



## Item 5.3: 25RPG009 Oncor and LCRA TSC Muscovy and Voss Lake 345/138-kV Regional Planning Group (RPG) Project

*Kristi Hobbs*  
*Vice President, System Planning and Weatherization*

Board of Directors Meeting

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\*Revised 06/01/2026, slide 3

### Purpose

Provide an overview of the \$1.457 billion Oncor and LCRA TSC Muscovy and Voss Lake 345/138-kV Tier 1 Reliability Project (Option 7A). Per ERCOT Protocol Section 3.11.4.7 Tier 1 projects require Board endorsement.

### Voting Items

ERCOT staff requests and recommends that the Board of Directors (Board) endorse the Oncor and LCRA TSC Muscovy and Voss Lake 345/138-kV RPG Project (Option 7A) based on North American Electric Reliability Corporation (NERC) and Electric Reliability Council of Texas, Inc (ERCOT) reliability planning criteria.

### Key Takeaways

- Ensuring ERCOT's leadership for grid reliability and resilience, the Project has completed RPG review and received an independent assessment from ERCOT staff and unopposed endorsement with one abstention by the Technical Advisory Committee (TAC).
- ERCOT studied several options and recommends Option 7A as it addresses all project needs in the study area, meets ERCOT and NERC reliability criteria, improves long-term load-serving capability, supports future load growth in the area and is feasible for construction.



# Oncor and LCRA TSC Muscovy and Voss Lake 345/138-kV RPG Project (cont.)

Estimated Cost: approximately \$1.457 billion

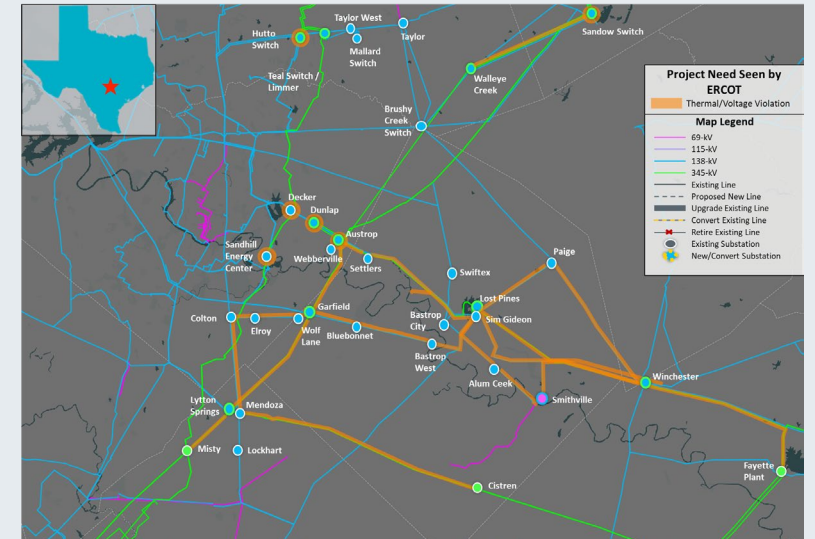
- Updated initial cost estimate (approximately \$388.94 million);
- A subset of upgrades identified in Oncor Set 1 North Central and South Central Texas Reliability Project (25RPG041) were included as part of this project (approximately \$603.33 million); and
- Approximately \$465.20 million in upgrades to address additional reliability violations under peak load conditions.

ERCOT Presented the project and TAC voted unopposed with one abstention to endorse the project on May 19, 2026.

ERCOT will be conducting an additional independent review to address the need in Study Area 2 – South of Hutto. The evaluation of Study Area 2 will be conducted after the completion of Study Area 1.

**Key Takeaway:** The Oncor and LCRA TSC Muscovy and Voss Lake 345/138-kV Project (Option 7A) has completed RPG review and received unopposed endorsement with one abstention by TAC.

## Reliability Violations Seen by ERCOT in Study Area 2 – South of Hutto



## Basis for ERCOT Board Endorsement

ERCOT's independent review identified a reliability need for the Oncor and LCRA TSC Muscovy and Voss Lake 345/138-kV Project (Option 7A) to satisfy:

NERC TPL-001-5.1 Table 1 Reliability Criteria for category:

- P0, P1, P3, P6-2 and P7 contingencies

ERCOT Planning Guide Section Reliability Performance Criteria contingency:

- 4.1.1.2(1)(a): The contingency is a loss of a common tower outage
- 4.1.1.2(1)(d): The contingency is a loss of a single generator followed by a single transmission element or common tower outage
- 4.1.1.2(1)(e): The contingency is a loss of a single transformer followed by a single transmission element or common tower outage

**Key Takeaway:** The Oncor and LCRA TSC Muscovy and Voss Lake 345/138-kV Project (Option 7A) is needed to reliably meet NERC and ERCOT Planning Guide criteria.

## Overall Project Summary

Approximately 159 circuit-miles of new 345-kV transmission lines;

Approximately 100.8 circuit-miles of rebuilt 345-kV transmission lines;

Approximately 45.4 circuit-miles of rebuilt 138-kV transmission lines;

Construct three (3) new 345/138-kV Stations;

Construct one (1) new 345-kV Station;

Install five (5) new 345/138-kV auto transformers; and

Install sized capacitors totaling 110.4 MVAR.

A Certificate of Convenience and Necessity (CCN) is needed for the construction of the new Limmer to Muscovy Switch 345-kV line, Voss Lake switch to Walleye Creek Switch 345-kV line, Muscovy Switch to Voss Lake Switch 345-kV line, two new Tower Switch to Knob Creek Switch 345-kV lines, Salado Switch to Tower Switch 345-kV line, Temple Switch to Tower Switch 345-kV line, Temple Switch to Temple Pecan Switch 345-kV line on separate structures, Hutto Switch to Limmer 345-kV line on separate structures, Salado Switch to Gabriel 345-kV line and the Gabriel to Hutto Switch 345-kV line, due to total approximately 97.3 miles of new right of way (ROW).

**Key Takeaway:** The Oncor and LCRA TSC Muscovy and Voss Lake 345/138-kV Project (Option 7A) will require a CCN due to approximately 97.3 miles of new ROW.

# Request for Board Vote

ERCOT staff requests and recommends that the Board endorse the need for the Oncor and LCRA TSC Muscovy and Voss Lake 345/138-kV Project (Option 7A) based on NERC and ERCOT reliability planning criteria.

The ERCOT Independent Review (EIR) is included as **Attachment A** to the Board Decision Template.

**Key Takeaway:** ERCOT studied several options and recommends Option 7A as it addresses all project needs, meets ERCOT and NERC Reliability Standard, improves long-term load-serving capability, supports future load growth in the area and is feasible for construction.

## ERCOT Recommendation

