SRRTEP Committee Southern
Dominion Supplemental Projects

November 18, 2020

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-2020-0029

Process Stage: Need Meeting 11/18/2020

Project Driver: Equipment Material Condition, Performance and Risk

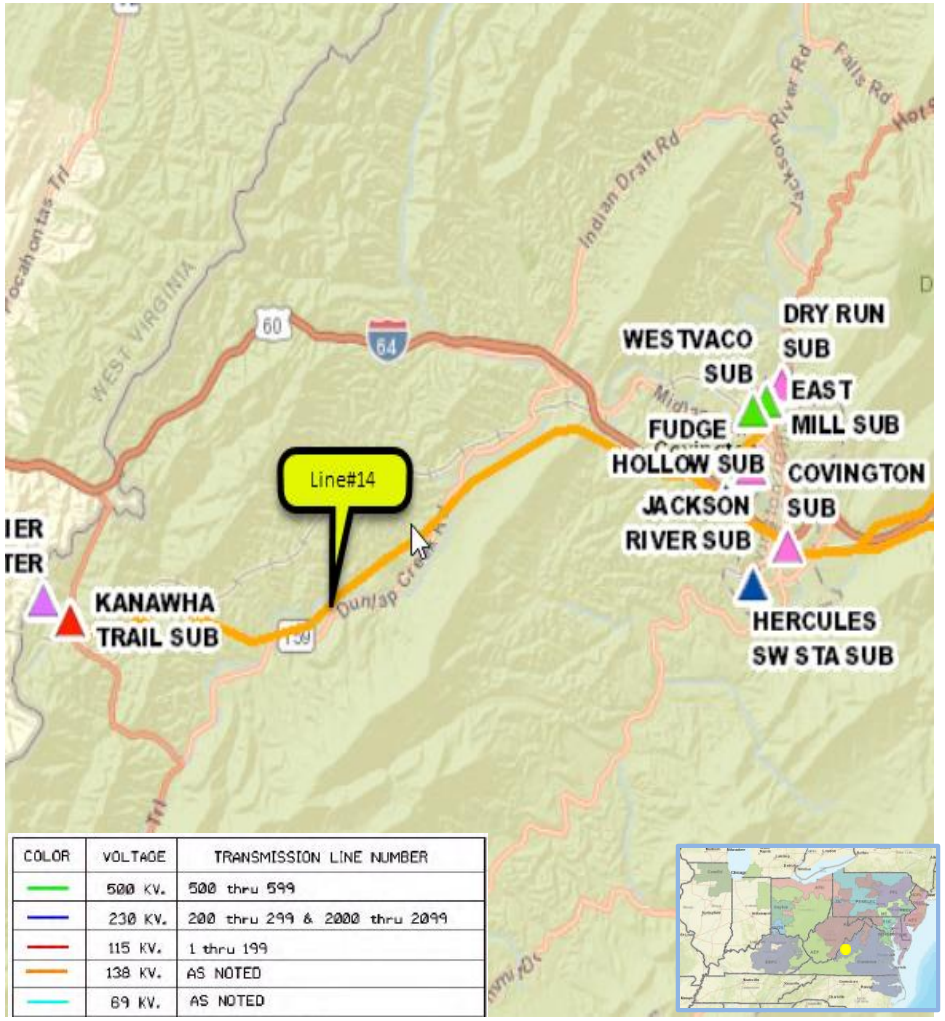
Specific Assumption References:

See details on Dominion Energy's End of Life Criteria in Dominion's Planning Assumptions presented in December 2019 and updated in September 2020

Problem Statement:

Dominion Energy has identified the need to replace 92 transmission towers on Line #14 between Fudge Hollow and the interconnect with AEP.

- Line #14 extends 14.94 miles to AEP territory from Fudge Hollow. AEP is fed radially from Fudge Hollow, most of the time.
- Existing structures are 1920's vintage Blaw Knox galvanized/painted towers.
- The line is at the end of its useful life (94 years old) and the ground line conditions of the structures range from fair to severe condition.



