SRRTEP Committee Southern
Dominion Supplemental Projects

July 12, 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 Equipment Material Condition, Performance and Risk

Need Number: DOM-2021-0038

Process Stage: Need Meeting 07/12/2021

Project Driver: Equipment Material Condition, Performance and Risk

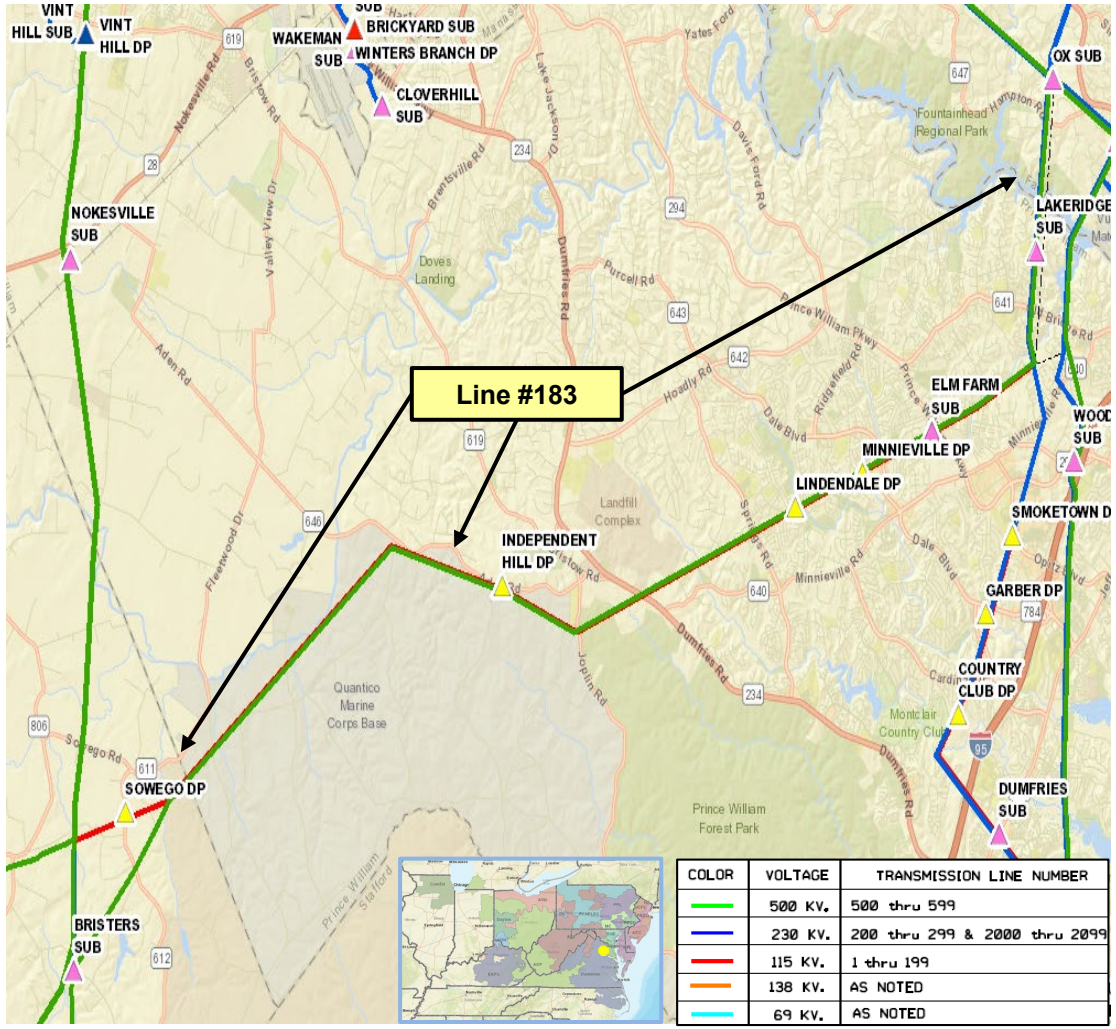
Specific Assumption References:

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 15.1 miles of 115 kV Line #183 (Bristers - Ox). The need for replacement is based on the Company's End of Life criteria.

