



**Combined CPS Energy Reactive Power
Planning Project & CPS Energy Helotes
345/138-kV Switching Station and
Autotransformer Addition at Eastside
Switching Station Project – ERCOT
Independent Review Study Status
Update**

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RPG Meeting
August 26, 2025

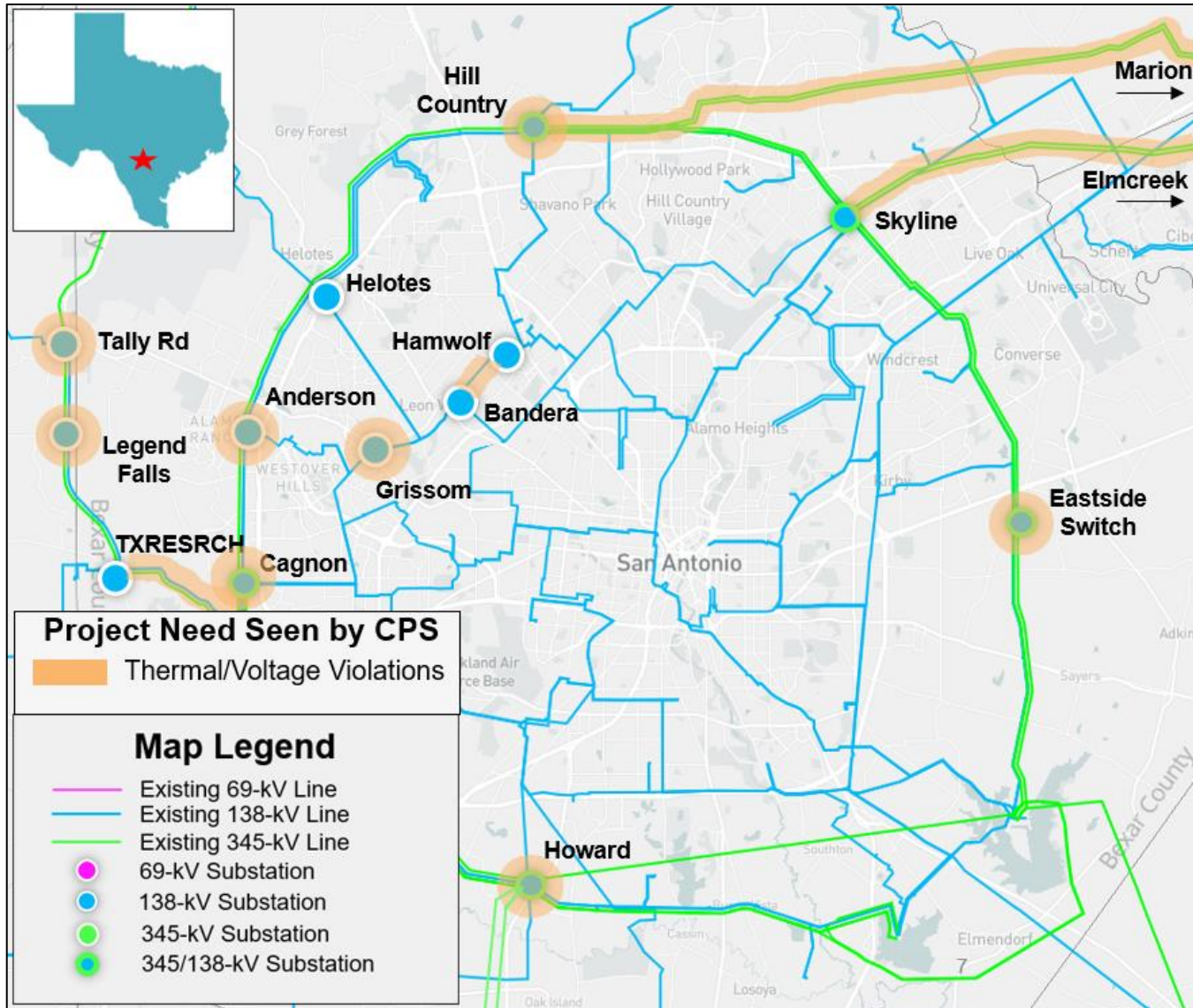
Introduction

- CPS Energy Reactive Power Planning Project (25RPG013) for Regional Planning Group (RPG) review in May 2025
 - This is a Tier 1 project with an estimated cost of \$116.50 million and will not require a Certificate of Convenience and Necessity (CCN)
 - Estimated in-service date (ISD) is December 2029
 - This project is needed to address post-contingency voltage violations in the Bexar County
- CPS Energy Helotes 345/138-kV Switching Station and Autotransformer Addition at Eastside Switching Station Project (25RPG017) for Regional Planning Group (RPG) review in May 2025
