



**Status Update - Oncor Flat Iron – Barr  
Ranch – Pegasus South 138-kV Line  
Project  
ERCOT Independent Review**

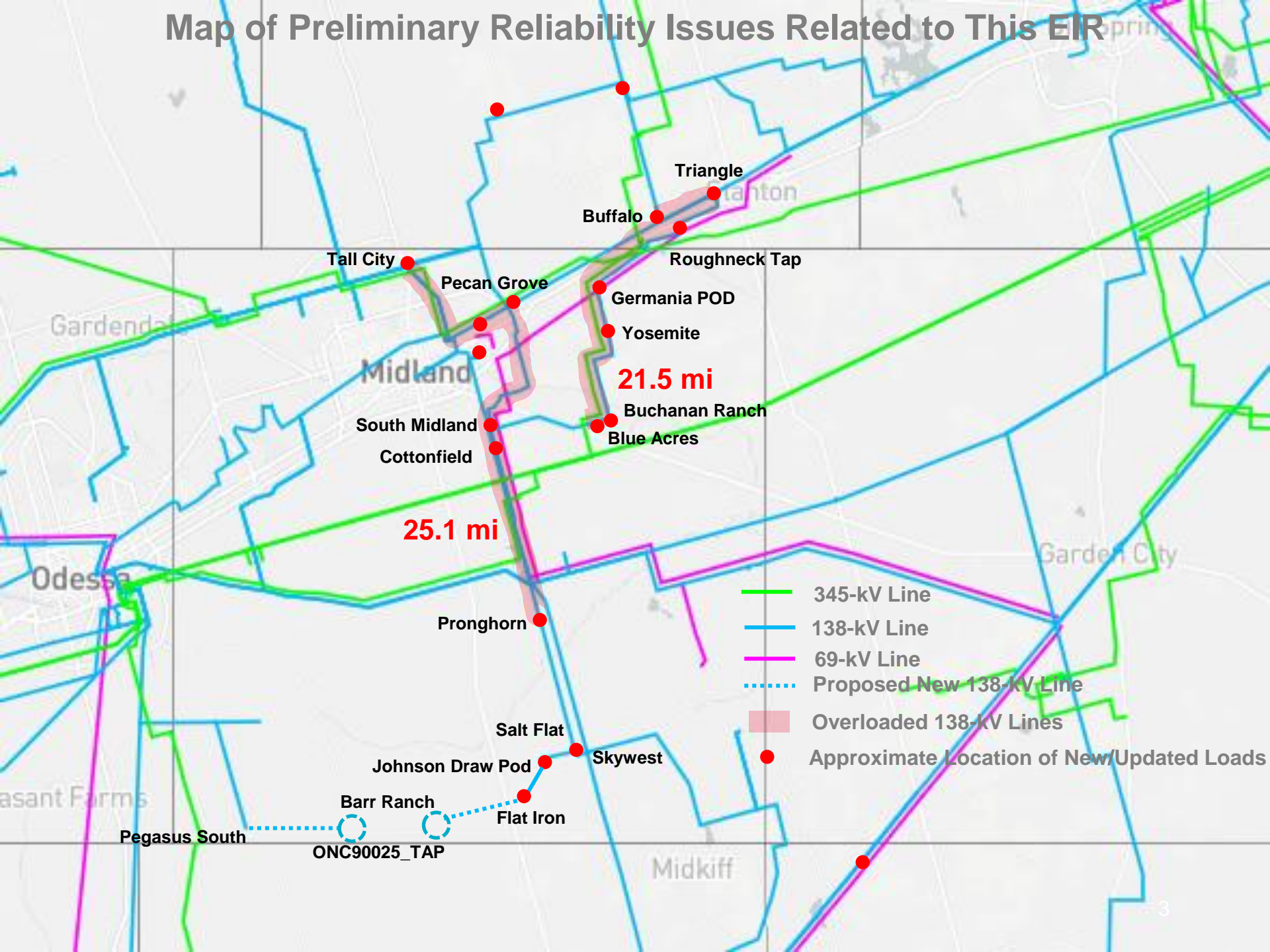
**Md Moinul Islam**

**RPG Meeting  
October 15, 2021**

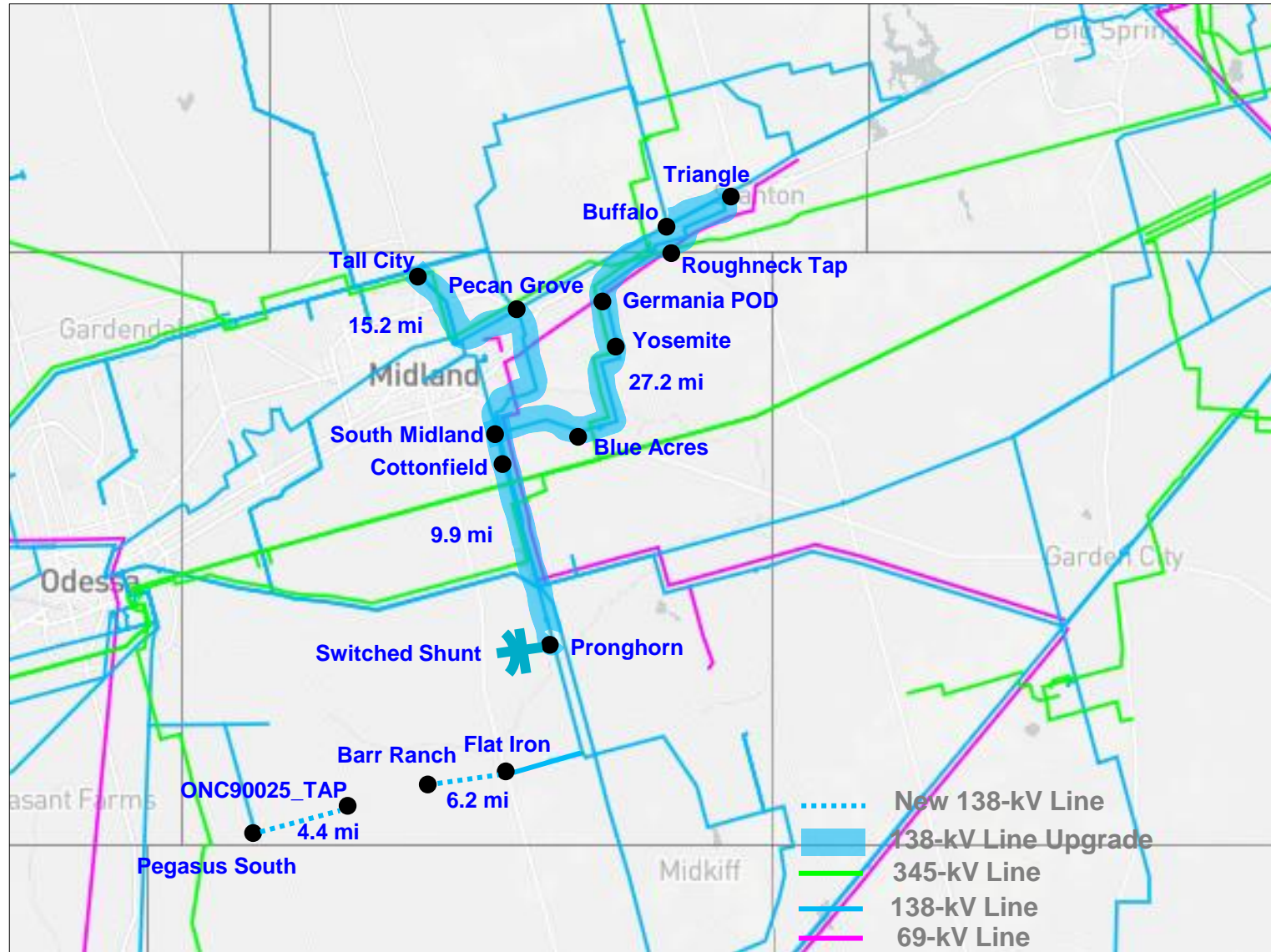
# Introduction

- Oncor submitted the Flat Iron – Barr Ranch – Pegasus South 138-kV Line Project for Regional Planning Group (RPG) review in June 2021. This is a Tier 2 project that is estimated to cost \$50.7 Million
