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PROJECT NO. 55999

REPORTS OF THE ELECTRIC RELABILITY COUNCIL OF TEXAS	**§**	**PUBLIC UTILITY COMMISSION**
	§	
	§	**OF TEXAS**

ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.'S NOTICE OF ACCEPTANCE OF A TIER 3 TRANSMISSION PROJECT

Pursuant to ERCOT Protocol Section 3.11.4.9(1), Electric Reliability Council of Texas, Inc. (ERCOT) files this Notice of the ERCOT Regional Planning Group (RPG)'s acceptance of a Tier 3 transmission project submitted by Oncor Electric Delivery Company LLC (Oncor), as reflected in Attachments A-B. Oncor is the ERCOT-registered Transmission Service Provider (TSP) responsible for the transmission project. ERCOT is prepared to provide the Commission with any additional information it may request regarding this matter.

Dated: April 1, 2024

Respectfully Submitted,

/s/ Katherine Gross

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March 5, 2024

Mr. Eithar Nashawati
Senior Director, Asset Planning
Oncor Electric Delivery
2233-B Mountain Creek PKWY
Dallas, TX 75211-6716

RE: Oncor Montfort Switch – Shankle Switch 138-kV Line Project

Dear Mr. Nashawati:

The Electric Reliability Council of Texas (ERCOT) Regional Planning Group (RPG) has reviewed and accepted the following Tier 3 transmission project in accordance with ERCOT Protocol Section 3.11.4:

Montfort Switch – Shankle Switch 138-kV Line Project:

- Rebuild Montfort 138-kV Switch by installing six 138-kV, 3200 A breakers in breaker-and-a-half bus arrangements; and
- Rebuild the existing 17.7-mile Montfort Switch Shankle Switch 138-kV Line using a conductor rated 2569 A (614 MVA) or greater, and upgrade all associated terminal equipment to meet or exceed 2569 A.

Should you have any questions please contact me at any time.

Sincerely,

Kristi J Hobbs

Kristi Hobbs
Vice President, System Planning and Weatherization
Electric Reliability Council of Texas

cc:

Pablo Vegas, ERCOT
Woody Rickerson, ERCOT
Prabhu Gnanam, ERCOT
Robert Golen, ERCOT
Brandon Gleason, ERCOT

Montfort Switch – Shankle Switch 138 kV Line

ERCOT RPG Submittal
February 6, 2024

Business and Operations Services
Assets Planning

ONCOR®

Table of Contents

Executive Summary

Oncor proposes a Tier 3 project consisting of the following work in Ellis and Navarro Counties:

- Rebuild Montfort 138 kV Switch by installing six 138 kV, 3200 A breakers in breaker-and-a-half bus arrangements; and
- Rebuild the existing 17.7-mile Montfort Switch – Shankle Switch 138 kV Line using a conductor rated 2569 A (614 MVA) or greater, and upgrade all associated terminal equipment to meet or exceed 2569 A.

Oncor steady-state assessments performed in the area identified post-contingency thermal overloads on the Montfort Switch – Shankle Switch 138 kV Line. Rebuilding the Montfort 138 kV Switch and upgrading the Montfort Switch – Shankle Switch 138 kV Line using a conductor rated 2569 A (614 MVA) or greater eliminates all thermal violations seen throughout the aforementioned steady-state assessments.

This estimated $33.8 million project in Ellis and Navarro Counties is recommended for construction to meet a December 2025 in-service date. The completion dates may change depending on material acquisition, outage coordination, construction, or other project related requirements. The proposed project is not expected to require a Certificate of Convenience and Necessity (CCN).

Oncor will work with ERCOT as necessary to develop and implement Constraint Management Plans based on summer operational conditions in 2025, and if needed Oncor will utilize line sectionalizing switches and/or load shed to mitigate line overload risks under contingency conditions.