 - This is a Tier 1 project with an estimated cost of \$110.0 million and will not require a Certificate of Convenience and Necessity (CCN)
 - Estimated ISD is Summer 2028 and Summer 2029
 - This project is needed to address post-contingency thermal violations in the Bexar County

Introduction cont'd

- CPS presented a project overview and ERCOT provided a project scope at the July 2025 RPG Meeting
 - <https://www.ercot.com/calendar/07292025-RPG-Meeting>
- ERCOT is currently conducting a single ERCOT Independent Review (EIR) by combining these two projects (25RPG013 and 25RPG017)

Study Area Map with Project Needs Seen by CPS



Preliminary Results of Reliability Assessment – Updated Base Case

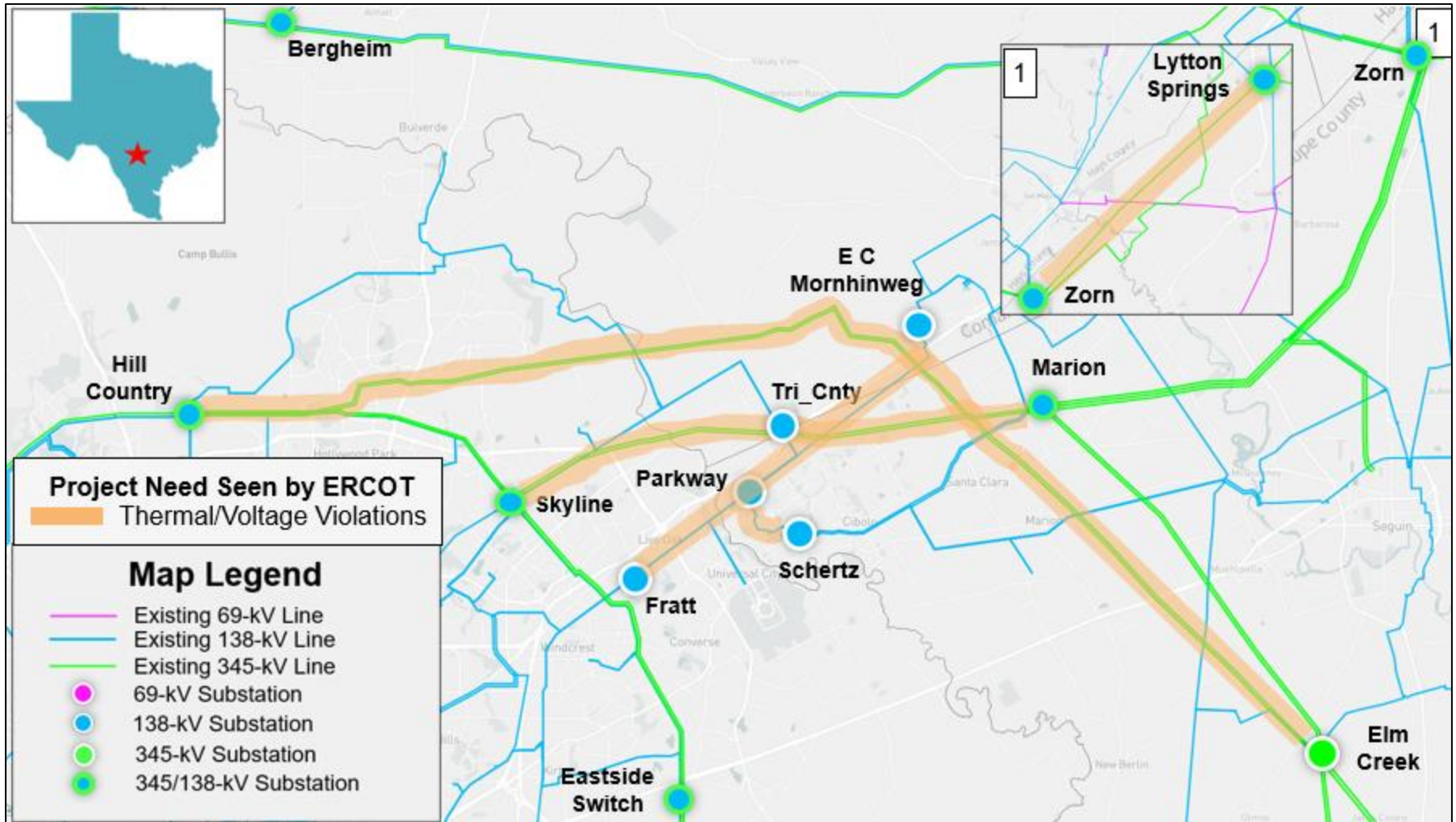
Contingency Category	Unsolved Power Flow	Voltage Violations	Thermal Overloads
P1***	None	None	1
P2, P4, P5	None	None	None
P3 (G-1+N-1)*	5	None	None
P6.2 (X-1+N-1)**	None	None	None
P7***	1	None	8

