STEC Ammonia Plant Load Project – ERCOT Independent Review Project Update

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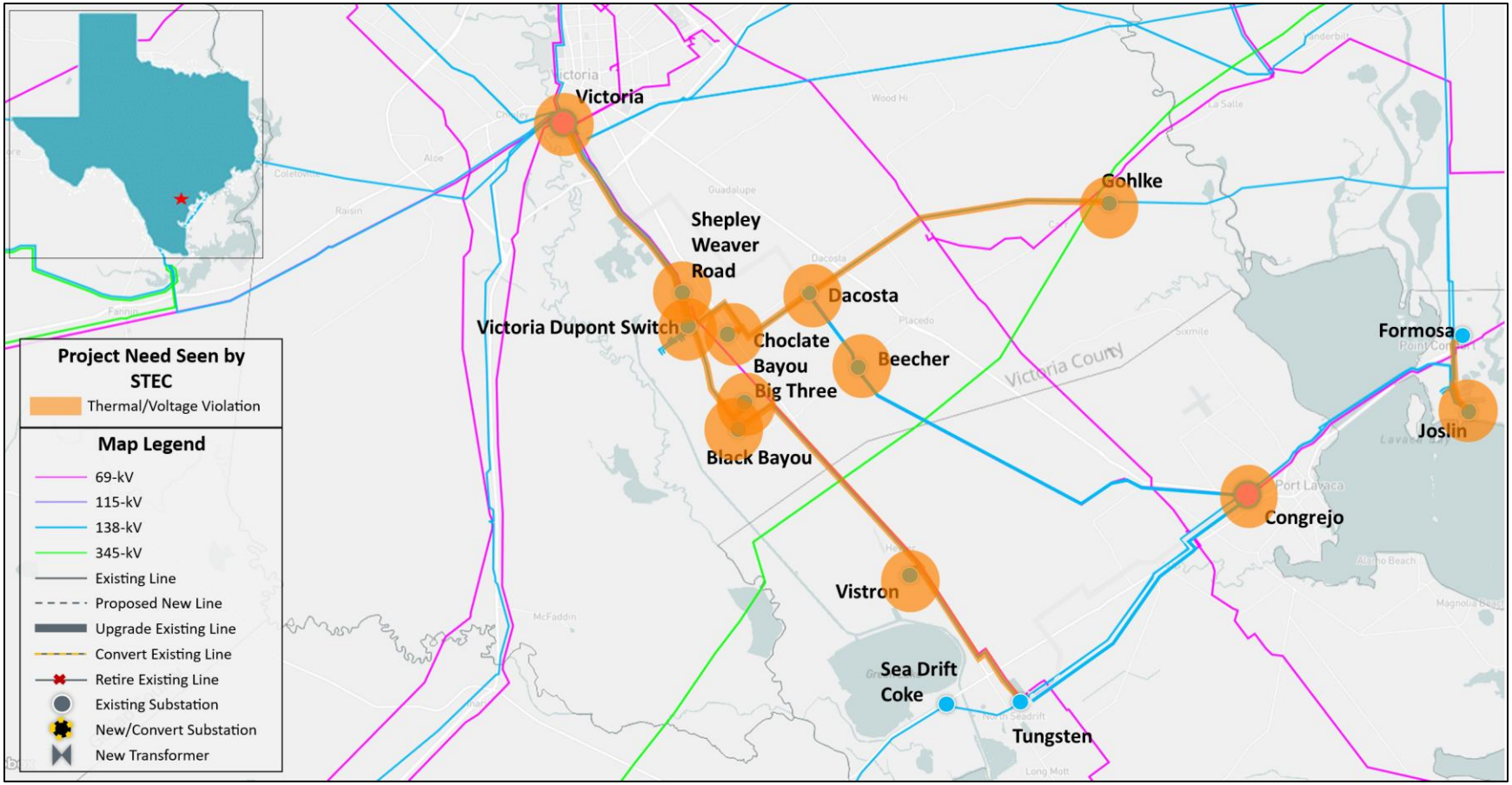
RPG Meeting
August 26, 2025

