

# SRRTEP Committee Southern Dominion Supplemental Projects

May 20, 2021

# Needs

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

# Dominion Transmission Zone: Supplemental Customer Load Request

**Need Number:** DOM-2021-0033

**Process Stage:** Need Meeting 05/20/2021

**Project Driver:** Customer Service

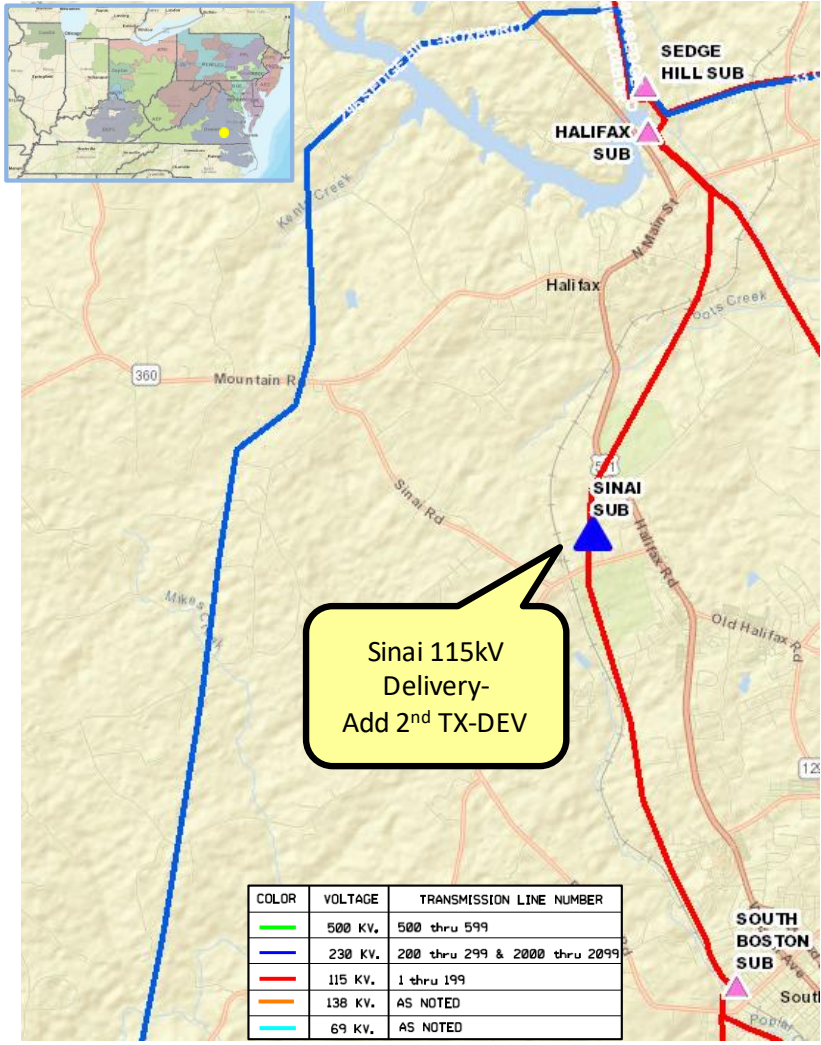
**Specific Assumption References:**

Customer load request will be evaluated per Dominion’s Facility Interconnection Requirements Document and Dominion’s Transmission Planning Criteria.

**Problem Statement:**

DEV Distribution has submitted a DP Request to add a 2nd, 33.6 MVA distribution transformer at Sinai Substation in Halifax County, Virginia. The new transformer is needed for load growth as well as to mitigate load loss for a transformer contingency. Requested in-service date is 11/15/2022.

