

# Dominion Supplemental Projects

Transmission Expansion Advisory  
Committee  
March 8, 2022

# 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-2022-0009

**Process Stage:** Need Meeting 03/08/2022

**Project Driver:** Customer Service

**Specific Assumption References:**

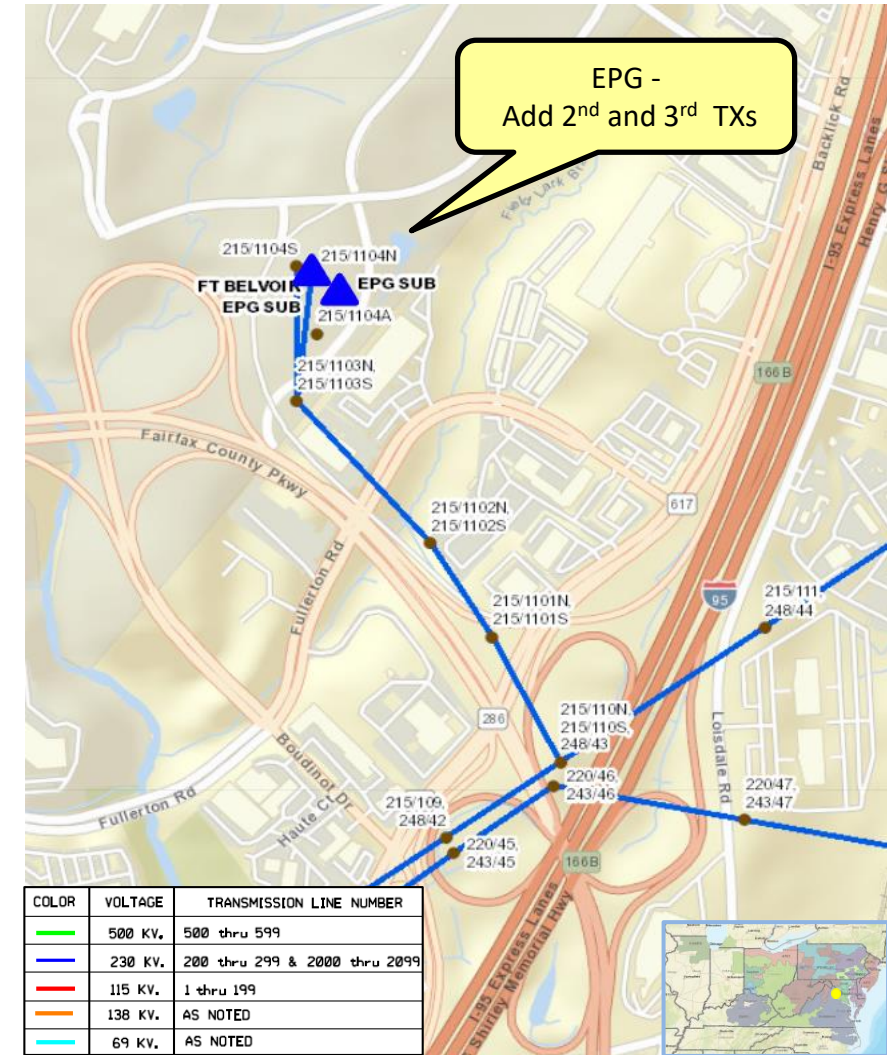
Customer load request will be evaluated per Dominion’s Facility Interconnection Requirements Document and Dominion’s Transmission Planning Criteria.

**Problem Statement:**

DEV Distribution has submitted a DP Request to add the 2<sup>nd</sup> and 3<sup>rd</sup> distribution transformers at EPG Substation in Fairfax County. The new transformers are being driven by continued load growth in the area.

Requested in-service date is 03/31/2023.

