC TPL-001-4 and ERCOT Specific Events defined in Planning Guide Section 4

Performance 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 buses 60 kV and above in the study region
- Voltages exceeding their pre-contingency and post-contingency limits
- Voltage deviations exceeding 8% on non-radial load busses

Dynamic Performance

- Consistent with NERC TPL 001-4 and ERCOT Planning Criteria defined in PG Section 4

Timeline

RPG Review Status

- ✓ Received at ERCOT System Planning: September 17, 2018
- ✓ Submitted to RPG for comment: September 18, 2018
- ✓ End of comment period: October 9, 2018
- ✓ End of study mode: November 14, 2018
- ERCOT Independent Review: In Progress (tentative completion: March, 2019)