Initial In-Service Load	Projected 2026 Load
Summer: 18.0 MW	Winter: 25.2 MW



# Dominion Transmission Zone: Supplemental Equipment Material Condition, Performance and Risk

**Need Number:** DOM-2021-0021

**Process Stage:** Need Meeting 05/20/2021

**Project Driver:** Equipment Material Condition, Performance and Risk

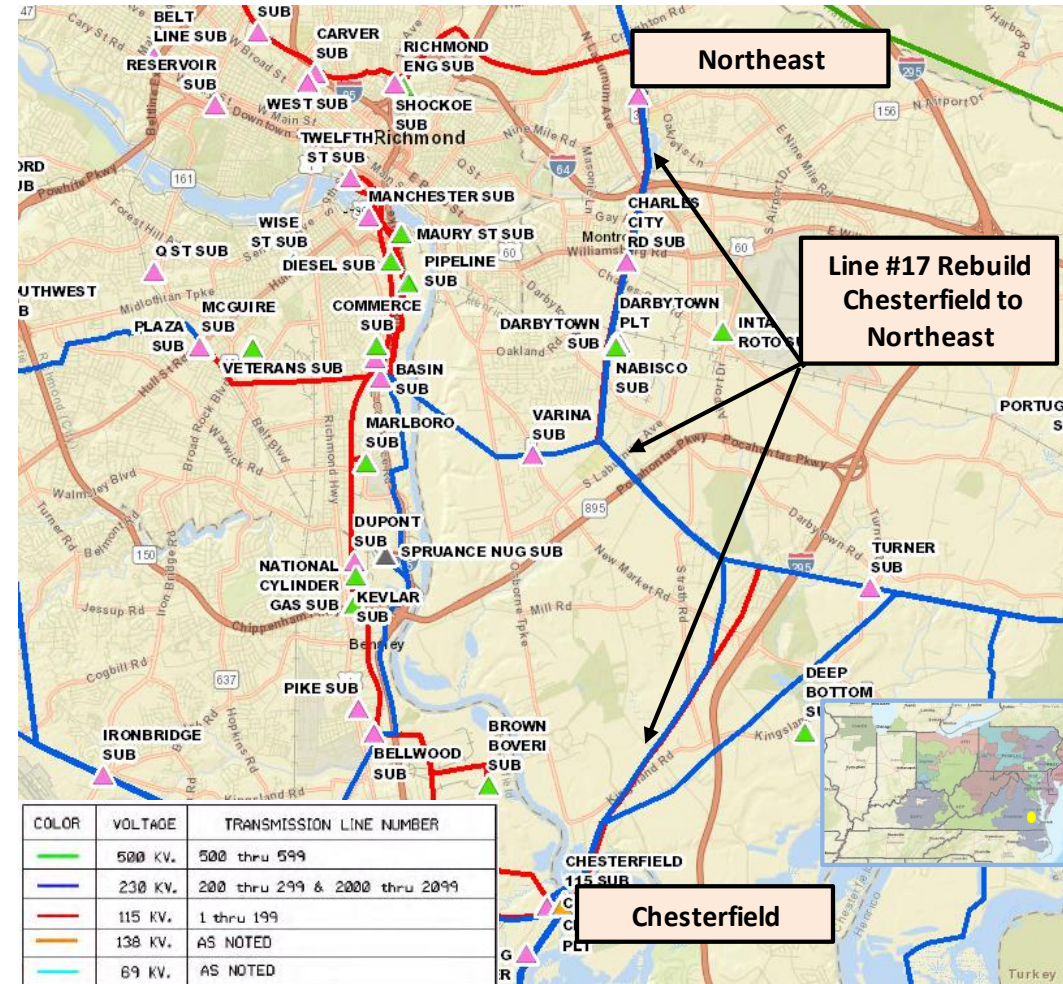
## Specific Assumption References:

See details on Equipment Material Condition, Performance and Risk in Dominion's Planning Assumptions presented in December 2020.

## Problem Statement:

Dominion Energy has identified the need to replace the entire 14.0 miles of 115kV Line#17 (Chesterfield to Northeast) based on the Company's end of life criteria.