Initial In-Service Load	Projected 2026 Load
Summer: 8.0 MW	Summer: 34.0 MW



# Dominion Transmission Zone: Supplemental Customer Load Request

**Need Number:** DOM-2022-0010

**Process Stage:** Need Meeting 03/08/2022

**Project Driver:** Customer Service

**Specific Assumption References:**

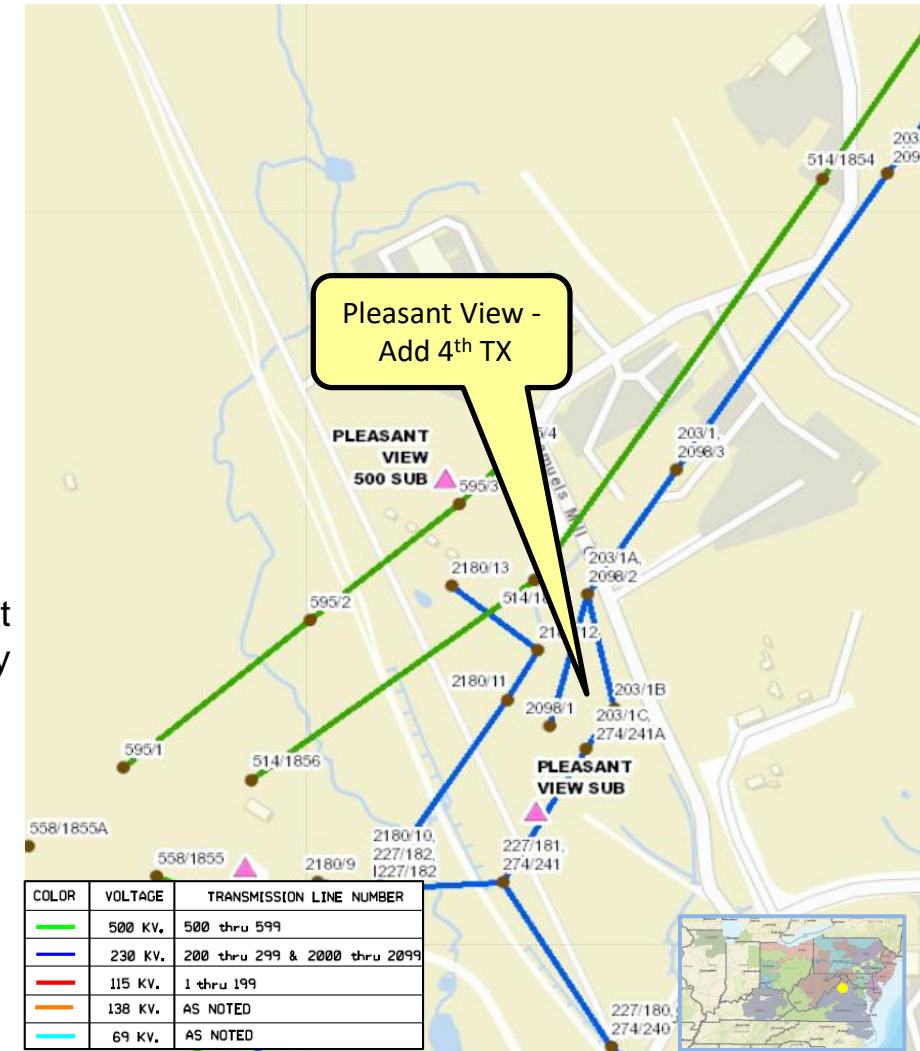
Customer load request will be evaluated per Dominion’s Facility Interconnection Requirements Document and Dominion’s Transmission Planning Criteria.

**Problem Statement:**

DEV Distribution has submitted a DP Request to add the 4<sup>th</sup> distribution transformer at Pleasant View Substation in Loudoun County. The new transformer is being driven by continued load growth in the area.

Requested in-service date is 07/15/2023.

Initial In-Service Load	Projected 2026 Load
Summer: 22.0 MW	Summer: 55.0 MW



# Solutions

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 Equipment Material Condition, Performance and Risk