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

Need Number: DOM-2020-0042

Process Stage: Need Meeting 11/18/2020

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 2019 and updated in September 2020

Problem Statement:
Dominion Energy has identified a need to replace approximately 3.7 miles of 115kV Lines #53 and #72 between Chesterfield Power Station and the Brown-Boveri Tap, including an additional approximately 0.52 mile tap line into Kingsland Substation from Line #72.

- Mainly double-circuit, wood, 3-pole H-frame construction with structures dating back to 1956. ACSR conductor.
- January 2020 condition assessment indicated severe corrosion of the 3/8" steel static wire and woodpecker damage to a number of poles
- 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.

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-2020-0032
Process Stage: Solutions Meeting 11/18/2020
Previously Presented: Need Meeting 09/10/2020

Project Driver: Equipment Material Condition, Performance and Risk

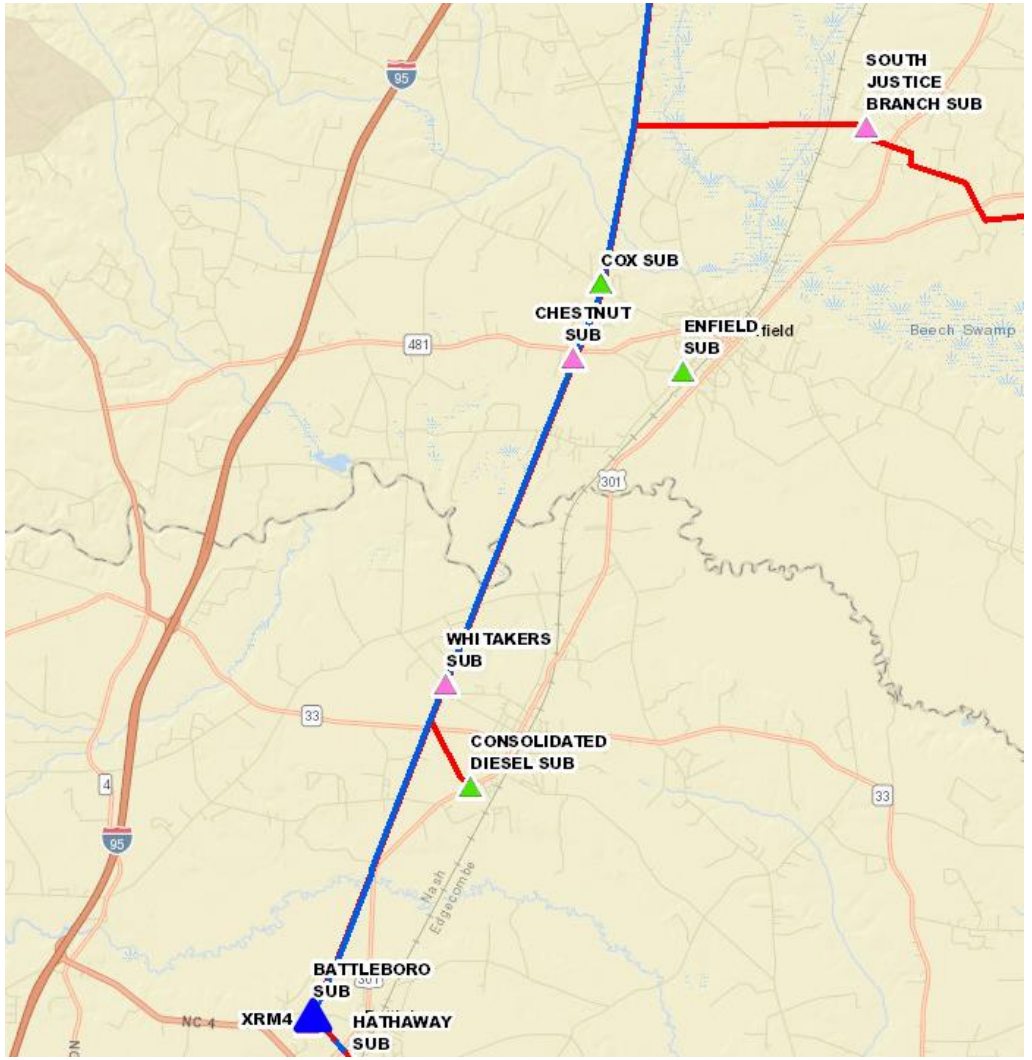
Specific Assumption References:

See details on Equipment Material Condition, Performance and Risk in Dominion's Planning Assumptions presented in December 2019 and updated in June 2020

Problem Statement:

Dominion Energy has identified a need to rebuild Line#1001 (Battleboro – Chestnut) due to end of life.

