



Oncor and LCRA Transmission Services Corporation (LCRA TSC) Muscovy and Voss Lake 345/138-kV Project (25RPG009) Phase 2 – ERCOT Independent Review (EIR) Status Update

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Regional Planning Group (RPG) Meeting
July 21, 2026

Introduction

Oncor and LCRA Transmission Services Corporation (LCRA TSC) submitted the Muscovy and Voss Lake Project (25RPG009) for Regional Planning Group (RPG) review in April 2025

- This is a Tier 1 project with an estimated cost of approximately \$381.83 million and will require a Convenience and Necessity (CCN)
- This project is needed to address post-contingency and thermal overloads and voltage violations in the Williamson and Milam counties
- 2024 RTP Observed similar violations and proposed 2024-SC28 and 2024-SC29

ERCOT Endorsed Phase 1 of this project in June 2026, which addressed the violations in Bell, Williamson, Milam and Robertson counties

- Oncor presented the project overview and ERCOT provided the EIR scope at the [May 2025 RPG Meeting](#)
- ERCOT provided Phase 1 EIR status updates at previous RPG meetings
 - [June 2025 RPG Meeting](#)
 - [July 2025 RPG Meeting](#)
 - [October 2025 RPG Meeting](#)
 - [January 2026 RPG Meeting](#)
 - [March 2026 RPG Meeting](#)