**Need Number:** DOM-2022-0004

**Process Stage:** Solution Meeting 03/08/2022

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

**Previously Presented:** 2/08/2022

## Specific Assumption References:

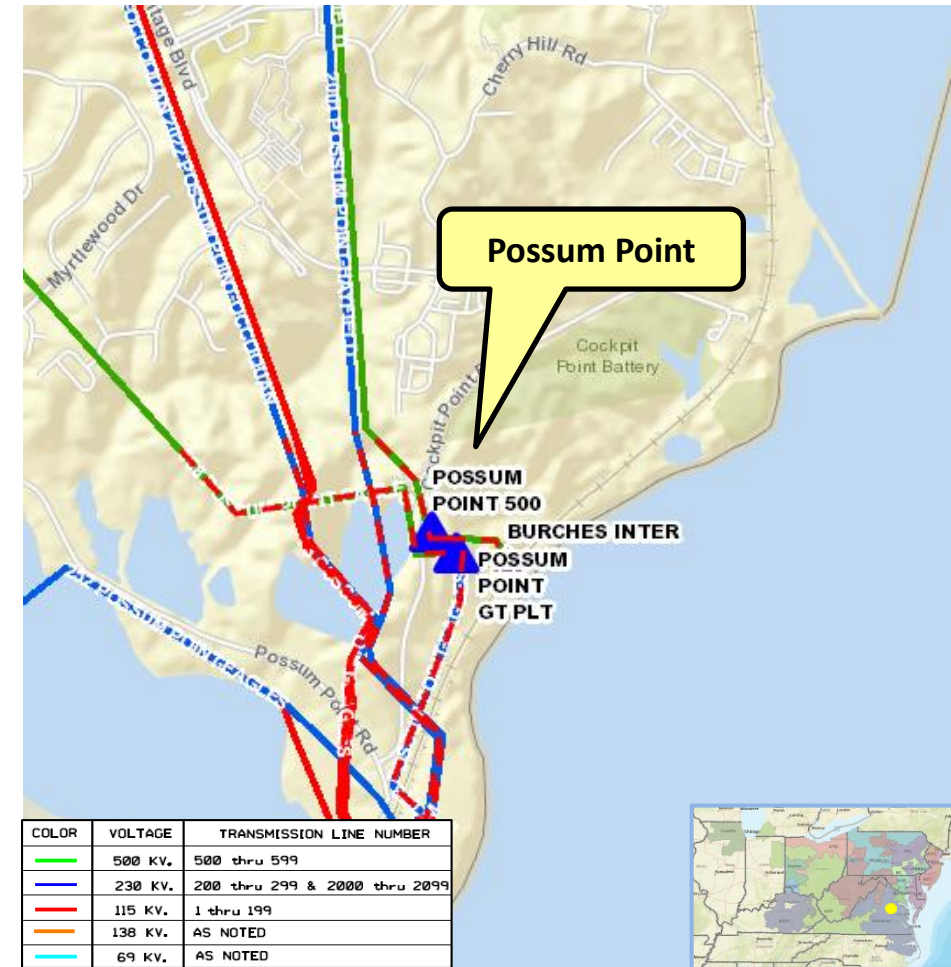
See details on Equipment Material Condition, Performance and Risk in Dominion's Planning Assumptions presented in December 2021.

## Problem Statement:

Dominion Energy has identified a need to replace four 500kV live tank breakers (561T571, 568T571, H1T568 & H1T560) and eight disconnect switches (56075, 56078, H178, H175, 56875, 56878, 57178 & 57175) at Possum Point Substation. These breakers and switches were manufactured in 1992 and are at end of life. The legacy live tank breakers have a history of component failures including external free standing CTs, external resistors and grading capacitors. No internal breaker condition monitoring is available with these type of breakers.

Other Possum Point station deficiencies include:

- Bus #1 relay protection has electromechanical relays that are no longer being supported.
- Arresters are the latest standard for 500kV terminations in the station and have not been installed on Line #560.
- The 500kV breaker panels do not have the latest standard requirements.



# Dominion Transmission Zone: Supplemental Possum Point Replace 500kV Breakers, Disconnects and Update Protection

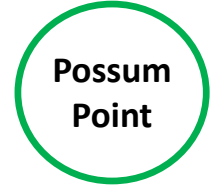
**Need Number:** DOM-2022-0004

**Process Stage:** Solutions Meeting 3/08/2022

**Proposed Solution:**

Replace the following substation equipment at Possum Point:

- Four 500kV breakers (560T571, 568T571, H1T568 & H1T560) with 5000A, 50kA breakers and breaker failure protection
- Eight 500kV breaker disconnect switches (56075, 56078, H178, H175, 56875, 56878, 57178 & 57175) with 5000A switches and associated leads
- Bus #1 differential protection from electromechanical to digital relays
- Install 3 – 500kV line arresters on Line #560 station terminations