Introduction

This submittal describes the need to rebuild the Montfort Switch – Shankle Switch 138 kV Line. Figure 1 below shows the approximate location of Montfort Switch and Montfort Switch – Shankle Switch 138 kV Line.

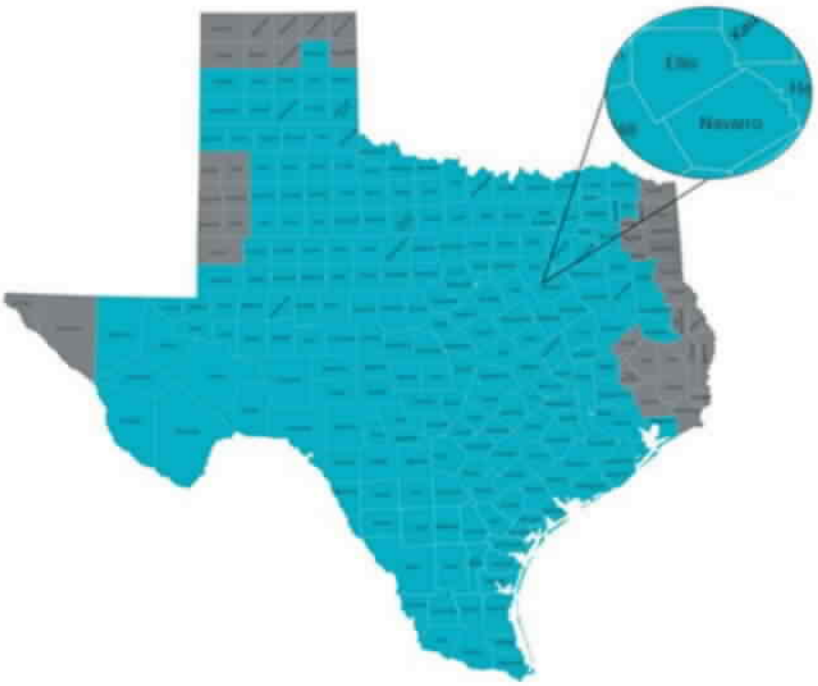

Figure 1. Ellis and Navarro County Map

Study Assumptions and Methodology

The steady state analysis utilized the ERCOT Steady State Working Group (SSWG) cases published on October 09, 2023. The post-contingency conditions that result in thermal violations include contingency scenarios per NERC Reliability Standard TPL-001-5.1 and ERCOT planning criteria.

The cases used for the dynamic studies were the Dynamic Working Group (DWG2023) 2025 Summer Peak (SP) Case and 2026 High Wind Low Load (HWLL) published in May 2023.

Study Results and Project Need

Steady State Analysis

Thermal Violations

In 2025, the loss of the Ennis Tractebel Train, followed by the common tower outage resulting in the loss of the Tri Corner Switch – Trinidad Switch 345 kV Double-Circuit Line, results in several sections of the Montfort Switch – Shankle Switch 138 kV Line loading beyond their emergency rating. These overloads violate ERCOT planning criteria, as outlined in ERCOT Planning Guide Section 4as well as NERC Reliability Standard TPL-001-5.1. Table 1 shows the pre-project and post-project thermals loading respectively under the contingency described above.

Contingency Line Section		Loading [% of Emergency Rating/Rate B]	
		Pre-Project	Post-Project
		2025	2025
Ennis Tractebel Train followed by two Tri-Corner Switch – Trinidad Switch 345 kV Double-Circuit Line	Montfort Switch – Telico	115	42
	Telico – Ennis Pump Tap	114	41
	Ennis Pump Tap – Crisp	103	37
	Crisp – Shankle Switch	100	35

Table 1. Pre- and Post-Project Worst Post-Contingency Loading

Voltage Violations

Oncor did not identify any new steady-state voltage criteria violations due to the proposed project.

Dynamic Analysis

Oncor evaluated the stability impacts of the proposed upgrade using the base cases and did not identify any concerns.