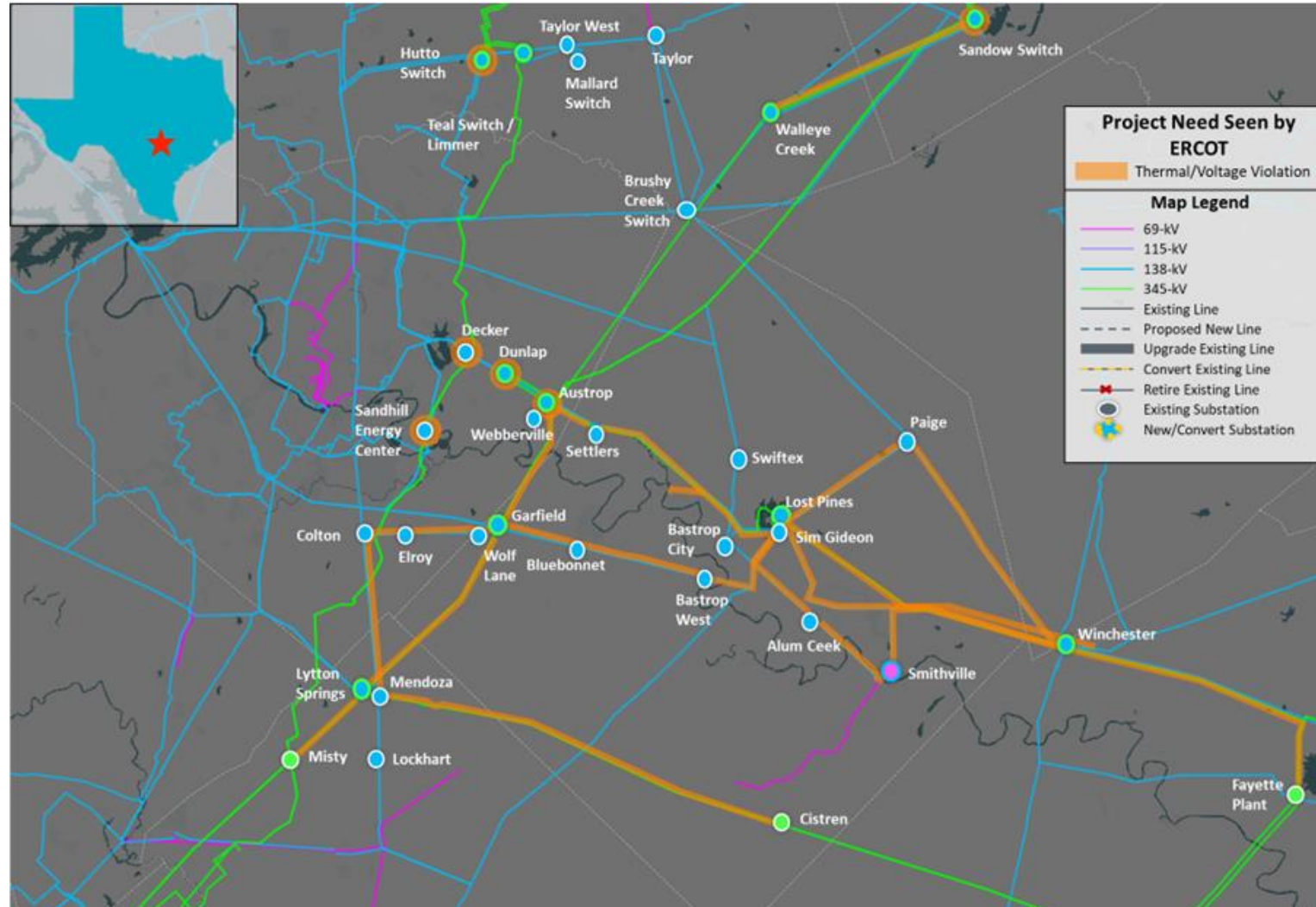
Introduction

The phase 2 of the EIR is needed to addresses post-contingency and thermal overloads and voltage violations in the Bastrop, Travis, Caldwell and Hays counties

This project is currently under ERCOT Independent Review (EIR)

- ERCOT provided Phase 2 EIR scope at [June 2026 RPG Meeting](#) RPG meeting

Recap - Violation Observed by ERCOT in Study Area 2 of the Phase 1 EIR



Study Assumptions

Study Region

- The Phase 2 of this EIR is in study area 2 which consists of Bastrop, Travis, Caldwell and Hays counties in the South Central Weather Zone and all the transmission elements that are electrically close were monitored

Steady-State Base Case

- Final [2025 Regional Transmission Planning \(RTP\)](#) 2031 summer peak load case, published on Market Information System (MIS) on December 22, 2025, were updated to construct the study base case

Transmission Updates

- New transmission projects (listed in [Appendix A1](#)), based on February 2026 [Transmission Project and Information Tracking \(TPIT\) report](#) and recently approved RPG project listed below were added to the base case
 - 24RPG009 Oncor and LCRA TSC Muscovy and Vosslake 345/138-kV Project - Phase 1
 - 26RPG001 LCRA TSC and CEHE Euclid 765-kV Substation and Transmission Line Addition Project
- Transmission projects (listed in [Appendix A2](#)) identified in the 2025 RTP in the study area that have not been approved by RPG were removed

Study Assumptions

Generation Updates

- New generation (listed in [Appendix B](#)) that met ERCOT Planning Guide Section 6.9(1) condition with Commercial Operation Date (COD) before the December 2031 (ISD) in the study area at the time of the study, but not already modeled in the RTP cases, were added to the case based on May 2026 [Generator Interconnection Status \(GIS\) report](#) published in MIS in June 2026
- All generation are dispatched consistent with the 2025 RTP methodology

Load and Reserve Updates

- Existing Officer Letter Loads (OLLs) in the study area, already modeled in the 2025 RTP cases, are scaled up in the study area or removed if needed
- New OLLs with confirmation by Attestation Letters from TSPs, were added in the study area
- The reserve are kept consistent with the 2025 RTP