*G-1 Generators tested: Leon Creek U1, San Miguel U1, and Guadalupe Energy Center CTG 1

**X-1 Transformers tested: Cagnon X1, Howard Road X1, and Hill Country X1 345/138-kV transformers

***Violations seen in the basecase under P1 and P7 events were also seen under G-1 and X-1 events

Study Area Map with Project Needs Seen by ERCOT



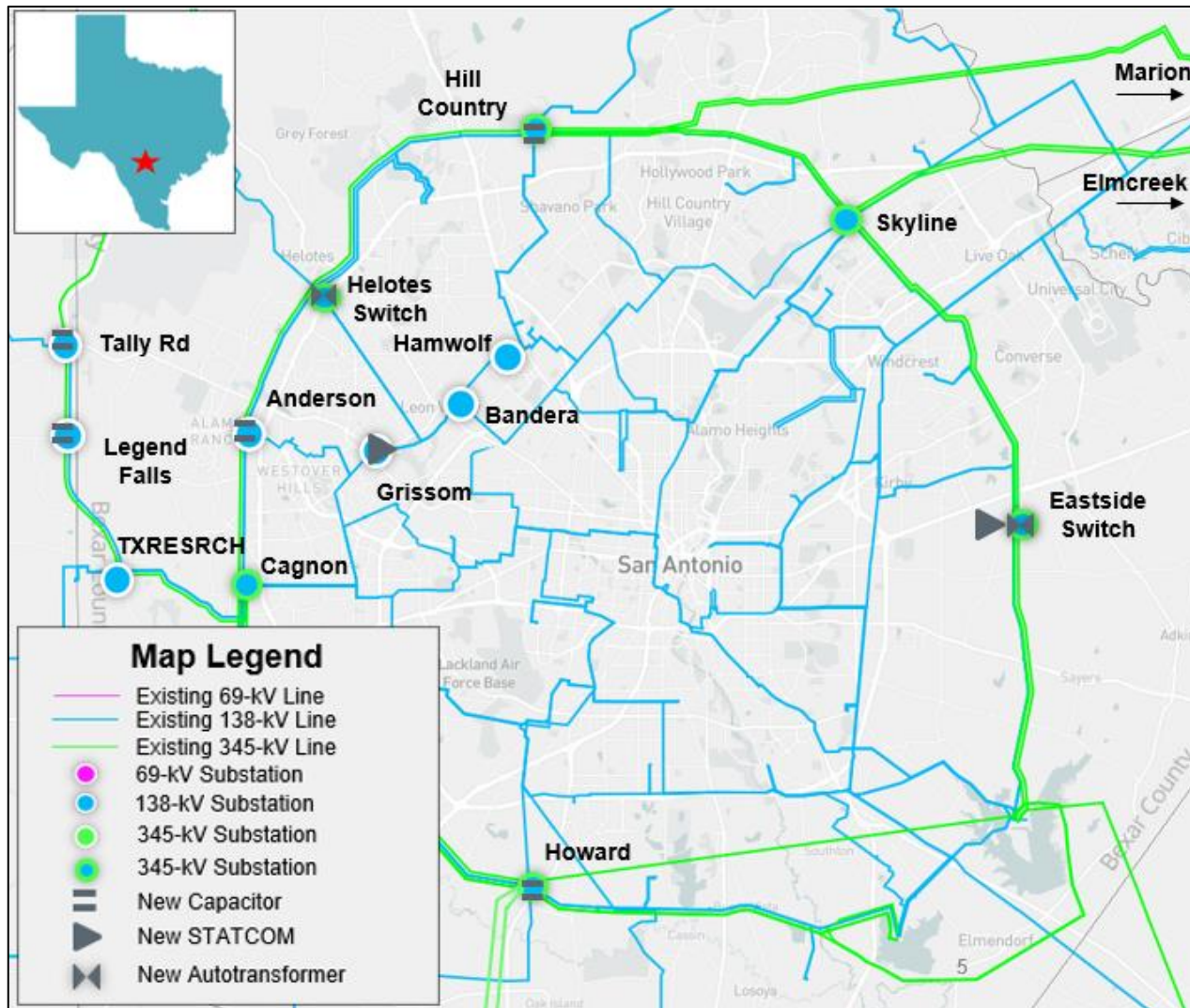
Option 1 – Combined CPS Project

- Install the following sized capacitors at the following substations:
 - 50 MVA_r, Hill Country
 - 50 MVA_r, Anderson
 - 25 MVA_r, Legend Falls
 - 50 MVA_r, Howard
 - 25 MVA_r, Talley Rd
- Install the following STATCOMs at the following substations:
 - 300 MVA_r, Grissom
 - 300 MVA_r, Eastside Switch

Option 1 – Combined CPS Project cont'd

- Construct a new Helotes 345-kV substation;
- Convert the existing Helotes 138-kV substation to a new 345/138-kV switching substation;
- Install two new 345/138-kV autotransformers at the new Helotes 345/138-kV switching substation, normal and emergency ratings of at least 600 MVA;
- Loop in the existing Hill Country to Cagnon 345-kV transmission line into the new Helotes 345-kV substation; and
- Install a new 345/138-kV autotransformer at the existing Eastside 345/138-kV substation, normal and emergency ratings of at least 600 MVA