- Line 1001 was constructed on predominately wood H-frame structures in 1959 from Battleboro to Chestnut (9.28 miles) .
- 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.
- The Line #1001 provides service to Consolidated Diesel and Whitakers substations with approximately 6.0 MW and 8.3 MW tapped load.



Dominion Transmission Zone: Supplemental End of Life – Transmission Lines Below 500 kV

Need Number: DOM-2020-0032

Process Stage: Solutions Meeting 11/18/2020

Proposed Solution:
Rebuild Line#1001 (Battleboro – Chestnut) to current 115kV standards with a minimum summer rating of 261 MVA.

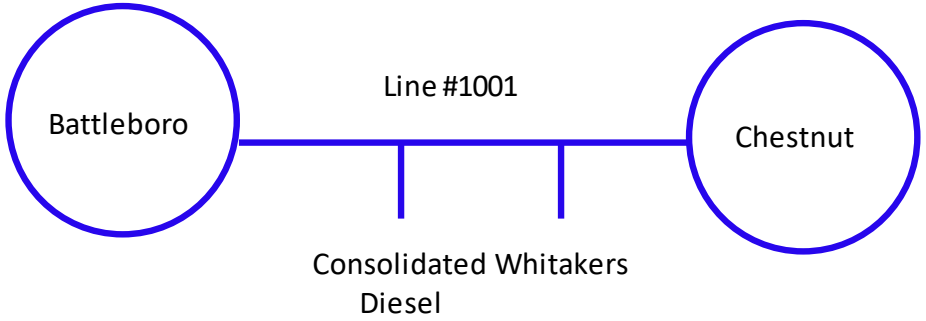
Estimated Project Cost: $14.0 M

Alternatives Considered:
No feasible alternatives

Projected In-service Date: 12/15/2024

Project Status: Conceptual

Model:



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

Need Number: DOM-2020-0033
Process Stage: Solutions Meeting 11/18/2020
Previously Presented: Need Meeting 09/10/2020

