

SRRTEP Committee Southern Dominion Supplemental Projects

March 18, 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-2021-0024

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.



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-2020-0042

Process Stage: Solutions Meeting 03/18/2021

Previously Presented: 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.
- A field-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.



Dominion Transmission Zone: Supplemental EOL Rebuild 115kV Lines #53 and #72 – Chesterfield to Brown Boveri Tap

Need Number: DOM-2020-0042

Process Stage: Solutions Meeting 03/18/2021

Proposed Solution:

Wreck and rebuild Line #53 and Line #72, approximately 3.7 miles from Chesterfield Power Station to the Brown-Boveri Tap (structures 200A to 232) with a minimum summer normal rating of 393 MVA. Upgrade the line terminals (wave trap, risers, line/breaker leads, switches, breakers, etc.) at Chesterfield Power Station to support/match the increased line rating. The 0.52-mile tap line into Kingsland Substation will use the lower rated standard conductor for 115kV tap lines (175 MVA).

Estimated Project Cost: \$9.75M

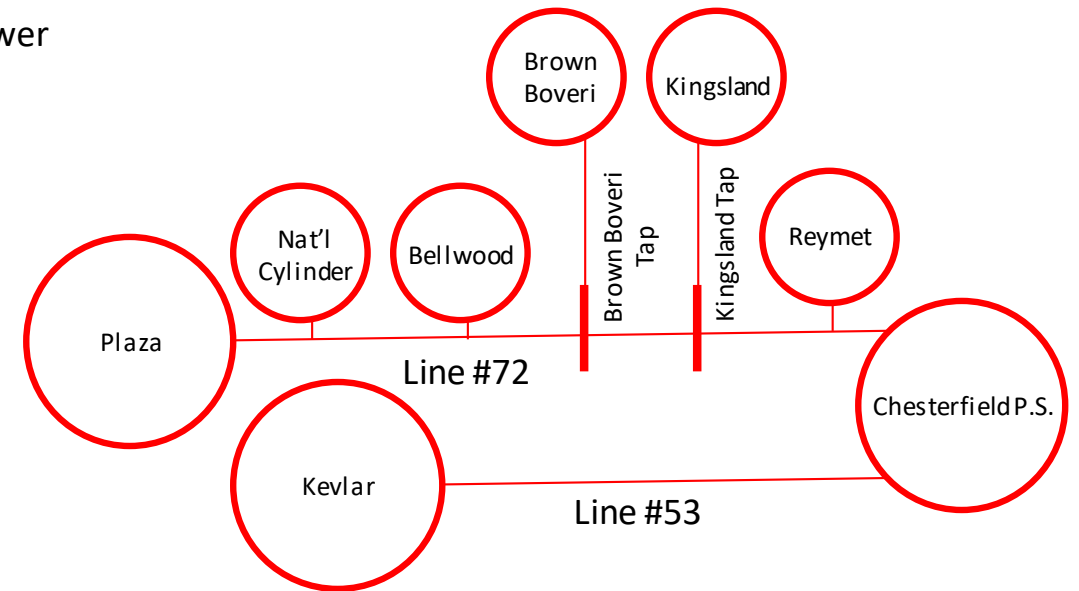
Alternatives Considered:

No feasible alternatives

Projected In-service Date: 09/30/2022

Project Status: Engineering

Model: 2025 RTEP



Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2021-0011

Process Stage: Solution Meeting 03/18/2021

Previously Presented: Need Meeting 02/16/2021

Project Driver: Customer Service

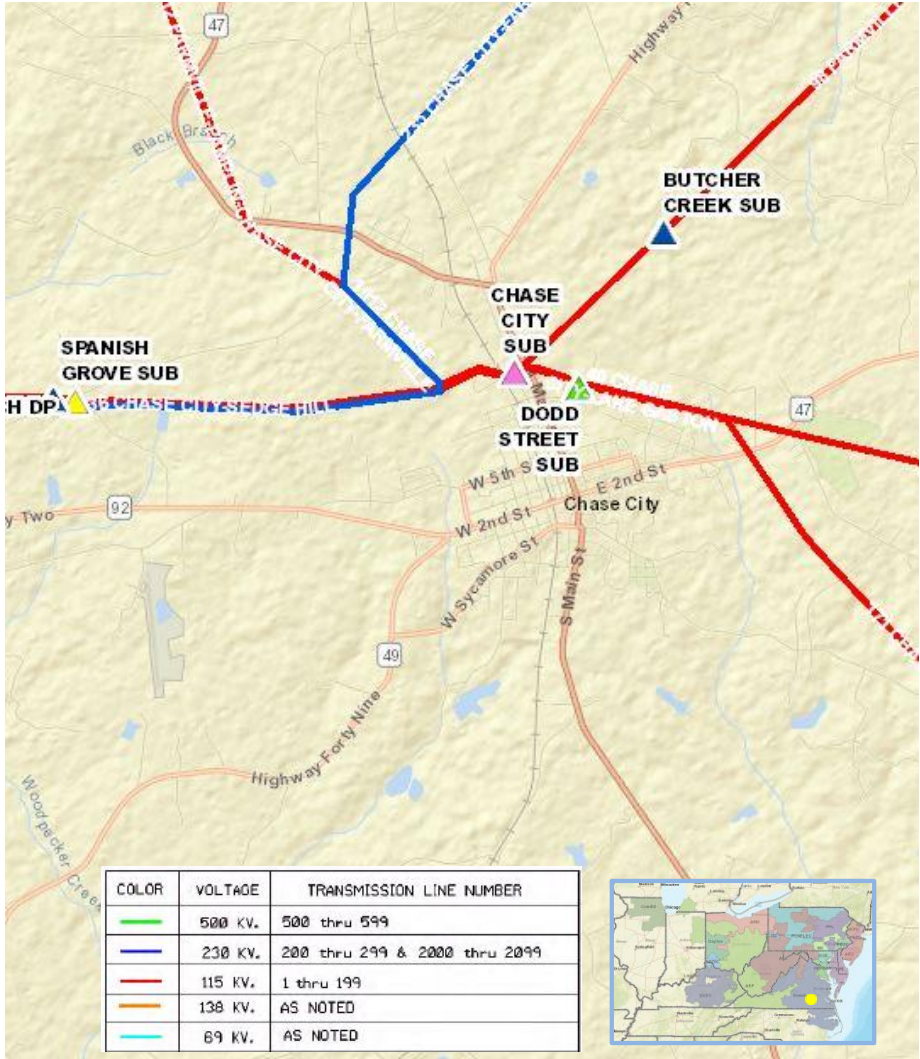
Specific Assumption References:

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, 22.4 MVA distribution transformer at Chase City Substation in Mecklenburg County. The new transformer is needed to mitigate load loss for a transformer contingency. Requested in-service date is 12/31/2021.

Initial In-Service Load	Projected 2026 Load
Winter: 19.1 MW	Summer: 19.7 MW



Dominion Transmission Zone: Supplemental Chase City 115kV Delivery- Add 2nd TX - DEV

Need Number: DOM-2021-0011

Process Stage: Solutions Meeting 03/18/2021

Proposed Solution:

Install a 1200 Amp, 25kAIC circuit switcher and associated equipment (bus, switches, relaying, etc.) to feed the new transformer at Chase City.

Estimated Project Cost: \$0.5 M

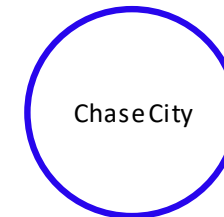
Alternatives Considered:

No feasible alternatives

Projected In-service Date: 12/31/2021

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

3/8/2021 – V1 – Original version posted to pjm.com

3/11/2021 – V1 – Side #8 updated RTEP Model, Slide #6
updated RTEP Model and Projected In-service Date