TNMP Galveston Region Project – ERCOT Independent Review Scope

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RPG Meeting
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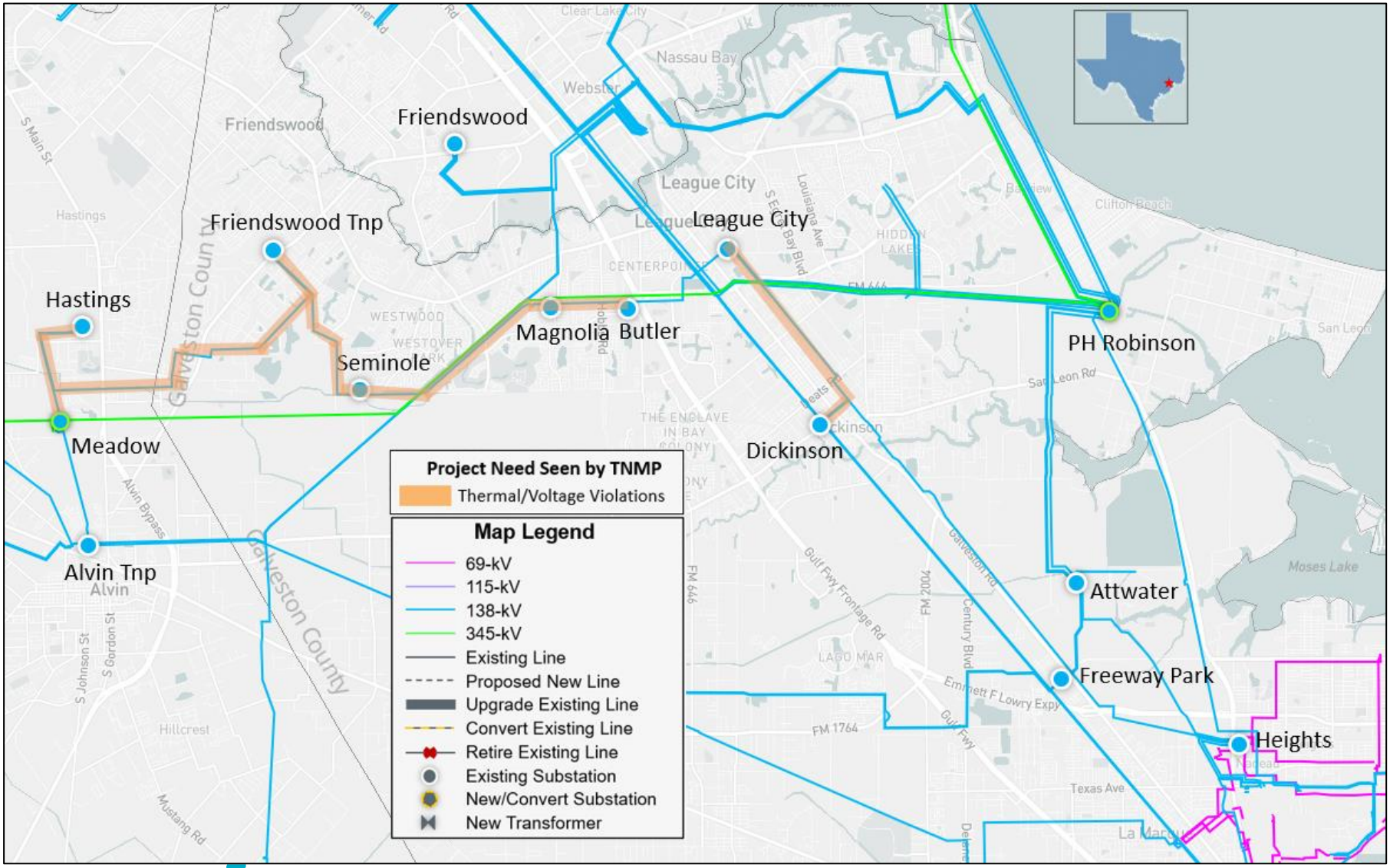
Introduction

- Texas New Mexico Power (TNMP) submitted the Galveston Region Project for Regional Planning Group (RPG) review in December 2024
  - This Tier 1 project is estimated to cost $133.73 million and will not require a Certificate of Convenience and Necessity (CCN) filing
  - Estimated in-service date is June 2028
  - Addresses the thermal overloads and voltage violations in the Galveston and nearby counties in the Coast weather zone
- This project is currently under ERCOT Independent Review (EIR)