- Line #17 is built mostly on wood H-frame structures installed between 1941 and 1972. The line has ACSR conductor and 3/8 inch static steel.
- Several structures have been replaced and assets/structures continue to experience deterioration.
- Industry guidelines indicate equipment life for wood structures is 35-55 years, conductor and connectors are 40-60 years, and porcelain insulators are 50 years.



# Dominion Transmission Zone: Supplemental Equipment Material Condition, Performance and Risk

**Need Number:** DOM-2021-0022

**Process Stage:** Need Meeting 05/20/2021

**Project Driver:** Equipment Material Condition, Performance and Risk

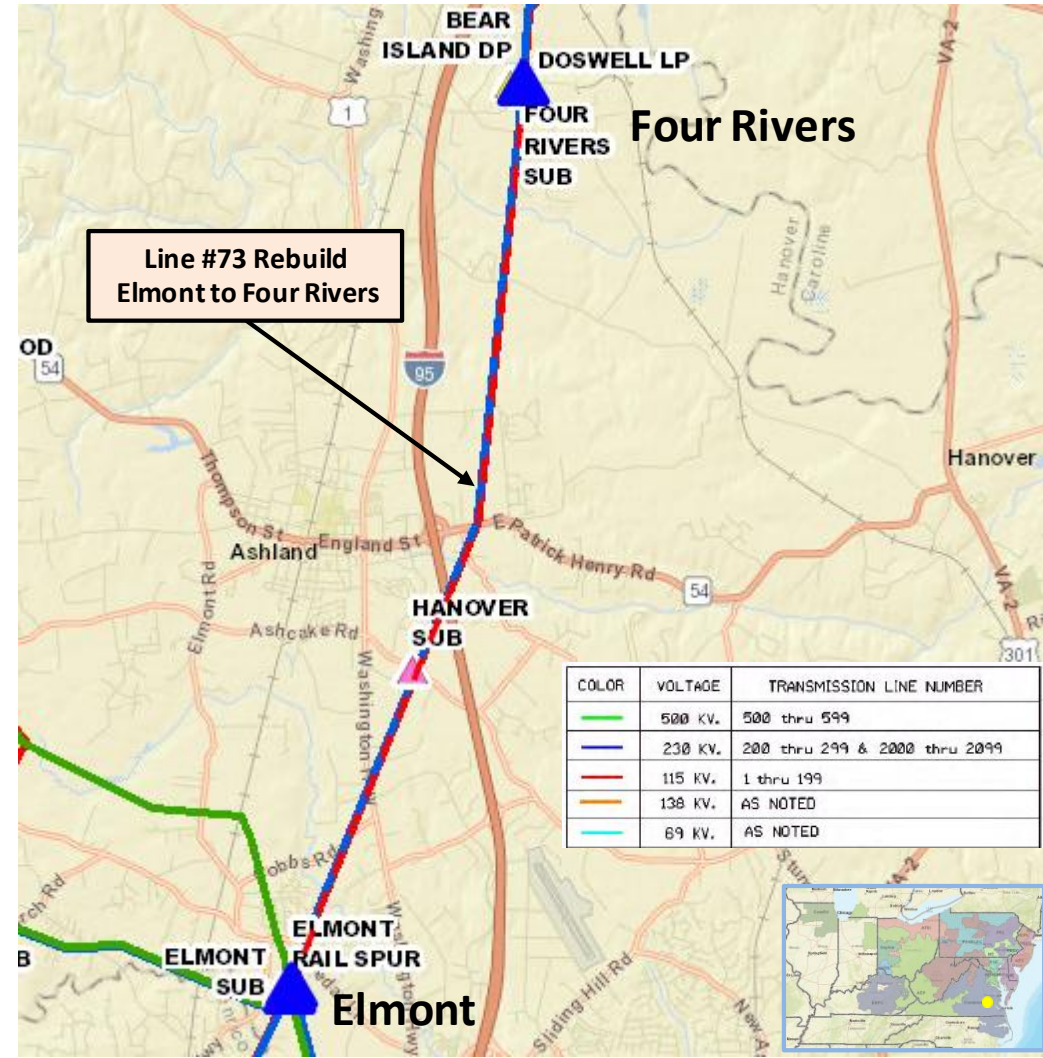
## Specific Assumption References:

See details on Equipment Material Condition, Performance and Risk in Dominion's Planning Assumptions presented in December 2020.