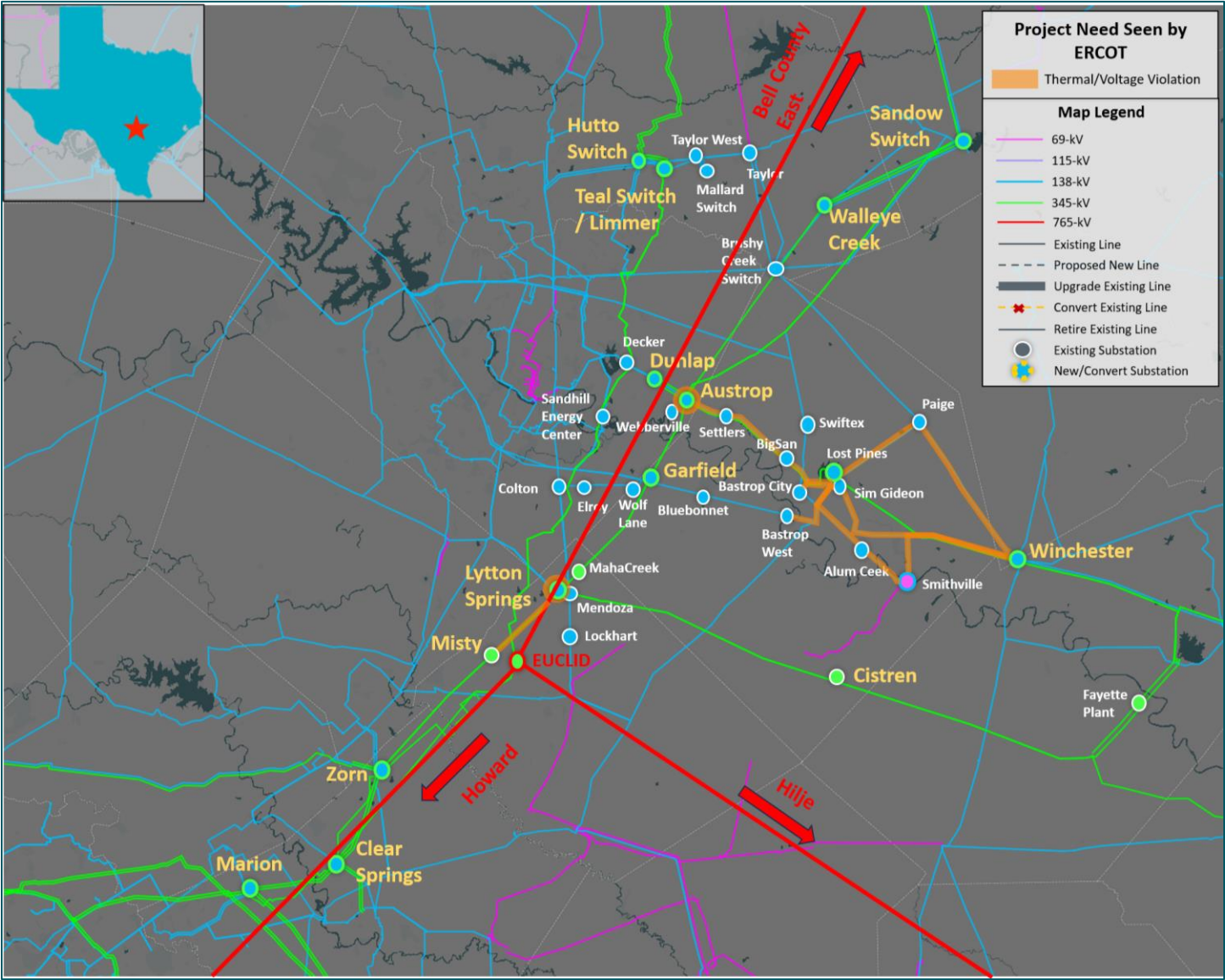
Preliminary Results of Reliability Assessment – Base Case

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

Contingency Category	Thermal Overloads	Voltage Violations	Unsolved Power Flow
P0: N-0	4	1	None
P1, P2-1, P7: N-1	9	19	None
P3: (G-1+N-1)*	None	4	None
P6-2: (X-1+N-1)*	3	2	None
Total	16	26	0

* See [Appendix C](#) for the list of G-1 generators and X-1 transformers being tested

Violation Observed by ERCOT in Study Area 2



Deliverables and Next Step

Tentative Timelines

- ERCOT will continue to evaluation alternative options
 - ERCOT may also perform the following studies
 - Maintenance Outage Evaluation
 - Long-Term Load-Serving Capability Assessment
 - TSP's will provide Cost Estimates and Feasibility Assessment
 - Additional Analysis
 - Generation Addition and Load Scaling Sensitivity Analyses
 - ERCOT Planning Guide Section 3.1.3(4)
 - Subsynchronous Oscillations (SSO) Assessment
 - ERCOT Nodal Protocol Section 3.22.1.3(2)
 - 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
- Provide status updates at the future RPG meetings
- ERCOT recommendation in Q3 2026

Key Takeaway: ERCOT recommendation in Q3 2026

Deliverables and Next Step

Tentative Timelines

- Provide status updates at the future RPG meetings
- ERCOT recommendation in Q3 2026

Key Takeaway: ERCOT recommendation in Q3 2026

Thank you! Questions/Comments?