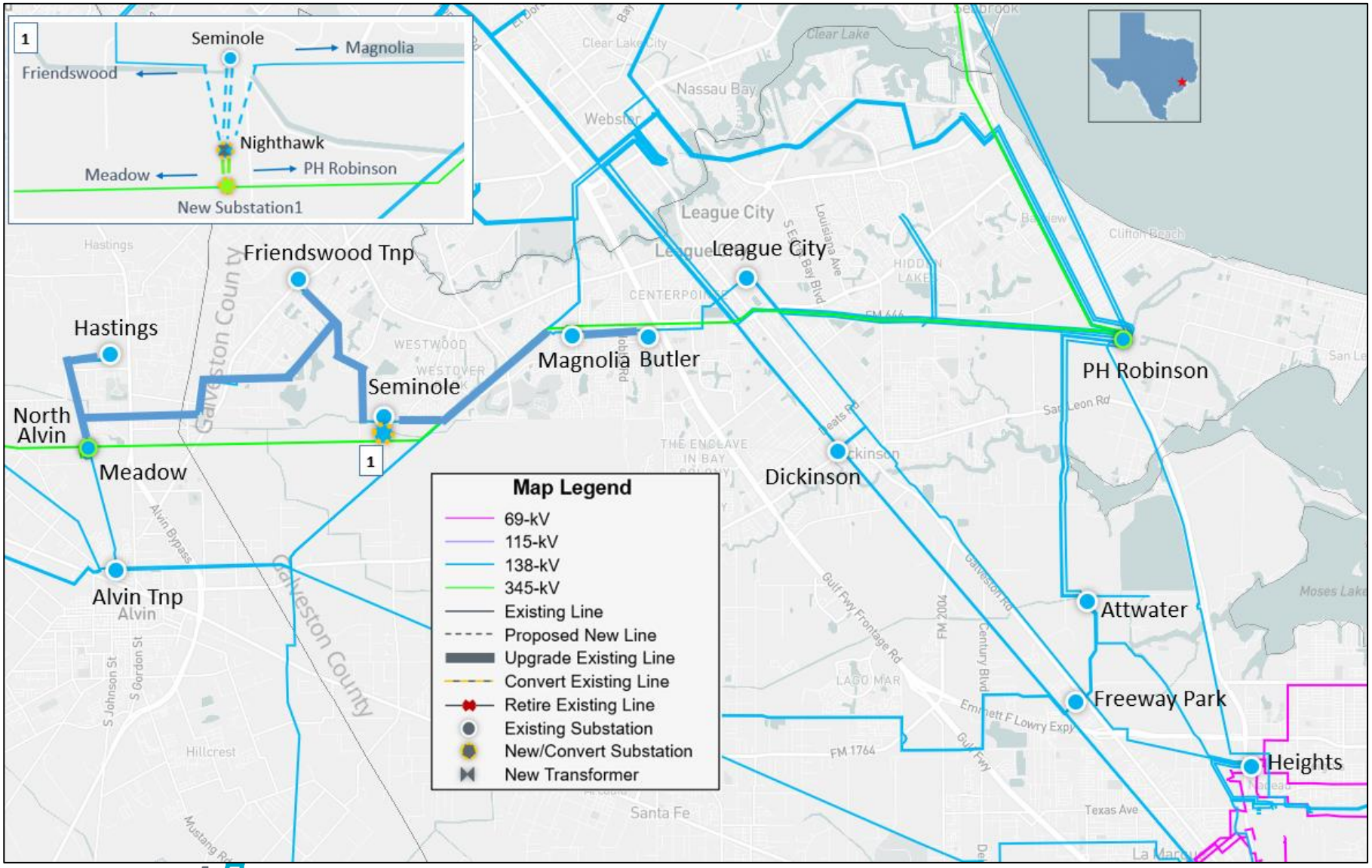
Study Area Map with Violations Seen by TNMP



Project Proposed by TNMP

- Build a new 345-kV New Substation 1 cutting into the existing PH Robinson to Meadow 345-kV line, approximately 12.49 miles from PH Robinson. The New Substation 1 will be designed with six 345-kV breakers in breaker-and-a-half configuration
- Build a new Nighthawk 345/138-kV substation, install two 345/138-kV transformers with normal and emergency ratings of at least 800 MVA and 1067 MVA for each transformer. The new Nighthawk 345/138-kV substation will be designed with four 345-kV breakers and ten 138-kV breakers in breaker-and-a-half configuration
- Add two new 345-kV tie-lines to connect the New Substation 1 and Nighthawk, approximately 0.12 miles each, on separate structures with normal and emergency rating of at least 2987 MVA for each tie-line
- Re-configure the existing Seminole to Friendswood Tnp and Seminole to Magnolia 138-kV lines to be routed through the new 138-kV Nighthawk substation
- Build a new 1.69-mile double-circuit jumper from the new 138-kV Nighthawk substation to the existing Seminole substation with normal and emergency rating of at least 717 MVA
- Re-conductor the existing Butler Road to Magnolia to Seminole (Nighthawk) to Friendswood Tnp to Hastings to North Alvin 138-kV lines with normal and emergency rating of at least 717 MVA, approximately 17.27 miles