Short-Circuit Study

The rebuild of Montfort 138 kV Switch and Montfort – Shankle 138kV Line is not expected to require any significant changes to the system topology. Due to the small scope of system changes, there will be no significant changes to the short circuit levels in the area. No short circuit study will be required.

Subsynchronous Resonance (SSR) Screening

The proposed upgrade takes place on the 138 kV transmission system which does not require an SSR Screening and therefore Oncor doesn't see the need for in-depth SSR analysis

Project Description

Oncor proposes a Tier 3 project that will:

- Rebuild Montfort 138 kV Switch by installing six 138 kV, 3200 A breakers in breaker-and-a-half bus arrangements; and
- Rebuild the existing 17.7-mile Montfort Switch – Shankle Switch 138 kV Line using a conductor rated 2569 A (614 MVA) or greater, and upgrade all associated terminal equipment to meet or exceed 2569 A.

The existing Montfort 138 kV Switch limited to 1200 A (287 MVA) and is not capable of 3200 A (764 MVA) terminal equipment which is required for this project. Rebuilding the Montfort 138 kV Switch would allow for 3200 A (764 MVA) terminal equipment capacity. The estimated cost of this project is $33.8 million, which includes $783,000 to upgrade terminal equipment at Ennis Pump Tap and Telico Tap by Brazos Electric Cooperative.

One-Line Diagram

Figure 2 shows the one-lines depicting the proposed project respectively.

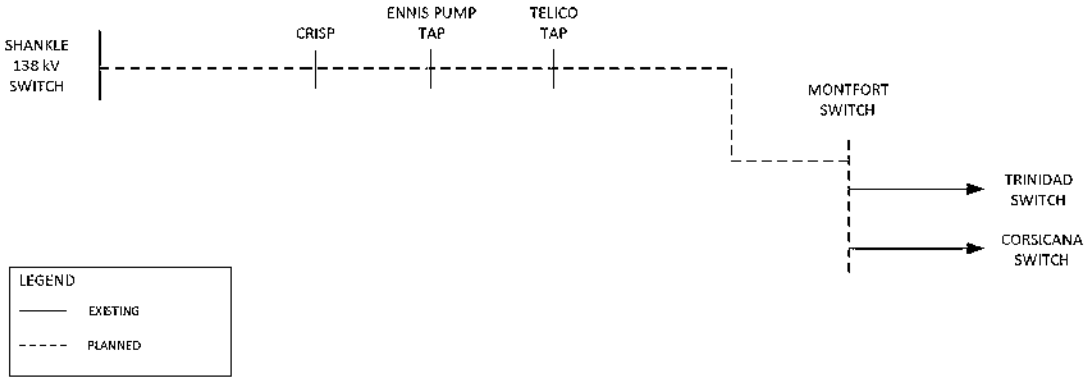

Figure 2. Montfort Switch – Shankle Switch 138 kV Line

Alternative Solutions

Oncor considered constructing a second 138 kV circuit between Montfort Switch and Shankle Switch. However, since the existing Montfort Switch – Shankle Switch 138 kV Line structures are single circuit capable, installing the second circuit would require new structures and a CCN filing with the PUC. Therefore, this alternative would result in significantly higher project cost and delayed in-service date.

Recommendation

Oncor proposes a Tier 3 project that will:

- Rebuild Montfort 138 kV Switch by installing six 138 kV, 3200 A breakers in breaker-and-a-half bus arrangements; and
- Rebuild the existing 17.7-mile Montfort Switch – Shankle Switch 138 kV Line using a conductor rated 2569 A (614 MVA) or greater, and upgrade all associated terminal equipment to meet or exceed 2569 A.

The rebuild of Montfort 138 kV Switch and the upgrade of Montfort Switch – Shankle Switch 138 kV Line using a conductor rated 2569 A (614 MVA) or greater will eliminate the post-contingency thermal overloads seen in the steady state assessments. This estimated $33.8 million project in Ellis and Navarro Counties is recommended to meet a December 2025 in-service date.