



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

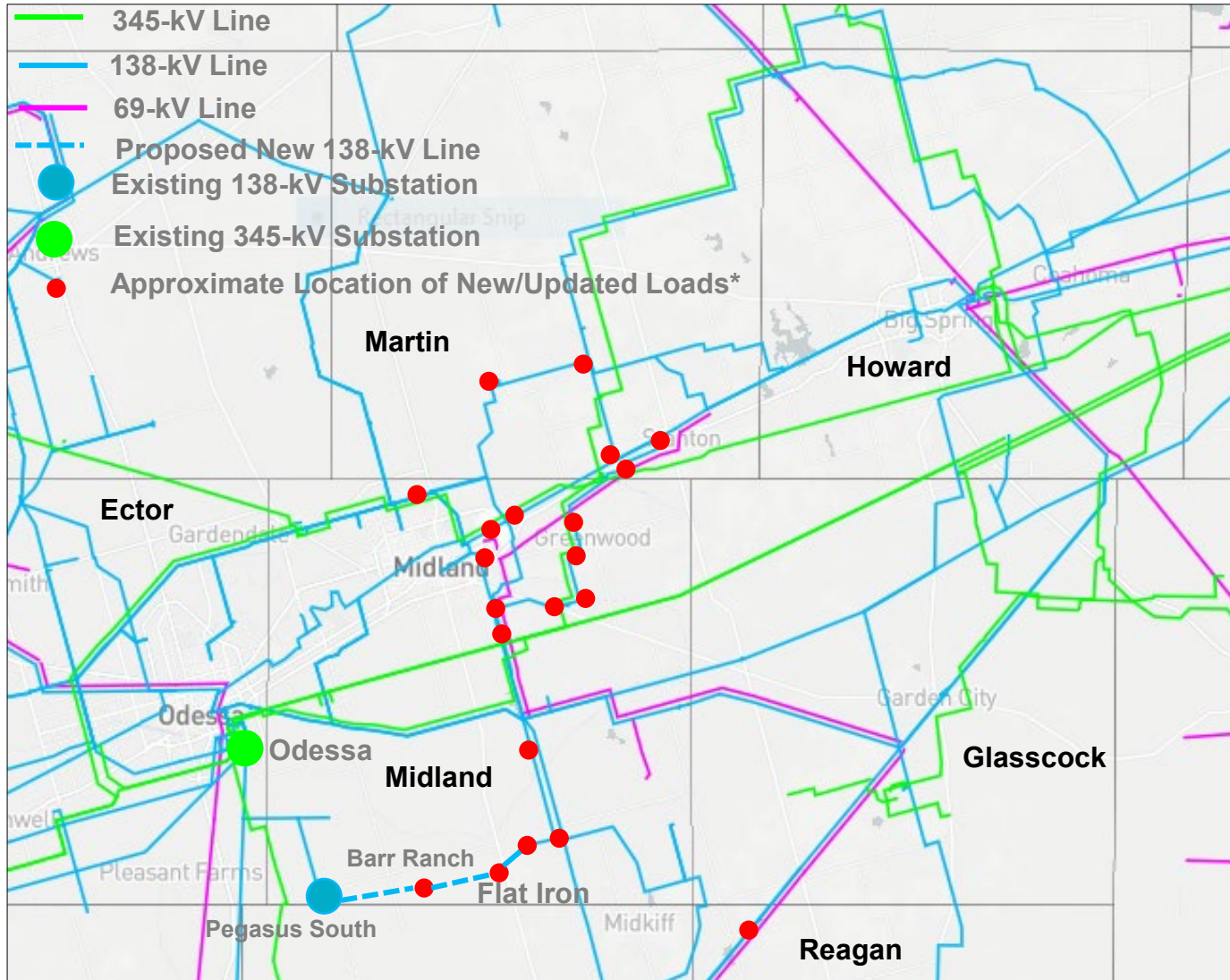
Md Moinul Islam

**RPG Meeting
September 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
[http://www.ercot.com/content/wcm/key_documents_lists/213867/Oncor - Flat Iron - Barr Ranch - Pegasus South 138-kV Line Project - August 17 RPG.pdf](http://www.ercot.com/content/wcm/key_documents_lists/213867/Oncor_-_Flat_Iron_-_Barr_Ranch_-_Pegasus_South_138-kV_Line_Project_-_August_17_RPG.pdf)
- ERCOT made additional adjustment to the load in the study base case to reflect the most recent load development in the area provided by Oncor. In this presentation, ERCOT will provide a status update of the ERCOT Independent Review (EIR)

Map: Approximate Location of New or Updated Loads



*Net 521 MW of loads were added to the study base case

Preliminary Results of Reliability Analysis

- ERCOT conducted steady-state load flow analysis according to the NERC TPL-001-4 and ERCOT Planning Criteria
- Thermal overloads of 138-kV lines and voltage violations at 138-kV buses were observed in the study area (Appendix A)