Map of the Project Proposed by TNMP



Study Assumptions – Base Case

- Study Region
  - Coast weather zone, focusing on the transmission elements in the Galveston and Brazoria Counties
- Steady-State Base Case
  - Final 2024 Regional Transmission Planning (RTP) 2030 summer peak and maintenance outage cases, posted in Market Information System (MIS), will be updated to construct the summer peak load and planned maintenance outage study base cases
    - Summer Peak Case: 2024RTP_2030_SUM_12202024
    - Planned Maintenance Case: 2024RTP_2030_MaintenanceOutage_12202024
    - Link: https://mis.ercot.com/secure/data-products/grid/regional-planning

Study Assumptions – Transmission

- Based on the October 2024 Transmission Project and Information Tracking (TPIT) posted on ERCOT website, projects with in-service dates on or before June 2030 within the study area will be added to the study base case if not already modeled in the case
  - TPIT Link: https://www.ercot.com/gridinfo/planning
  - See appendix A for the list of transmission projects to be added
- Transmission projects identified in the 2024 RTP as placeholder projects related to this RPG project will be removed to develop the study base case
  - See appendix B for the list of transmission projects to be removed

Study Assumptions – Generation

- New generation that met Planning Guide Section 6.9(1) condition with Commercial Operation Date (COD) before June 2030 at the time of the study, but not already modeled in the RTP case, will be added to the study base case based on the January 2025 Generator Interconnection Status (GIS) report posted on the ERCOT website in February 2025
  - GIS Link: https://www.ercot.com/gridinfo/resource
  - See appendix C for the list of generation projects to be added
- All generation will be dispatched consistent with the 2024 RTP methodology
- All recent retired/indefinitely mothballed units will be reviewed and turned off, if not already reflected in the 2024 RTP Final case

Study Assumptions – Load & Reserve

- Load in study area
  - Updated load forecast in the Galveston region will be applied
- Reserve
  - Load outside of study Weather Zone(s) may be adjusted to maintain the reserve consistent with the 2024 RTP

Contingencies and Criteria

- Contingencies
  - NERC TPL-001-5.1 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 (345-kV only)
    - P3 (G-1+N-1: G-1 of Amoco Oil Combined Cycle Train 2)
    - P6-2 (X-1+N-1: X-1 of PH Robinson and Meadow 345/138-kV transformers)
- Criteria
  - Monitor all 69-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 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 studies:
    - Planned maintenance outage
    - Long-Term Load-Serving Capability Assessment
- Generation and Load Scaling Sensitivity Analyses
  - Planning Guide Section 3.1.3(4)
- Subsynchronous Resonance (SSR) Assessment
  - Nodal Protocol Section 3.22.1.3(2)
- Congestion Analysis
  - 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 future RPG meetings
  - Final recommendation – Q2 2025

Thank you!

Stakeholder comments also welcomed through:

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Appendix A – Transmission Projects

- List of transmission projects to be added to study base case

RPG/TPIT No	Project Name	Tier	Project ISD	From County
87594	Rebuild League City-Dickinson 138kV with 2-795 ACSS	Tier 4	Nov-24	TNMP
87889	Install 2x 40 MVAR Cap bank at League City	Tier 4	May-25	TNMP

Appendix B – Transmission Projects

- List of transmission projects to be removed from the study base case

RTP Project ID	Project Name	County
2024-MORC-C3	Choctaw Tap TNP (39095) to Texas City Main TNP (39140) 69-kV Line Upgrade	Galveston

Appendix C – Generation Projects

- List of generation projects to be added to study base case

GINR	Project Name	Fuel	Projected COD	Capacity (~MW)	County
22INR0525	St. Gall II Energy Storage	OTH	07/01/2025	100.2	Pecos
23INR0372	Cross Trails Storage	OTH	05/26/2025	58.3	Scurry
24INR0493	Crowned Heron BESS 2	OTH	07/31/2025	154.2	Fort Bend
24INR0631	Radian Storage SLF	OTH	04/22/2025	160.3	Brown
25INR0231	Apache Hill BESS	OTH	11/15/2026	200.9	Hood