- This line segment between Bristers and Minnieville DP consists of COR-TEN® towers that were constructed in 1967, as well as wood pole structures dating back to 1948.
- The COR-TEN® towers have inherent corrosion problems causing continuous deterioration to the steel members thereby jeopardizing the reliability of this line. The vintage wood pole structures along this ROW have also reached the end of their useful life and are a high priority for replacement.
- Industry guidelines indicate equipment life for steel structures is 40-60 years, wood structures is 35-55 years, conductor and connectors are 40-60 years, and porcelain insulators are 50 years.



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

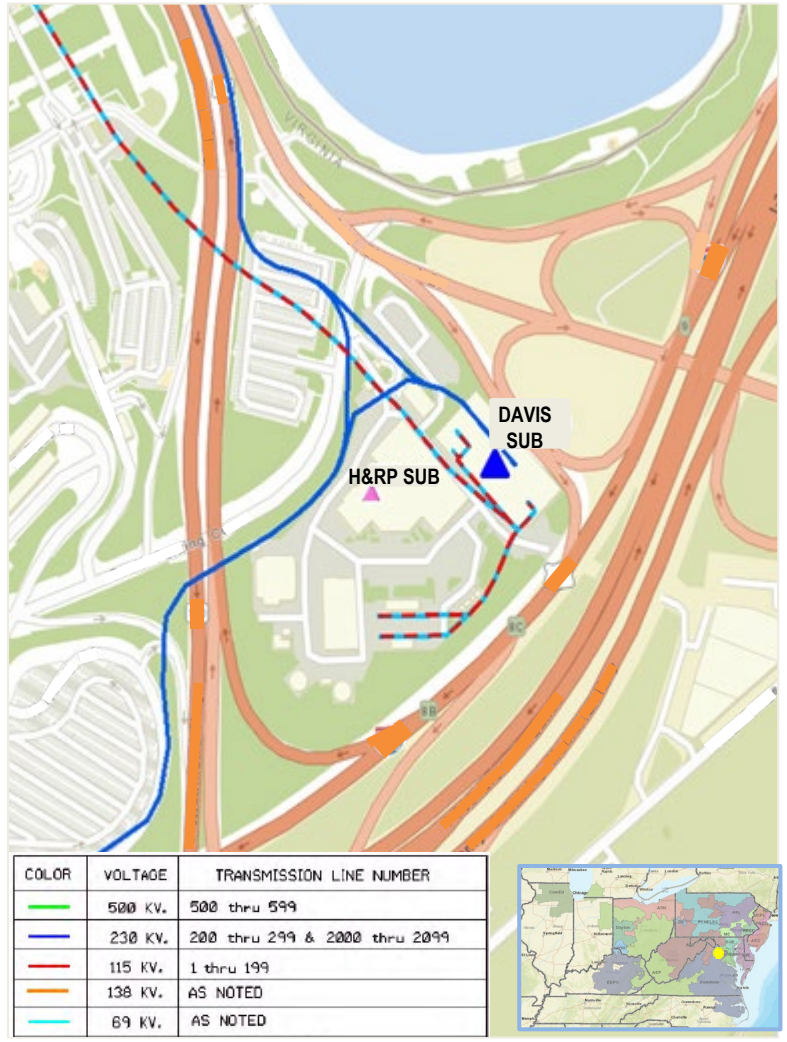
Dominion Transmission Zone: Supplemental Equipment Material Condition, Performance and Risk

Need Number: DOM-2021-0024
Process Stage: Solution Meeting 07/12/2021
Process Stage: Need Meeting 03/18/2021

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 twelve 69kV breakers at Davis Substation due to age and increasing maintenance issues. The breakers in question were manufactured in 1990 and several of this type have experienced the arcing tip breaking and falling off the main moving contact assembly. There is no way to detect this issue without a failure unless it is caught during maintenance. This condition can lead to a catastrophic failure if the arcing tip falls into the breaker and creates a flash or unsuccessful fault interruption.



Dominion Transmission Zone: Supplemental
Replace Twelve 69kV Breakers at Davis Substation - DEV

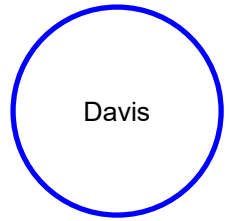
Need Number: DOM-2021-0024

Process Stage: Solutions Meeting 07/12/2021

Proposed Solution:
Replace the existing twelve 69kV breakers with new 69kV, 3000 Amp, 50kA units.
Include other ancillary equipment (arresters, switches, relays, etc.) as needed.