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Appendix

- Appendix A1: Transmission Projects Added
- Appendix A2: Transmission Backed Out
- Appendix B: Generation Added
- Appendix C: G-1 Generators and X-1 Transformers List

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Appendix A1: Transmission Projects to be Added to Base case

TPIT	Project Name	Tier	Project ISD	County(s)	TSP
91289	LCRATSC_Settlers Substation Upgrade	Tier 4	Apr-27	Bastrop	LCRA TSC
99831	LCRATSC_Cedar_Hill_Manor_Transmission_Line_Upgrade	Tier 4	May-29	Travis, Bastrop	LCRA TSC
100165	Gristmill_Substation_Addition	Tier 4	May-29	Hays	LCRA TSC
99928	Three Lakes Substation Addition	Tier 4	Dec-28	Caldwell	LCRA TSC
91847A	Hornsby Load Power Transformer Addition	Tier 4	May-26	Travis	LCRA TSC
70714	La Cima Substation Addition	Tier 4	Nov-26	Hays	LCRA TSC
93274	Bastrop_Mesquite_Substation_Addition	Tier 4	May-27	Bastrop	LCRA TSC
91293	LCRATSC_Gabriel-Schwertner TL conversion	Tier 4	May-27	Williamson	LCRA TSC
99924	Pine Path Substation Addition	Tier 4	Jun-27	Williamson	LCRA TSC
78404	BBEC Bastrop Colony Substation Addition (formerly Bastrop Village)	Tier 4	Dec-27	Caldwell	LCRA TSC
99827A	LCRATSC_Canyon-Gofort_Transmission_Line_Overhaul	Tier 4	May-28	Hays	LCRA TSC
99827B	LCRATSC_Canyon-Gofort_Transmission_Line_Overhaul	Tier 4	May-28	Hays	LCRA TSC
99827C	LCRATSC_Canyon-Gofort_Transmission_Line_Overhaul	Tier 4	May-28	Bastrop	LCRA TSC
92565	Sim_Gideon_Winchester_Transmission_Line_Upgrade	Tier 4	May-28	Bastrop	LCRA TSC
100178	HarrisBranch_McNeil_Transmission_Line_Upgrade	Tier 4	May-28	Travis	LCRA TSC
100180	HarrisBranch_ShadowGlen_Transmission_Line_Upgrade	Tier 4	May-28	Travis	LCRA TSC
100182	Henne_Zorn_Transmission_Line_Upgrade	Tier 4	May-28	Comal, Hays	LCRA TSC
99818	LCRATSC_Manor_Shadow_Glen_Transmission_Line_Upgrade	Tier 4	May-28	Travis	LCRA TSC

Appendix A1: Transmission Projects to be Added to Base case

TPIT	Project Name	Tier	Project ISD	County(s)	TSP
99774	Butler_Elgin_Transmission_Line_Overhaul	Tier 4	May-28	Bastrop, Williamson	LCRA TSC
100534	Misty Substation Addition	Tier 4	May-28	Caldwell	LCRA TSC
91386	Smithville_Substation_Upgrade	Tier 4	Jun-28	Bastrop	LCRA TSC
91487A	Austrop - Sim Gideon Transmission Line Upgrade	Tier 4	Dec-28	Travis	LCRA TSC
99823	LCRATSC_Flatonia-Luling_Transmission_Line_Conversion	Tier 4	Dec-28	Fayette, Caldwell	LCRA TSC
91487B	Austrop - Sim Gideon Transmission Line Upgrade	Tier 4	Jan-29	Travis, Bastrop	LCRA TSC
100159	Establish Teal East 138 kV Switch for a customer POD	Tier 4	Dec-28	Williamson	Oncor
80546	Upgrade the Hutto & Round Rock - Salado 138 kV Line	Tier 3	May-27	Williamson	Oncor
66206	Upgrade Temple - Minerva 69 kV Line	Tier 3	Sep-27	Bell, Milam	Oncor
93191	Bent Tree 138 kV Substation	Tier 4	Dec-26	Williamson	Oncor
99271	Upgrade Hutto 138 kV terminal equipment	Tier 4	May-27	Williamson	Oncor
99136	Wilke 138 kV Capacitors	Tier 4	May-27	Williamson	Oncor
75524	This converts Bell County to Gabriel to 138 KV	Tier 4	Dec-26	Bell	BEPC
102484	BEPC_TPIT102484_MAYSFIELD	Tier 4	Jun-27	Bastrop	BEPC
86836	AEN_Northland_KoenigLane_Ckt__conversion_to_138kV	Tier 4	Jun-29	Travis	AEN
16TPIT0007	McNeil to MagPlant Ckt 977 Upgrade	Tier 4	Jun-30	Travis	AEN
4425	New TR-AW Ckt 1032 AW-MR Ckt 1039 MR-JV Ckt 961	Tier 4	Aug-32	Travis	AEN