## Problem Statement:

Dominion Energy has identified the need to replace the entire 9 miles of 115kV Line #73 (Elmont to Four Rivers) based on the Company's End of Life Criteria.

- Line #73 was constructed on primarily wood H-frame structures built in 1956 (65 service years). The line has ACSR conductor and 3/8 inch static steel.
- A number of structures have either been repaired or replaced and assets/structures continue to experience deterioration.
- Industry guidelines indicate equipment life for wood structures is 35-55 years, conductor and connectors are 40-60 years, and porcelain insulators are 50 years.



# Dominion Transmission Zone: Supplemental Equipment Material Condition, Performance and Risk

**Need Number:** DOM-2021-0023

**Process Stage:** Need Meeting 05/20/2021

**Project Driver:** Equipment Material Condition, Performance and Risk

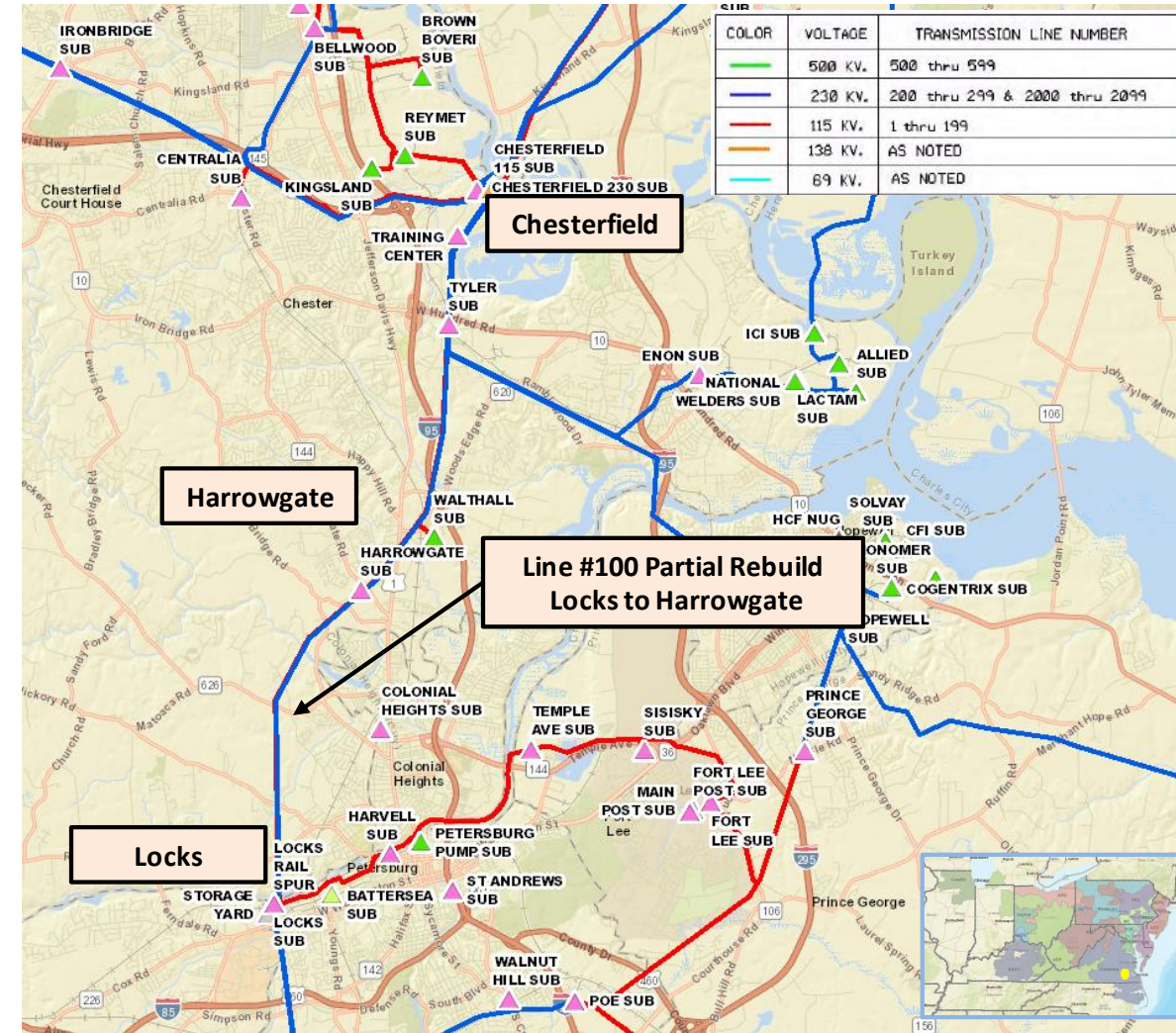
## Specific Assumption References:

See details on Equipment Material Condition, Performance and Risk in Dominion's Planning Assumptions presented in December 2020.

## Problem Statement:

Dominion Energy has identified the need to replace approximately 5.3 miles of 115kV Line #100 (Locks – Chesterfield) between Locks and Harrowgate Substations.

- Transmission structures between Locks and Harrowgate are wood H-frame structures built in 1952 (69 service years). The line has ACSR conductor and 3/8 inch static steel.
- Industry guidelines indicate equipment life for wood structures is 35-55 years, conductor and connectors are 40-60 years, and porcelain insulators are 50 years.



# Dominion Transmission Zone: Supplemental Equipment Material Condition, Performance and Risk

**Need Number:** DOM-2021-0029

**Process Stage:** Need Meeting 05/20/2021

**Project Driver:** Equipment Material Condition, Performance and Risk

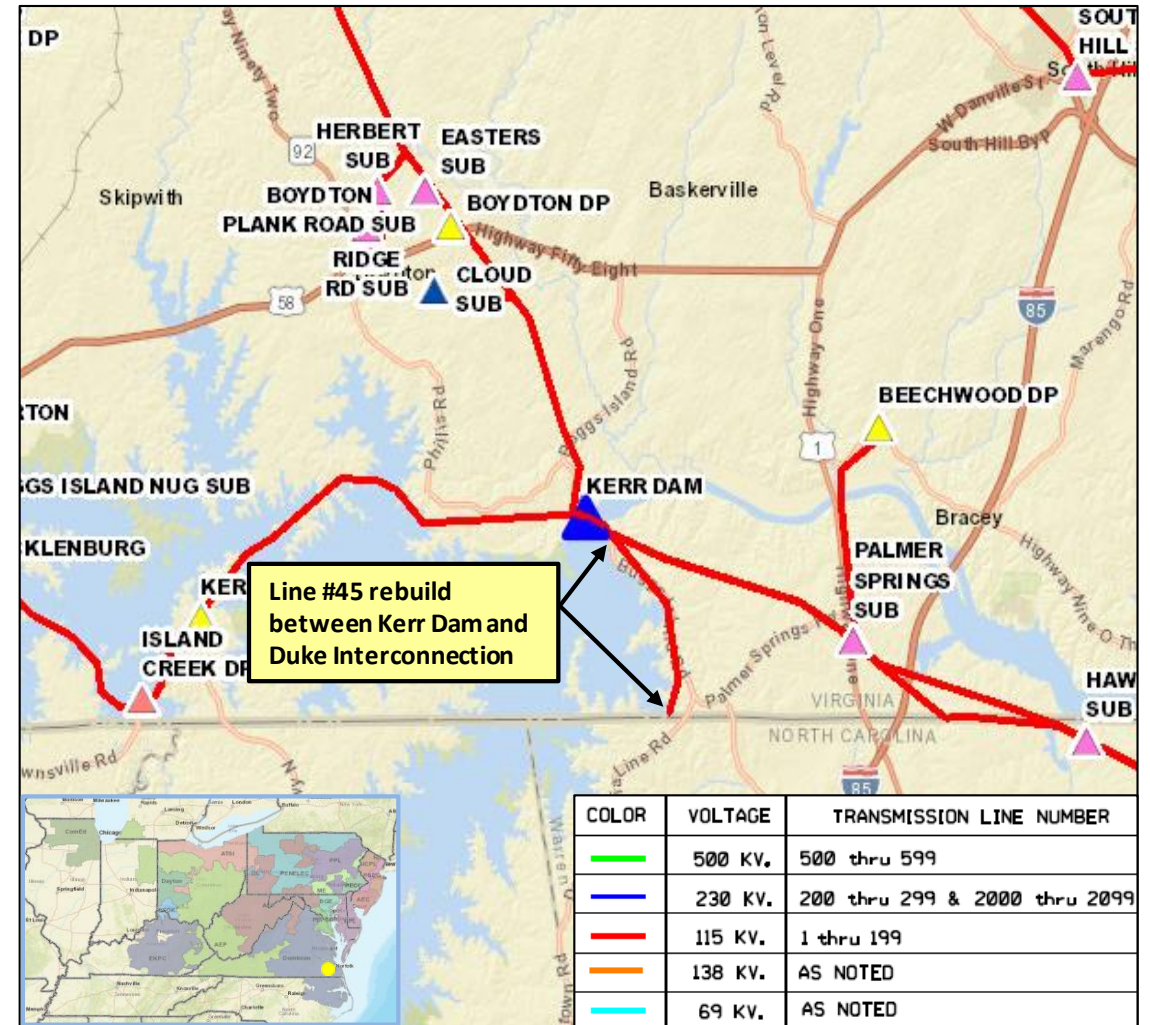
## Specific Assumption References:

See details on Equipment Material Condition, Performance and Risk in Dominion’s Planning Assumptions presented in December 2020.

## Problem Statement:

Dominion Energy has identified a need to replace approximately 4.7 miles of 115kV Line #45 (Kerr Dam to Duke Interconnection) based on the Company’s End of Life criteria.

- Line #45 constructed on wood H-frame structures in 1930 (90+ years old). The line has ACSR conductor and 3/8 inch static steel.
- Industry guidelines indicate equipment life for wood structures is 35-55 years, conductor and connectors are 40-60 years, and porcelain insulators are 50 years.