**Estimated Project cost:**

\$6.8 M

**Alternative Considered:**

No feasible alternatives

**Projected In-service Date:**

11/17/2023

**Project Status:**

Engineering

**Model:** 2025 RTEP

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

**Need Number:** DOM-2022-0005

**Process Stage:** Solution Meeting 03/08/2022

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

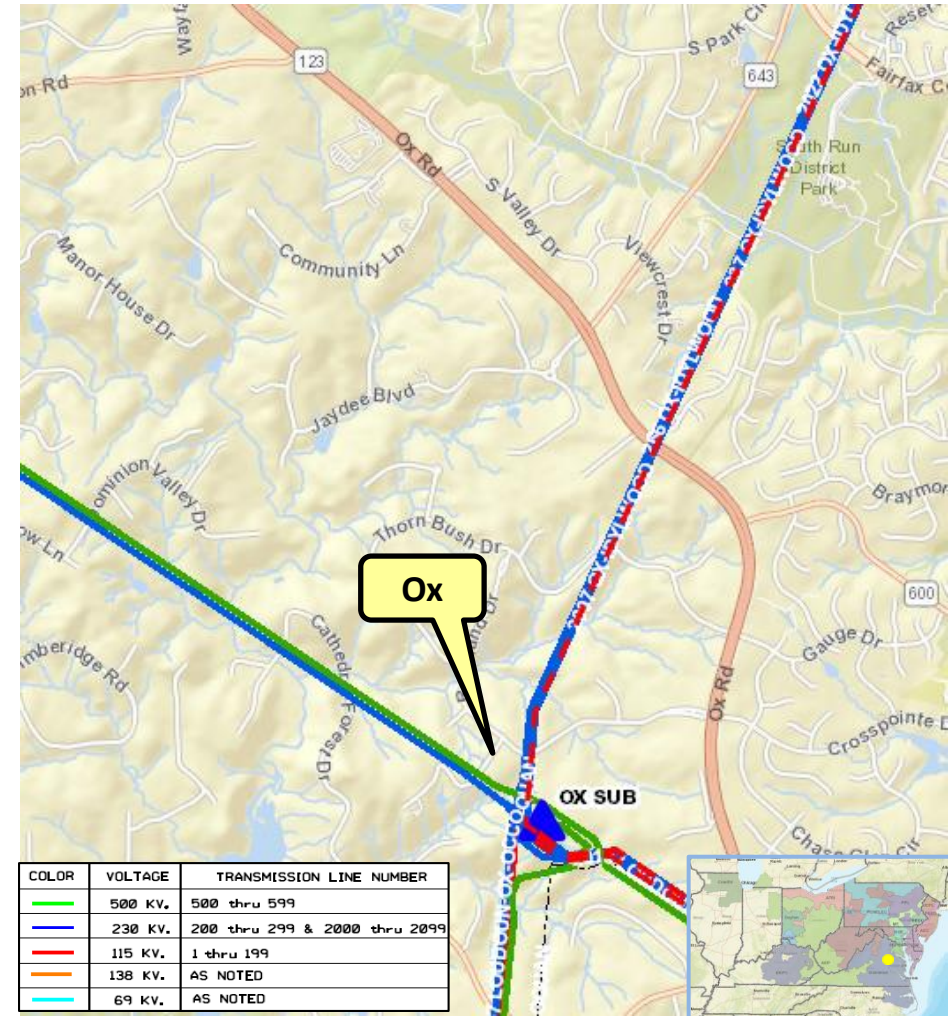
**Previously Presented:** 02/08/2022

**Specific Assumption References:**

See details on Equipment Material Condition, Performance and Risk in Dominion’s Planning Assumptions presented in December 2021.

**Problem Statement:**

Dominion Energy has identified a need to replace a live tank breaker 561T571 at Ox Substation. This breaker was built in 1998 and is at end of life. The legacy live tank breakers have a history of component failures including external free standing CTs, external resistors and grading capacitors. No internal breaker condition monitoring is available with these type of breakers.





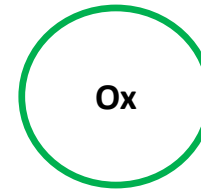
# Dominion Transmission Zone: Supplemental Ox Replace 500kV Breaker

**Need Number:** DOM-2022-0005

**Process Stage:** Solutions Meeting 3/08/2022

**Proposed Solution:**

Replace 500kV breaker 561T571 with a 5000A, 50kA breaker at Ox substation.