  - ✓ Expected in-service date is Summer 2024
  - ✓ The proposed RPG project requires a Certificate of Convenience and Necessity (CCN)
  - ✓ Addresses the reliability issues primarily driven by new confirmed load additions due to the expansion of oil and gas industry and generation in the area according to the RPG submittal
- ERCOT presented the study scope at the August RPG meeting [August RPG Meeting Presentation File](#)
- ERCOT presented the reliability issues at the September RPG meeting [September RPG Meeting Presentation File](#)
- To address the reliability issues, ERCOT evaluated five transmission upgrade options. In this presentation, ERCOT will provide a status update of the ERCOT Independent Review (EIR)

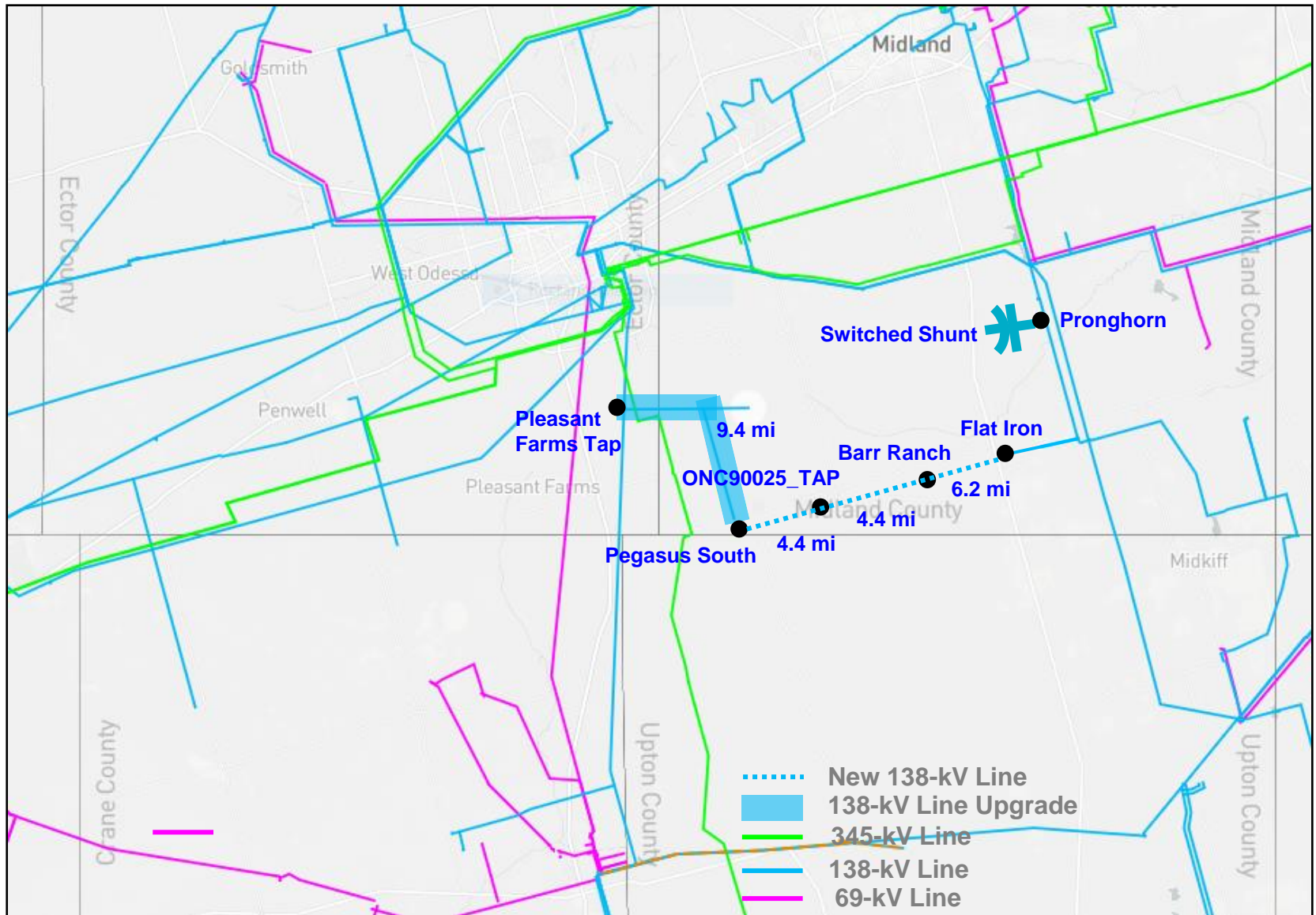
# Map of Preliminary Reliability Issues Related to This EIR