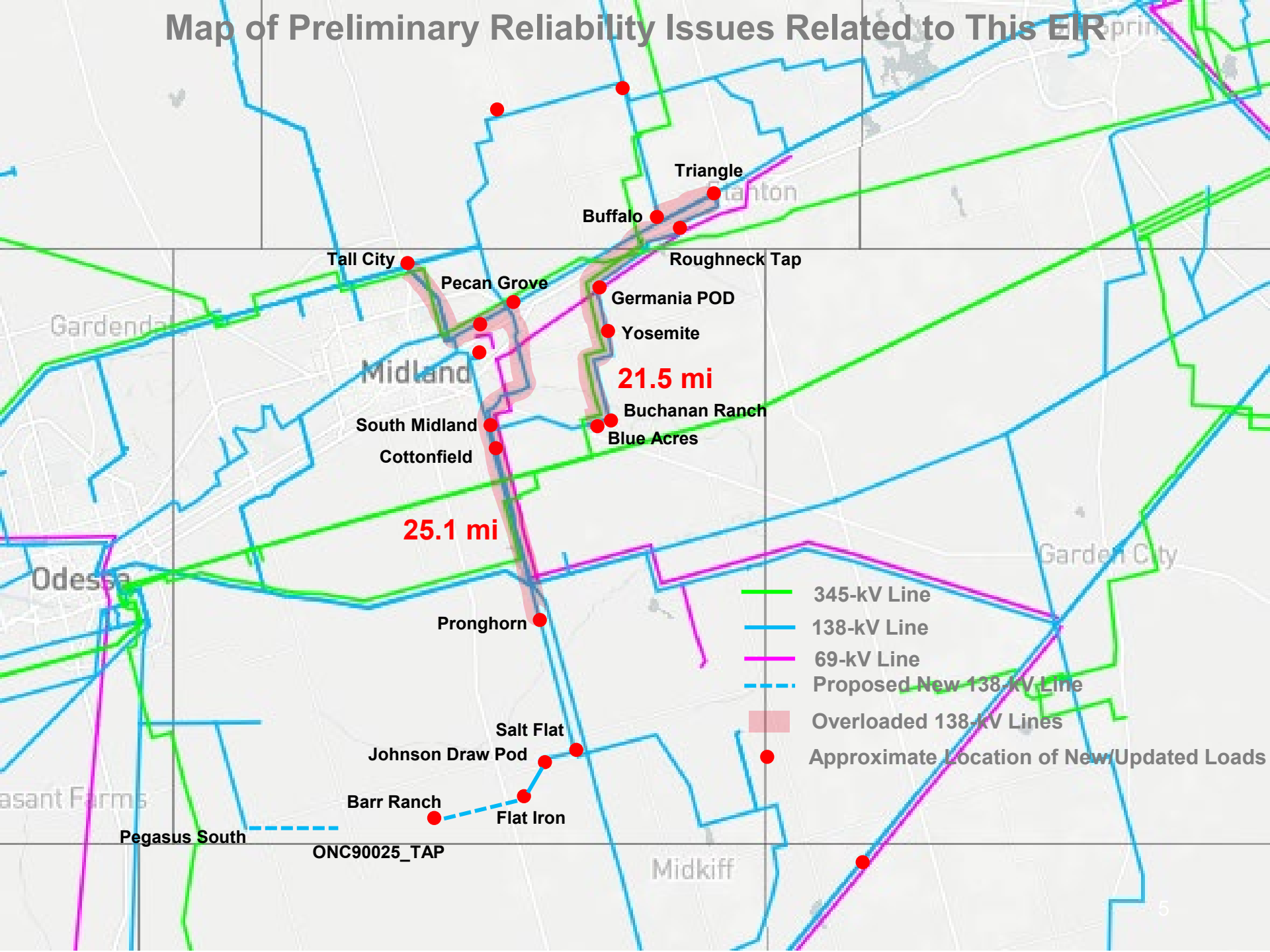
Contingency Category	Thermal Overloads (mi)*	# of Voltage Issues**	Unsolved Contingencies
P0	None	None	None
P1	38.1	14	None
P3	39.8	14	None
P6-2	46.6	14	None

*P3 and P6 contingencies cause additional 1.7 mi and 8.5 mi of thermal overloads compared to P1, respectively

**All voltage violations under P1, P3 and P6 occur at the identical 138-kV buses

- No unsolved contingencies were observed in the study area

Map of Preliminary Reliability Issues Related to This EIR



Next Steps

- ERCOT will continue to work with TSP to review the preliminary reliability issues and to develop transmission upgrade options
- Tentative Timelines
 - ✓ Status update at the October RPG meeting
 - ✓ Final recommendation: October 2021



Stakeholder Comments Also Welcome Through:

SunWook.Kang@ercot.com

Appendix A: Preliminary Reliability Issues – Thermal Overloads

Overloaded Transmission Facilities	Length (mi)	From Bus County
Tall City – Pecan Grove 138-kV CKT 1	7.5	Midland
Pecan Grove – South Midland 138-kV CKT 1	7.7	Midland
South Midland – Cottonfield Sub 138-kV CKT 1	1.0	Midland
Cottonfield Sub – Pronghorn 138-kV CKT 1	8.9	Midland
Buffalo – Triangle 138-kV CKT 1	3.5	Midland
Triangle – Roughneck Tap 138-kV CKT 1	5.3	Howard
Roughneck Tap – Germania POD 138-kV CKT 1	4.2	Howard
Germania POD – Yosemite 138-kV CKT 1	1.7	Howard
Yosemite – Blue Acres 138-kV CKT 1	6.8	Midland

Total 46.6 mi of Transmission Facilities were overloaded

Appendix A: Preliminary Reliability Issues – Low Voltages

Bus Number	Bus Name	kV	County
23861	Pecan Grove	138	Midland
23860	South Midland	138	Midland
1133	Cottonfield	138	Midland
23856	Pronghorn	138	Midland
23859	Slat Flat	138	Midland
11344	Johnson Draw POD	138	Midland
11217	Flat Iron	138	Midland
11235	Barr Ranch	138	Midland
90011	Other_126 (90011)	138	Midland
23860	Blue Acres	138	Midland
23843	Roughneck	138	Howard
11390	Germania POD	138	Howard
23858	Yosemite	138	Midland
11335	Buchanan Ranch	138	Midland