**Estimated Project cost:**

\$1.4 M

**Alternative Considered:**

No feasible alternatives

**Projected In-service Date:**

11/1/2022

**Project Status:**

Engineering

**Model:** 2025 RTEP

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

**Need Number:** DOM-2022-0006

**Process Stage:** Solution Meeting 03/08/2022

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

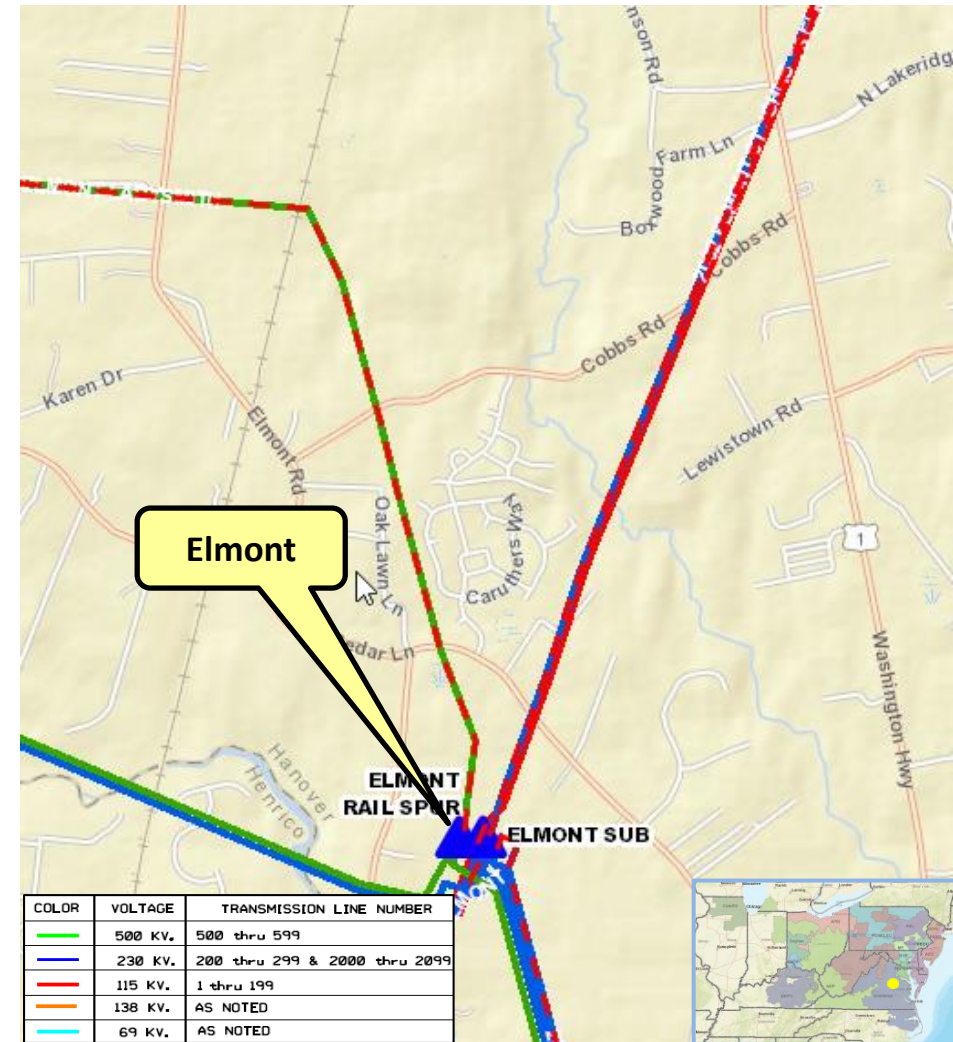
**Previously Presented:** 2/08/2022

**Specific Assumption References:**

See details on Equipment Material Condition, Performance and Risk in Dominion’s Planning Assumptions presented in December 2021.

**Problem Statement:**

Dominion Energy has identified a need to replace one 500kV live tank breaker (H1T553) and two disconnect switches (H198 & 55397) at Elmont Substation. These breakers and switches were manufactured in 1992 and are at end of life. The legacy live tank breakers have a history of component failures including external free standing CTs, external resistors and grading capacitors. No internal breaker condition monitoring is available with these type of breakers.



# Dominion Transmission Zone: Supplemental Elmont Replace 500kV Breaker and Disconnects

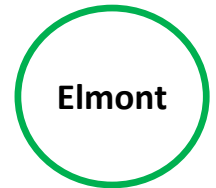
**Need Number:** DOM-2022-0006

**Process Stage:** Solutions Meeting 3/08/2022

**Proposed Solution:**

Replace the following substation equipment at Elmont:

- Breaker H1T553 with 5000A, 50kA breaker
- Two 500kV breaker disconnect switches (H198 & 55397) with 5000A switches and associated leads



**Estimated Project cost:**

\$1.8 M

**Alternative Considered:**

No feasible alternatives

**Projected In-service Date:**

12/1/2022

**Project Status:**

Engineering

**Model:** 2025 RTEP

# 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

02/25/2022 – V1 – Original version posted to pjm.com