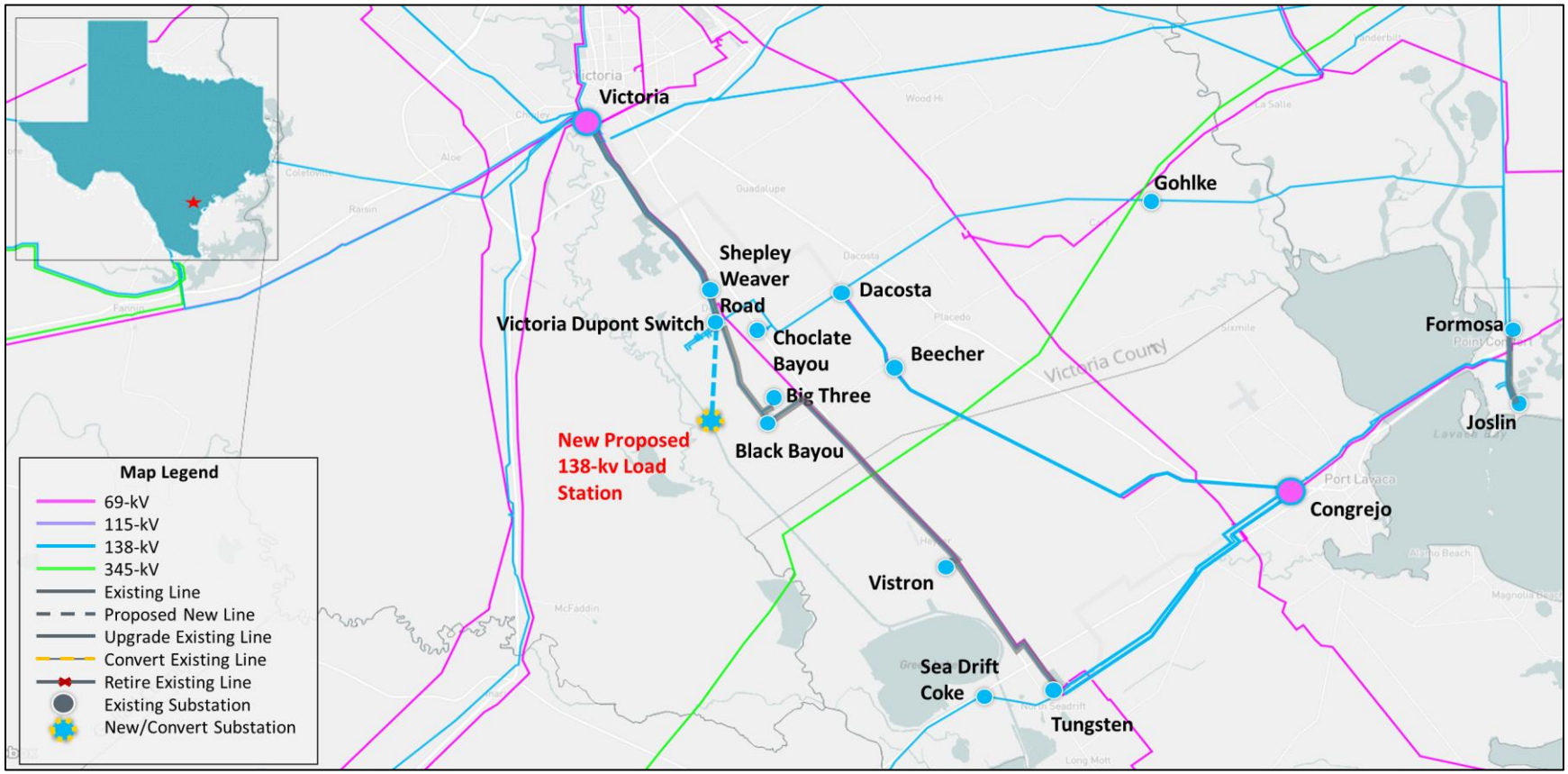
Introduction

- STEC submitted the Ammonia Plant Load Project for Regional Planning Group (RPG) review in May 2025.
  - This Tier 2 project is estimated to cost $65.47 million and will require a Certificate of Convenience and Necessity (CCN)
  - Estimated in-service date (ISD) is June 2028
  - To address the reliability concerns seen by STEC with addition of 300 MW of Ammonia Plant Load
- STEC provided an overview presentation and ERCOT provided the study scope at the June RPG Meeting
  - https://www.ercot.com/calendar/06172025-RPG-Meeting
- This project is currently under ERCOT Independent Review (EIR)

Recap – Study Area Map with the violations as seen by STEC



Recap – Project Proposed by STEC



Recap – Project Proposed by STEC

- Connect the Load to AEP's 138-kV Dupont Switching station via a 3.4-mile 138-kV transmission line, which will require both a CCN and ROW acquisition. The line will have normal and emergency ratings of at least 427 MVA and 478 MVA, respectively;
- Rebuild the existing Victoria Plant to Shepley to Dupont 138-kV transmission line with normal and emergency ratings of at least 485 MVA, approximately 7.66-mile;
- Rebuild the existing 7.66-mile 138-kV Victoria Plant to Dupont 138-kV transmission line ckt2 with normal and emergency ratings of at least 485 MVA, approximately 7.66-mile;
- Remove the double-circuit section of the Victoria Plant to Shepley and Victoria Plant to Dupont circuits (by rebuilding the two circuits on separate structures) to eliminate the NERC P7/ERCOT_1 (common tower outage) events. This would require a new ROW and CCN;
- Rebuild the existing 138-kV Formosa to Joslin 138-kV transmission line with normal and emergency ratings of at least 485 MVA, approximately 2.41-mile; and
- Rebuild the existing Tungsten to Vistron to Black Bayou to Big Three to Dupont 138-kV transmission line with normal and emergency ratings of at least 485 MVA, approximately 21.11-mile.

Study Assumptions – Load, Reserve, Transmission & Generation

- 2024 Regional Transmission Planning (RTP) 2029 summer peak case was used as the start case
- Load in study area
  - Loads in study area were updated to create the study base case
- Reserve
  - Reserve levels are consistent with the 2024 RTP
- Transmission
  - See Appendix A for a list of transmission projects added
  - See Appendix B for a list of RTP placeholder projects that were removed
- Generation
  - See Appendix C for a list of generation projects added