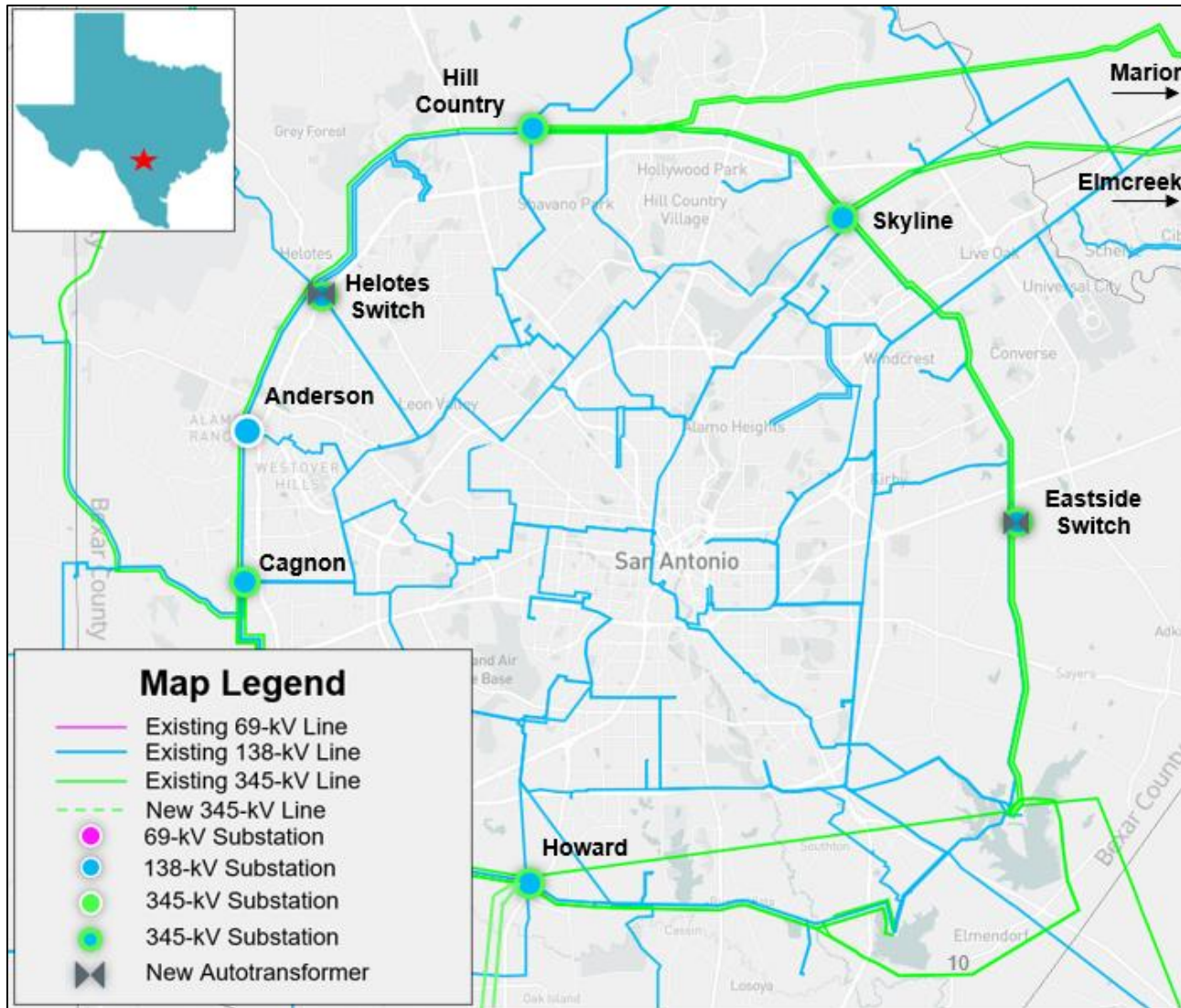
Option 1 – Combined CPS Project



Option 2 – ERCOT Option

- Construct a new Helotes 345-kV substation;
- Convert the existing Helotes 138-kV substation to a new 345/138-kV switching substation;
- Install two new 345/138-kV autotransformers at the new Helotes 345/138-kV switching substation, normal and emergency ratings of at least 600 MVA;
- Loop in the existing Hill Country to Cagnon 345-kV transmission line into the new Helotes 345-kV substation; and
- Install a new 345/138-kV autotransformer at the existing Eastside 345/138-kV substation, normal and emergency ratings of at least 600 MVA