Project Driver: Equipment Material Condition, Performance and Risk

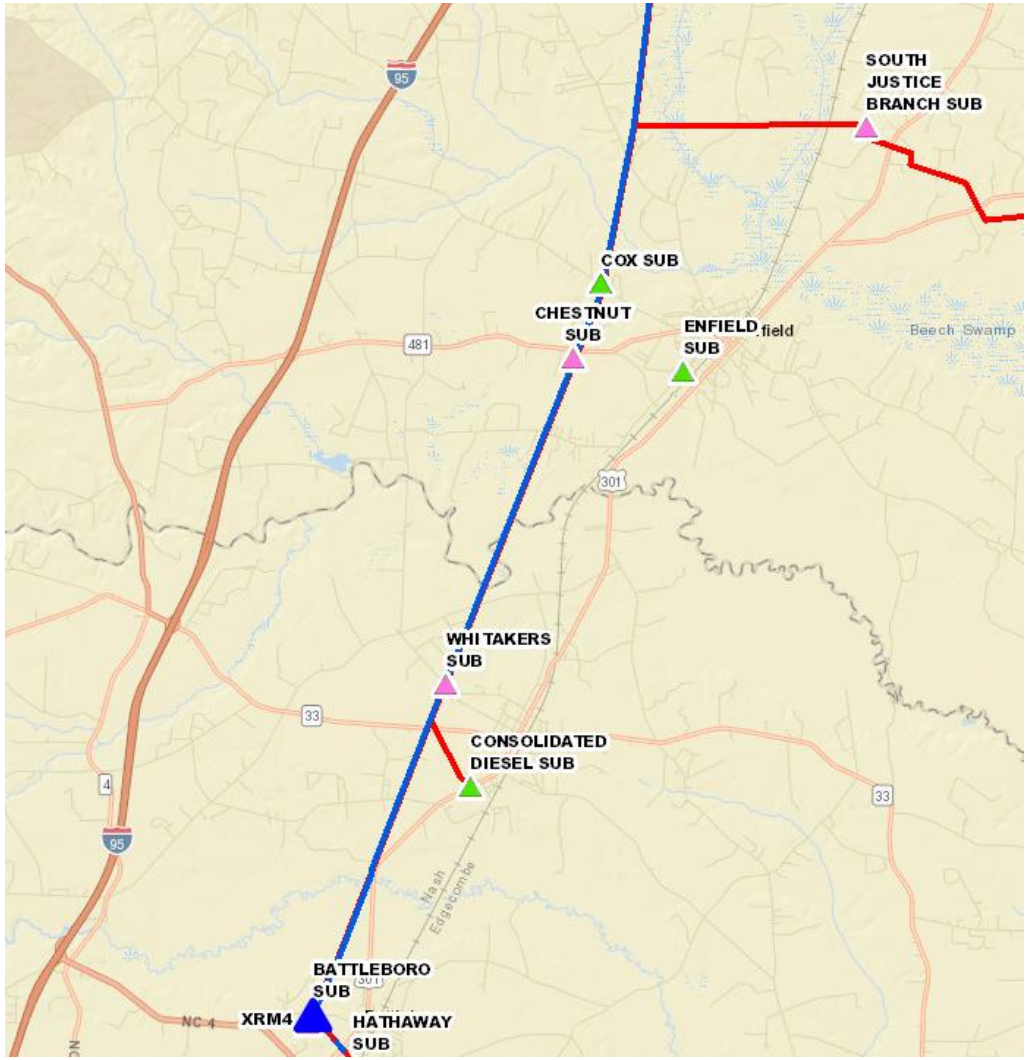
Specific Assumption References:

See details on Equipment Material Condition, Performance and Risk in Dominion's Planning Assumptions presented in December 2019 and updated in June 2020

Problem Statement:

Dominion Energy has identified a need to rebuild Line#1024 (Chestnut – South Justice Branch) due to end of life.

- Line 1024 was constructed on predominately wood H-frame structures in 1959 from Chestnut to South Justice Branch (3.39 miles of 6.41 miles) .
- 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.
- The Line #1024 provides service to Cox DP substations with approximately 14.0 MW of tapped load.



Dominion Transmission Zone: Supplemental End of Life – Transmission Lines Below 500 kV

Need Number: DOM-2020-0033

Process Stage: Solutions Meeting 11/18/2020

Proposed Solution:

Rebuild Line#1024 (Chestnut – South Justice Branch) to current 115kV standards with a minimum summer rating of 261 MVA.

Estimated Project Cost: $5.1 M

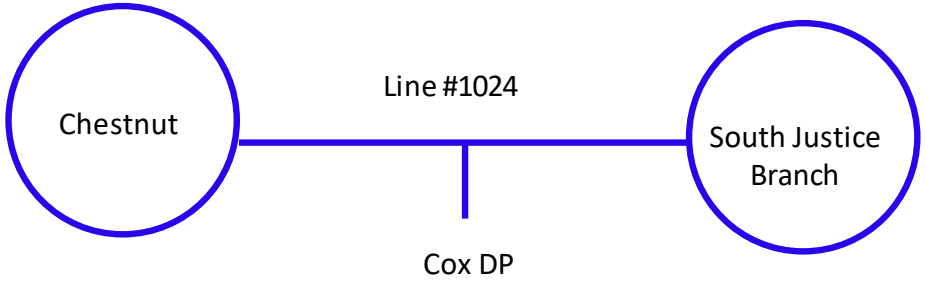
Alternatives Considered:

No feasible alternatives

Projected In-service Date: 12/31/2023

Project Status: Conceptual

Model:



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

11/6/2020 – V1 – Original version posted to pjm.com

11/12/2020 – V2 – Target date updated for DOM-2020-0033