Estimated Project Cost: $5.5 M

Alternatives Considered:
None



Projected In-service Date: 12/02/2021

Project Status: Engineering

Model: 2025 RTEP

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

Need Number: DOM-2021-0026

Process Stage: Solution Meeting 07/12/2021

Previously Presented: Need Meeting 04/14/2021

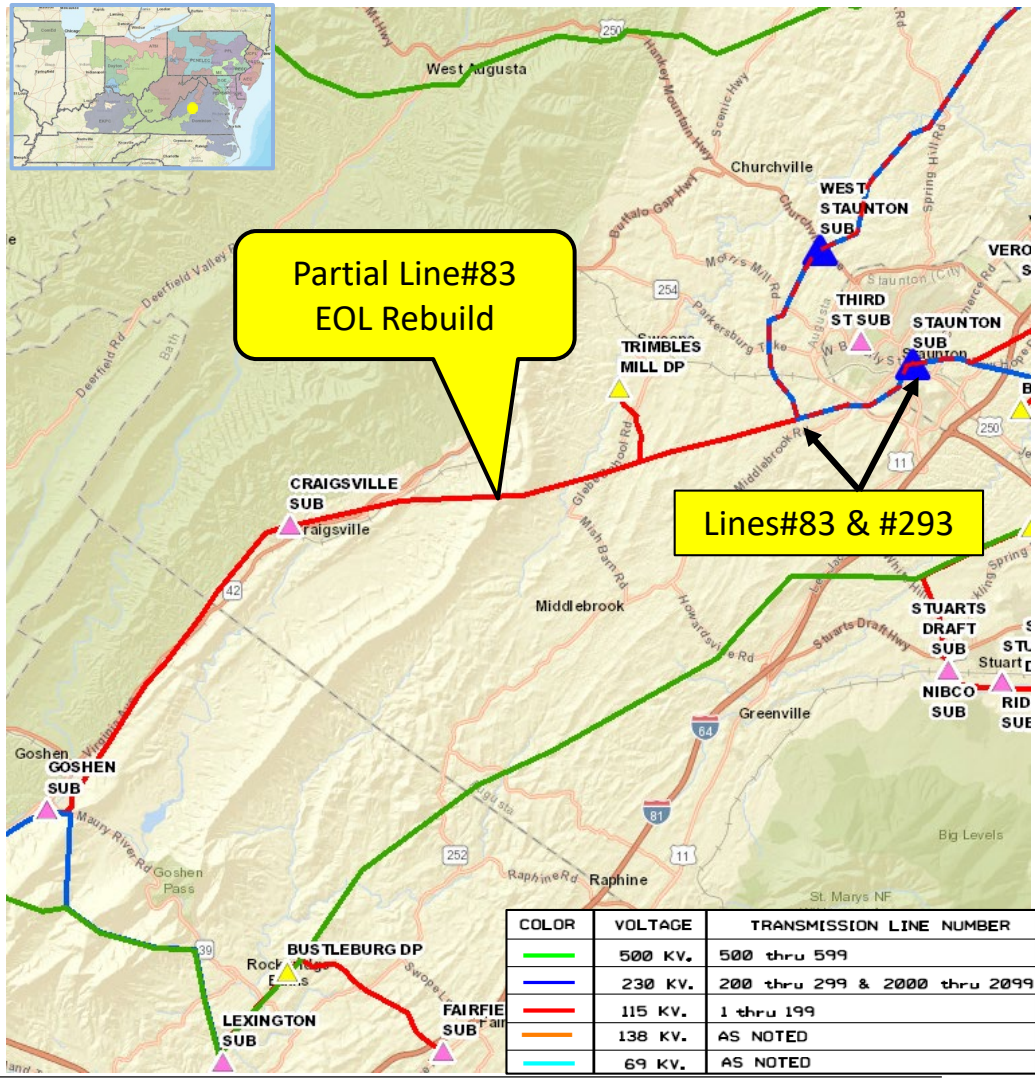
Project Driver: Equipment Material Condition, Performance and Risk

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 approx. 14.6 miles of 115kV Line #83 from Craigsville to the junction where 115kV Line #83 transitions to double-circuit with 230kV Line #293.