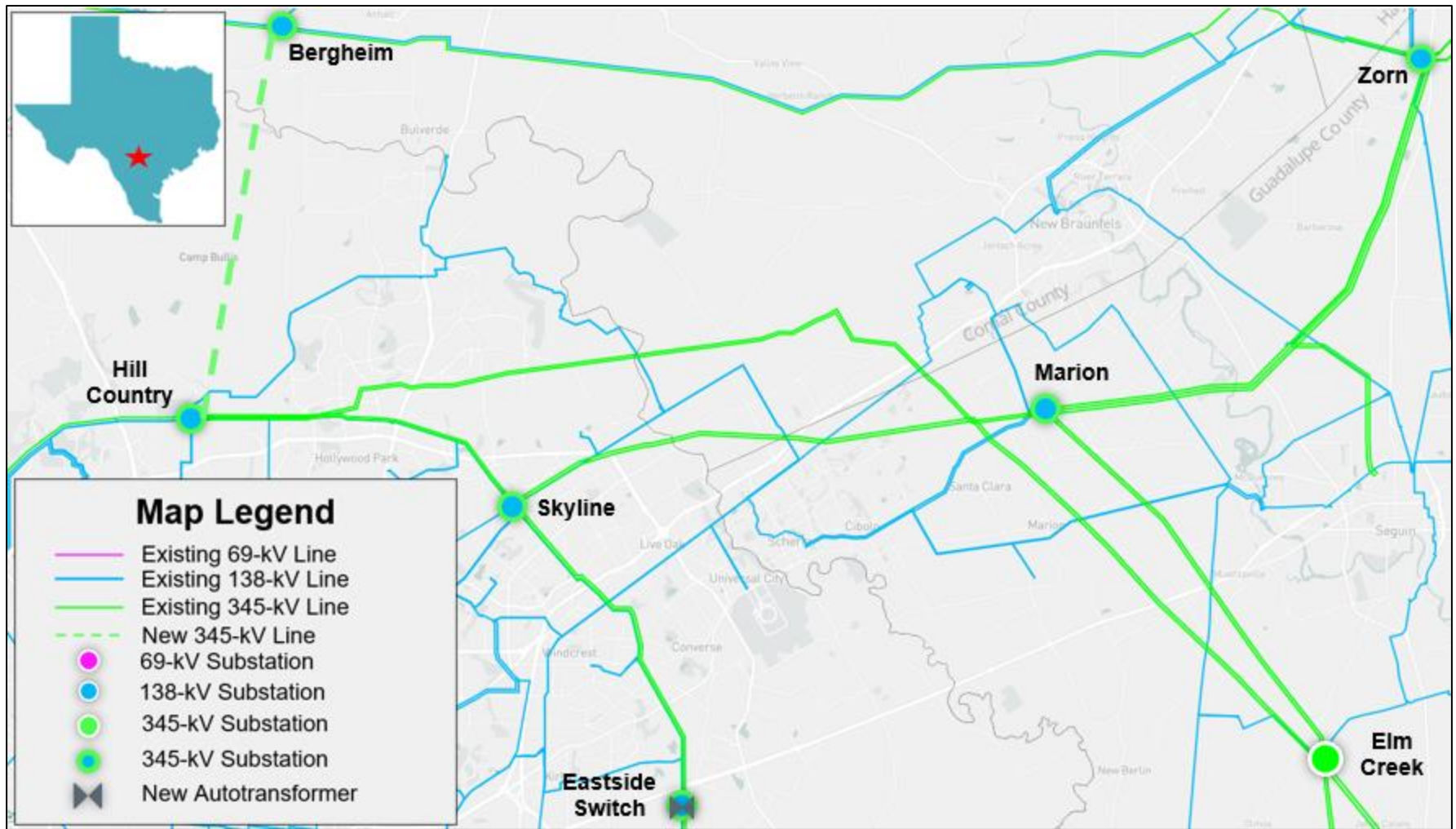
Option 2 – ERCOT Option



Option 3 – ERCOT Option

- Install a new 345/138-kV autotransformer at the existing Eastside 345/138-kV substation, normal and emergency ratings of at least 600 MVA
- Install a new Bergheim to Hill Country 345-kV double-circuit transmission line on double-circuit structures with normal and emergency ratings of at least 2000 MVA, approximately 14.4-mile

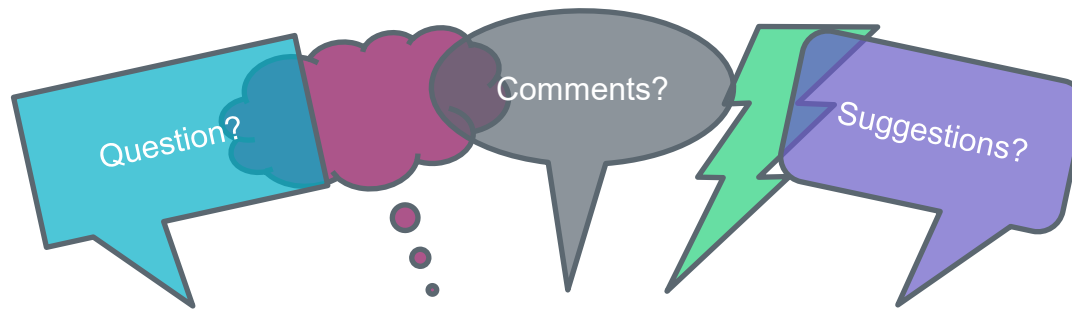
Option 3 – ERCOT Option



Next Steps and Tentative Timeline

- ERCOT will continue with project evaluation and perform the following
 - Conduct Planned Maintenance Outage Evaluation
 - Conduct Long-Term Load-Serving Capability Assessment
 - Request TSPs to conduct Cost Estimate and Feasibility Assessment
- Additional analyses to be performed on the preferred option
 - Congestion Analysis to ensure that the identified transmission upgrades do not result in new congestion within the study area
 - Generation Addition and Load Scaling Sensitivity Analyses
 - Planning Guide Section 3.1.3(4)
 - Subsynchronous Resonance (SSR) Assessment
 - Nodal Protocol Section 3.22.1.3(2)
- Tentative Timelines
 - Status updates at the future RPG meetings
 - Final recommendation – Q4 2025

Thank you!



Stakeholder comments also welcomed through:

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