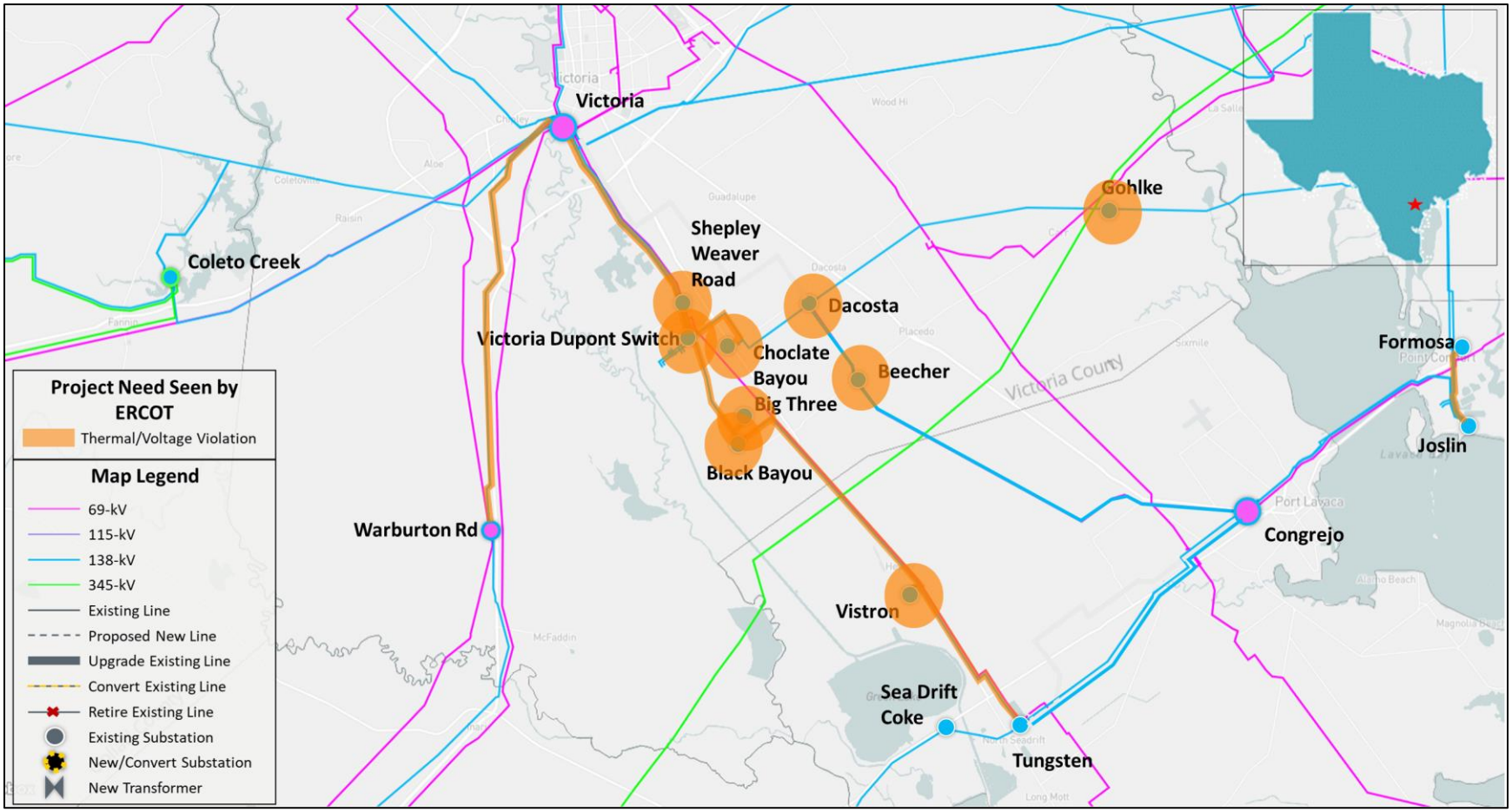
Preliminary Results of Reliability Assessment – Need Analysis

- ERCOT conducted steady-state load flow analysis for the study base case according to the NERC TPL-001-5.1 and ERCOT Planning Criteria to identify project need

Contingency Category	Voltage Violations	Thermal Violations	Unsolved Power Flow
N-0 (P0)	None	None	None
N-1 (P1, P2-1, P7)	None	None	None
G-1+N-1 (P3)*	9	10	None
X-1+N-1 (P6-2)*	None	2	None

* See Appendix D for list of G-1 generators and X-1 transformers tested

Study Area Map with Violations seen by ERCOT



Next Steps and Tentative Timelines

- ERCOT will evaluate options and provide status updates at future RPG meetings
  - Maintenance outage evaluation
  - Long-Term Load-Serving capability assessment
  - Cost estimates and feasibility assessment
- 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
- Tentative timeline
  - Final recommendation – Q4 2025

Thank you!