- Line #83 was originally constructed in 1925 consisting of lattice steel towers, ACSR conductor and 3/8" static wire.
- Line #83 has a history of poor operational performance with many operations and lock-outs.
- The remaining segment of Line #83 that shares a common structure with Line #293 will be rebuilt as a part of project DOM-2020-0028.
- Industry guidelines indicate equipment life for steel structures 40-60 years, wood structures is 35-55 years, conductor and connectors are 40-60 years, and porcelain insulators are 50 years.



Dominion Transmission Zone: Supplemental 115 kV Partial Line #83 – EOL Rebuild

Need Number: DOM-2021-0026

Process Stage: Solutions Meeting 07/12/2021

Proposed Solution:
Approximately 14.6 miles consisting of lattice steel towers will be replaced with appropriate structures. New conductor with a normal summer rating of 262 MVA will be used.

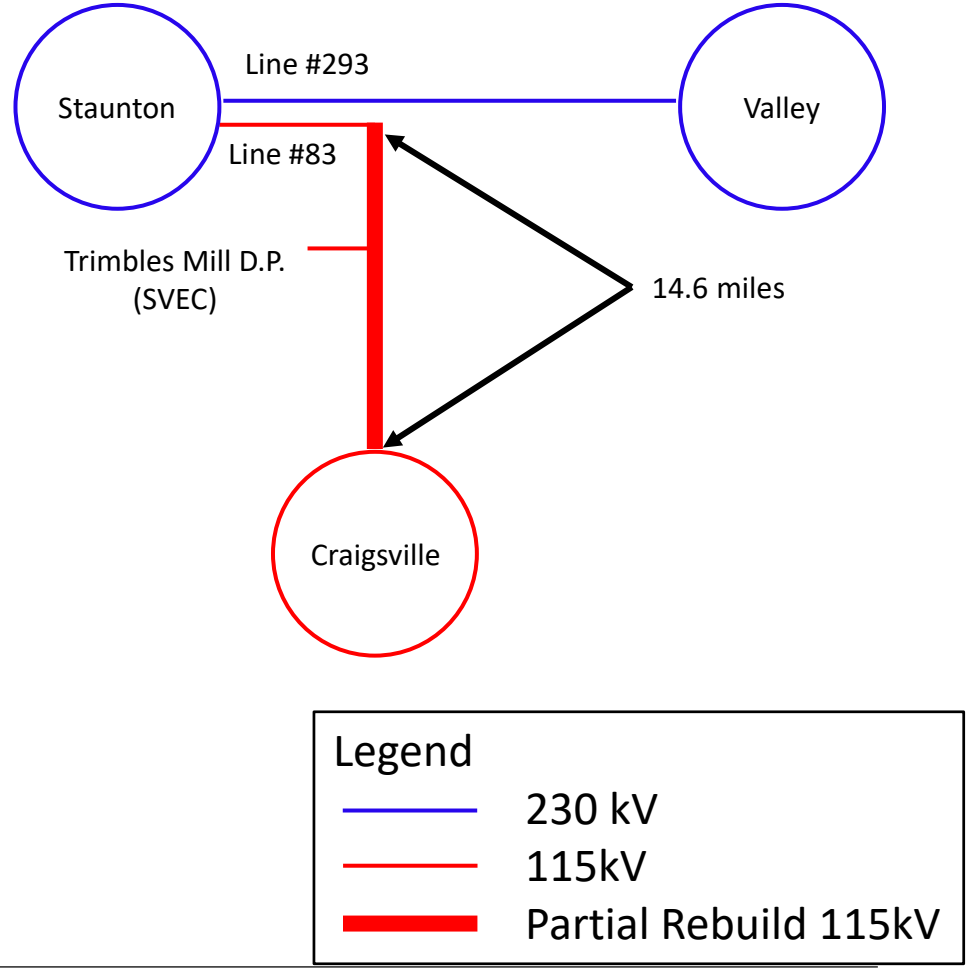
Estimated Project Cost: $23 M

Alternatives Considered:
No feasible alternatives.
Line #83 provides service to Trimbles Mill D.P. (SVEC).

Projected In-service Date: 12/31/2023

Project Status: Conceptual

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

07/02/2021 – V1 – Original version posted to pjm.com

11/17/2021 – V2 – Updated slide 6 to indicate 50kA breakers, not 40kA.

11/18/2021 – V3 – Updated slide 6 to reflect a corrected project cost of $5.5M, not $4.5M.