# Dominion Transmission Zone: Supplemental Equipment Material Condition, Performance and Risk

**Need Number:** DOM-2021-0042

**Process Stage:** Need Meeting 05/20/2021

**Project Driver:** Equipment Material Condition, Performance and Risk

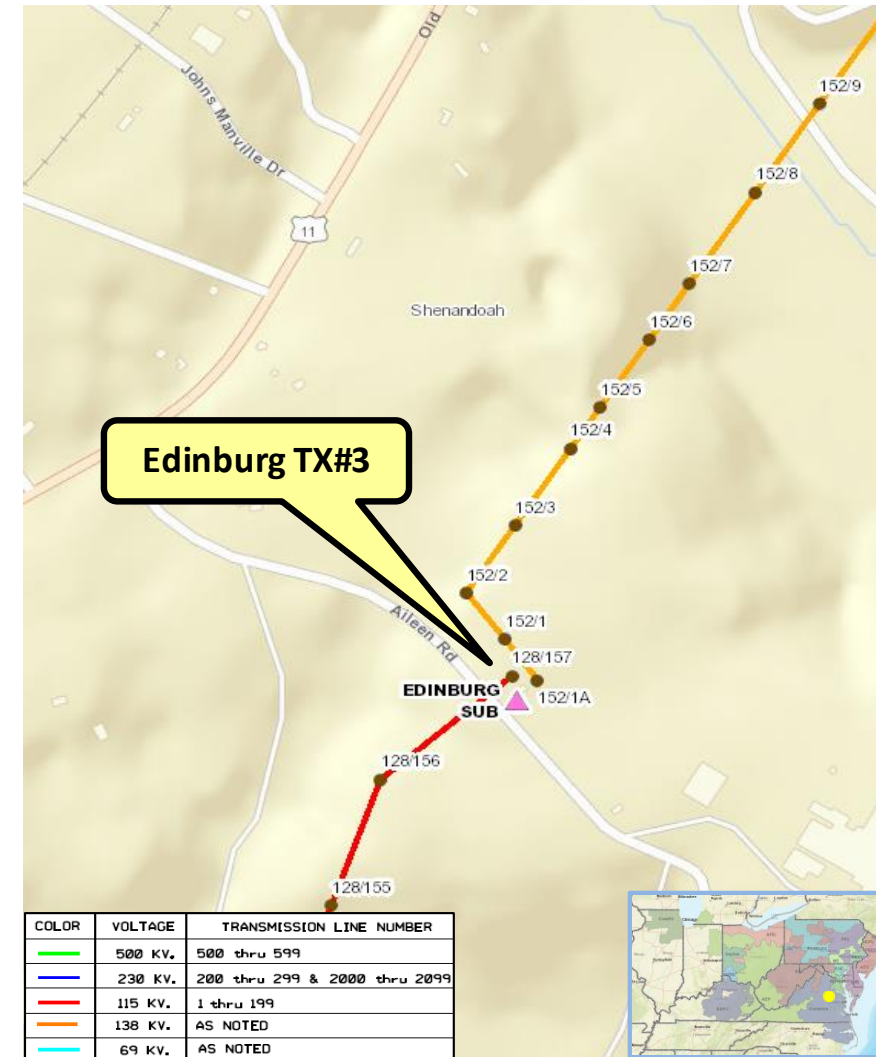
## **Specific Assumption References:**

See details on Equipment Material Condition, Performance and Risk in Dominion's Planning Assumptions presented in December 2020.

## **Problem Statement:**

Edinburg TX#3 is a 112 MVA, 138/115/13.2 kV transformer bank that was manufactured in 1986. This transformer bank has been identified for replacement based on the results of Dominion's transformer health assessment (THA) process. Detailed drivers include:

- Age (>30 years old).
- Reduced BIL ratings (2 levels below standard).
- Tertiary winding design not meeting current MVA requirement for loading.
- Degraded porcelain type bushings.
- Oil DGA indicates high CO and CO2 levels; potential break down of dielectric paper insulation on main current carrying conductors inside the transformer.
- Transformer paint is not in good shape.
- THA score less than 80.





# Appendix

# High level M-3 Meeting Schedule

Assumptions	Activity	Timing
	Posting of TO Assumptions Meeting information	20 days before Assumptions Meeting
	Stakeholder comments	10 days after Assumptions Meeting
Needs	Activity	Timing
	TOs and Stakeholders Post Needs Meeting slides	10 days before Needs Meeting
	Stakeholder comments	10 days after Needs Meeting
Solutions	Activity	Timing
	TOs and Stakeholders Post Solutions Meeting slides	10 days before Solutions Meeting
	Stakeholder comments	10 days after Solutions Meeting
Submission of Supplemental Projects & Local Plan	Activity	Timing
	Do No Harm (DNH) analysis for selected solution	Prior to posting selected solution
	Post selected solution(s)	Following completion of DNH analysis
	Stakeholder comments	10 days prior to Local Plan Submission for integration into RTEP
	Local Plan submitted to PJM for integration into RTEP	Following review and consideration of comments received after posting of selected solutions

# Revision History

5/10/2021 – V1 – Original version posted to pjm.com