Stakeholder comments also welcomed through:

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Appendix A – Transmission Projects

- List of transmission projects added to study base case

RPG/TPIT No	Project Name	Tier	Project ISD	TSP
82829	New Furhman Substation	Tier 4	Apr-25	STEC
69473	Jaguar: Construct New Distribution Station	Tier 4	Jul-25	AEP TCC
76788	Upgrade Victoria-Rayburn	Tier 4	Dec-25	STEC
69489	Shepley: Construct New Distribution Station	Tier 4	Feb-26	AEP TCC
81647	Dupont Switch to Sardinia: Construct New 138 kV Line	Tier 4	Jun-26	AEP TCC
76818	Upgrade Rayburn Auto Station	Tier 4	Oct-26	STEC
87029	Chocolate Bayou to Portside Energy Center: Construct New 138 kV Line	Tier 4	Dec-26	AEP TCC
87027	Black Bayou: Construct New 138 kV Terminal	Tier 4	Apr-27	AEP TCC
76777	Rebuild Nursery-El Toro	Tier 4	May-27	STEC
81556	Haber: Construct New 345 kV Terminal	Tier 4	May-27	AEP TCC
73441	Dupont Switch to Joslin: Rebuild 138 kV Line	Tier 4	May-27	AEP TCC
81548	Haber: Construct New 345 kV Station	Tier 4	May-27	AEP TCC
81553	Haber: Construct New 345 kV Terminal	Tier 4	May-27	AEP TCC

Appendix B – Transmission Projects

- List of transmission projects removed from the study base case

TPIT No	Project Name	County
2024-CS2	Victoria (8169) to Refugio (8410) 69-kV Line Upgrades	Victoria, Refugio
2024-C12	Sam Rayburn Switchyd (5500) to Warburton Road Switching Station (5605) 69-kV Line Upgrades	Victoria
2024-C15	Victoria Area 138-kV Line Upgrades and Furhman Switch (5506) to Magruder (8194) 138-kV Line Addition	Victoria
2024-C19	Joslin (8140) to Gohlke (8141) to Dacosta (8722) 138-kV Line Upgrades	Calhoun, Victoria

Appendix C – New Generation Projects to Add

GINR	Project Name	Fuel	Projected COD	Capacity (~MW)	County
22INR0445	SPC Bloom BESS	OTH	04/07/2027	100.00	Victoria
23INR0090	Iguala Solar	SOL	12/31/2025	250.00	Victoria
23INR0342	Brizo BESS	OTH	12/01/2027	140.76	Victoria
24INR0093	Oriana Solar	SOL	08/08/2025	181.00	Victoria
24INR0109	Oriana BESS	OTH	06/15/2026	60.30	Victoria
24INR0168	Tejano Storage	OTH	07/01/2027	152.00	Victoria
24INR0283	Sunshine Solar	SOL	12/01/2026	130.72	Victoria
24INR0401	Portside Energy Center (Solar) SLF	SOL	12/31/2026	41.11	Victoria
24INR0403	Portside Energy Center (BESS) SLF	OTH	12/31/2026	41.11	Victoria
24INR0425	Two Brothers ESS	OTH	04/07/2027	152.00	Victoria
26INR0019	HyFuels Green Lake Solar	SOL	12/01/2027	346.00	Victoria
26INR0021	Crossroads Wind	WIN	06/30/2027	253.29	Victoria
26INR0028	HyFuels Calhoun Solar	SOL	10/01/2026	301.82	Victoria
26INR0046	Paluxy Solar	SOL	06/30/2027	1,029.06	Victoria
26INR0047	Paluxy Storage	OTH	06/30/2027	511.68	Victoria
26INR0505	Goldhill Energy Storage	OTH	09/30/2026	200.58	Victoria
26INR0559	Georgia-Lynn BESS	OTH	02/20/2028	108.70	Victoria
27INR0169	Marcos Solar	SOL	08/15/2027	115.88	Victoria
27INR0170	Marcos BESS	OTH	08/15/2027	115.88	Victoria
27INR0224	Leopard BESS	OTH	07/02/2027	264.24	Victoria
27INR0382	Calico BESS	OTH	03/01/2027	204.90	Victoria

Appendix D – G-1 Generators and X-1 Transformers

G-1 Generators	X-1 Transformers
Victoria Port Units	Coleto Creek – Ckt 1 345/138-kV
Formosa Units	