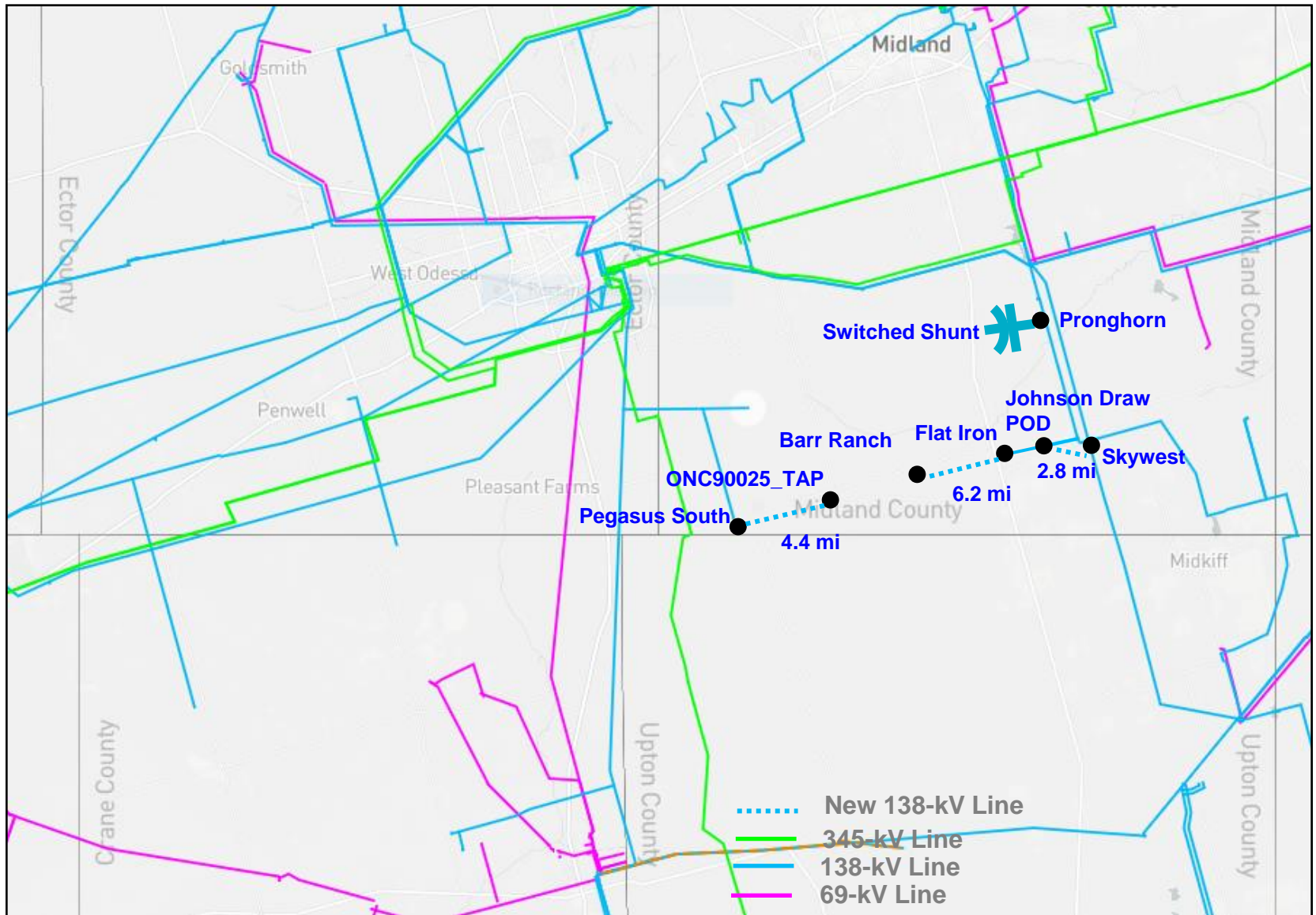
# Option 1



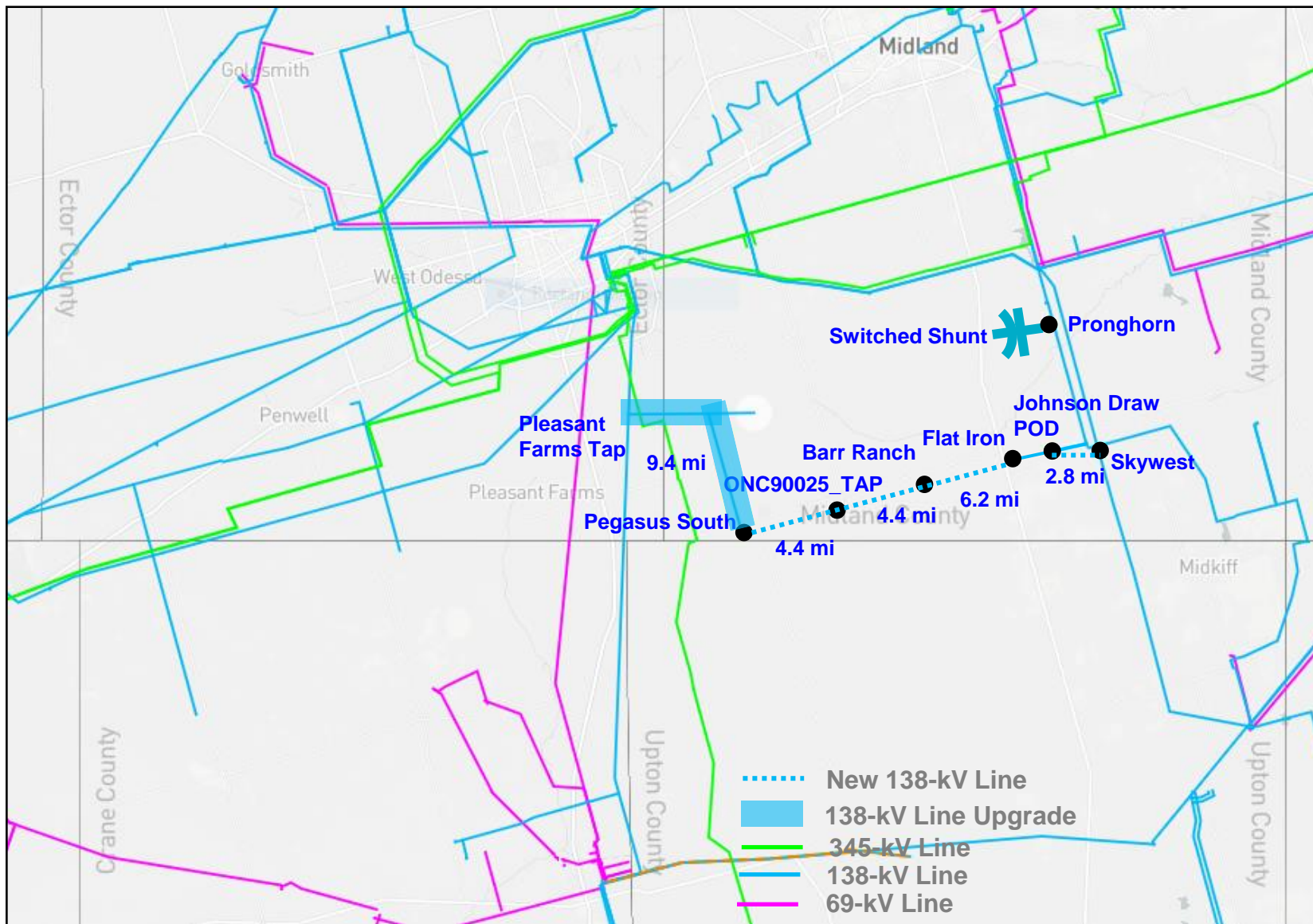
# Option 2



# Option 3



# Option 4



# Results of Transmission Upgrade Options

- All four transmission upgrade options resolved the reliability issues as identified in this EIR



# Planned Maintenance Outage Analysis

- ERCOT performed an N-1-1 analysis for selected planned maintenance outage in the area to evaluate the performance of four transmission upgrade options

Performance Comparison	Option 1	Option 2	Option 3	Option 4
Thermal Overloads (mi)	Yes (7.2 mi)	Yes (44.4 mi)	No	No
Low Voltages	Yes (47)	Yes (11)	Yes (1)	No
Unsolved Cases	Yes (1)	No	No	No

## Next Steps

- ERCOT is currently working with TSP to obtain inputs (e.g., cost estimates and feasibility)
- **Tentative schedule:**
  - Final Recommendation: Q4, 2021



Stakeholder Comments Also Welcome Through:

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# Appendix A - Transmission Upgrade Options

## • Option 1

- Upgrade the following 52.3 mi of 138-kV lines with emergency rating of 614 MVA
  - Tall City – Pecan Grove 138-kV CKT 1 (7.5 mi)
  - Pecan Grove – South Midland 138-kV CKT 1 (7.7 mi)
  - South Midland – Cottonfield Sub 138-kV CKT 1 (1 mi)
  - Cottonfield Sub – Pronghorn 138-kV CKT 1 (8.9 mi)
  - Buffalo – Triangle 138-kV CKT 1 (3.5 mi)
  - Triangle – Roughneck Tap 138-kV CKT 1 (5.3 mi)
  - Roughneck Tap – Germania POD 138-kV CKT 1 (4.2 mi)
  - Germania POD – Yosemite 138-kV CKT 1 (1.7 mi)
  - Yosemite – Blue Acres 138-kV CKT 1 (6.8 mi)
  - Blue Acres – South Midland 138-kV CKT 1 (5.7 mi)
- New 138-kV line from Barr Ranch to Flat Iron (6.2 mi)
- New 138-kV line from Pegasus South to ONC90025\_TAP (4.4 mi)
- New 55.2 Mvar 138-kV switched shunt at Pronghorn

# Appendix A - Transmission Upgrade Options

- **Option 2**

- New 138-kV line from Flat Iron to Barr Ranch to ONC90025\_TAP - Pegasus South 138-kV Line (15 mi)
- Upgrade the existing 138-kV line from Pegasus South to Pleasant Farm (9.4 mi) with emergency rating of 614 MVA
- New 55.2 Mvar 138-kV switched shunt at Pronghorn

- **Option 3**

- New 138-kV line from Skywest to Johnson Draw POD (2.8 mi)
- New 138-kV line from Barr Ranch to Flat Iron (6.2 mi)
- New 138-kV line from Pegasus South to ONC90025\_TAP (4.4 mi)
- New 55.2 Mvar 138-kV switched shunt at Pronghorn

# Appendix A - Transmission Upgrade Options

- **Option 4**

- New 138-kV line from Flat Iron to Barr Ranch to ONC90025\_TAP - Pegasus South 138-kV Line (15 mi)
- Upgrade the existing 138-kV line from Pegasus South to Pleasant Farm (9.4 mi) with emergency rating of 614 MVA
- New 138-kV line from Skywest to Johnson Draw POD (2.8 mi)
- New 55.2 Mvar 138-kV switched shunt at Pronghorn