Appendix A2: Transmission Projects to be Removed from Base case

RTP Project ID	Project Name	County(s)
2023-SC03	Dessau (9193) to McNeil AEN (9076) 138-kV Line Upgrade	Travis
2023-SC15	Sim Gideon Area 138-kV Line Upgrades	Bastrop, Fayette, Travis
2024-SC04	Wells Branch Area 138-kV Line Upgrades	Travis
2024-SC21	Austrop (9328) to Dunlap (9045) 138-kV Line Addition	Travis
2024-SC28	Voss Lake 345/138-kV Substation Expansion and Bell County East (3687) to Voss Lake (3751) 345-kV Double-Circuit Line Upgrade	Milam
2024-SC32	McNeil AEN (9076) 138-kV Bus Tie Breaker Upgrade	Travis
2025-ESC01	TNP One Plant Switchyard (39950) to Hogcreek (3704) to LittlePond (3377) 345-kV Line Upgrades	Milam, Robertson
2025-NC16	Gibson (3706) to Littlepond (3377) 345-kV Line Upgrades	Bell, Milam
2025-NC28	Midnight (3777) 138-kV Capacitor Bank Addition	Williamson
2025-NC31	Holland (3646) to Bartlett (13647) 69-kV Line Upgrade	Bell, Williamson
2025-NCSC01	Round Rock (3668) to Star Ranch (3653) 138-kV Line Upgrades	Williamson
2025-SC01	Central Texas 345-kV Voltage Support	Travis

Appendix A2: Transmission Projects to be Removed from Base case

RTP Project ID	Project Name	County(s)
2025-SC02	Euclid (699999) 765-kV Station and Euclid (699999) to Hillje (644200) 765-kV Line Addition	Caldwell, Colorado, Gonzales, Lavaca, Wharton
2025-SC03	County Line (777024) 138-kV Line Upgrades	Bastrop
2025-SC04	Dunlap (9044) Area 345-kV Line Reconfiguration	Travis
2025-SC05	Central Texas 345-kV Line Upgrades	Bastrop, Caldwell, Guadalupe, Travis
2025-SC06	Robertson (32) to Minerva (3683) 138-kV Line Upgrades	Milam, Robertson
2025-SC08	Settlers (7328) 138-kV Capacitor Bank Addition	Bastrop
2025-SC12	Cedar Hill (7331) to Manor (7330) 138-kV Line Upgrade	Bastrop, Travis
2025-SC13	Lytton (9074/9075) 345/138-kV Transformer Upgrades	Caldwell
2025-SC14	Austrop (7040/9328) 345/138-kV Transformer Upgrades	Travis
2025-SC18	Hutto Switch (3666) to Teal (3362) 138-kV Line Upgrade	Williamson
2025-SC19	Hillje (44200) to Crasco Creek (9067) to Holman (9073) 345-kV Line Upgrades	Caldwell, Fayette, Wharton

Appendix B: Generation Projects to be Added

GINR	Project Name	Fuel	Project COD	Max Capacity (~MW)	County
22INR0350	Sadow Solar	SOL	06/01/2028	287.2	Milam
22INR0503	Tidwell Prairie II Batt	OTH	08/04/2026	203.6	Robertson
22INR0504	Barton Branch IA	OTH	10/01/2026	203.6	Robertson
23INR0421	Bee Branch IA	OTH	06/01/2027	203.8	Robertson
24INR0042	Yaupon Solar SLF	SOL	11/18/2026	200.8	Milam
25INR0281	Cosper Solar	SOL	11/12/2027	148.1	Bell

Appendix C: List of G-1 Generators and X-1 Transformers Tested

Generator	Transformer
Bastrop Energy Center	Euclid 765/345-kV
Giga Energy Storage	Bell County East 765/345-kV
East Backland Solar	Hutto 345/138-kV Autotransformer
Garfield Generator	Gabriel 345/138-kV Autotransformer
LostPines Generator	Muscovy Switch 345/138-kV
Panda CCT	Salado Switch 345/138-kV
Hays Energy	Sadow Switch 345/138-kV
Timmerman Power Plant	Voss Lake 345/138-kV
Sim Gideon Unit 1	Walleye Creek 345/138-kV
	Teal Switch 345/138-kV
	Gilleland Creek 345/138-kV
	Zorn 345/138-kV
	Austrop 345/138-kV
	Lytton 345/138-kV
	Garfield 345/138-kV
	Winchester 345/138-kV