

Dominion Supplemental Projects

Transmission Expansion Advisory
Committee
February 4, 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 Customer Load Request

Need Number: DOM-2020-0001

Process Stage: Need Meeting 02/04/2020

Project Driver: Customer Service

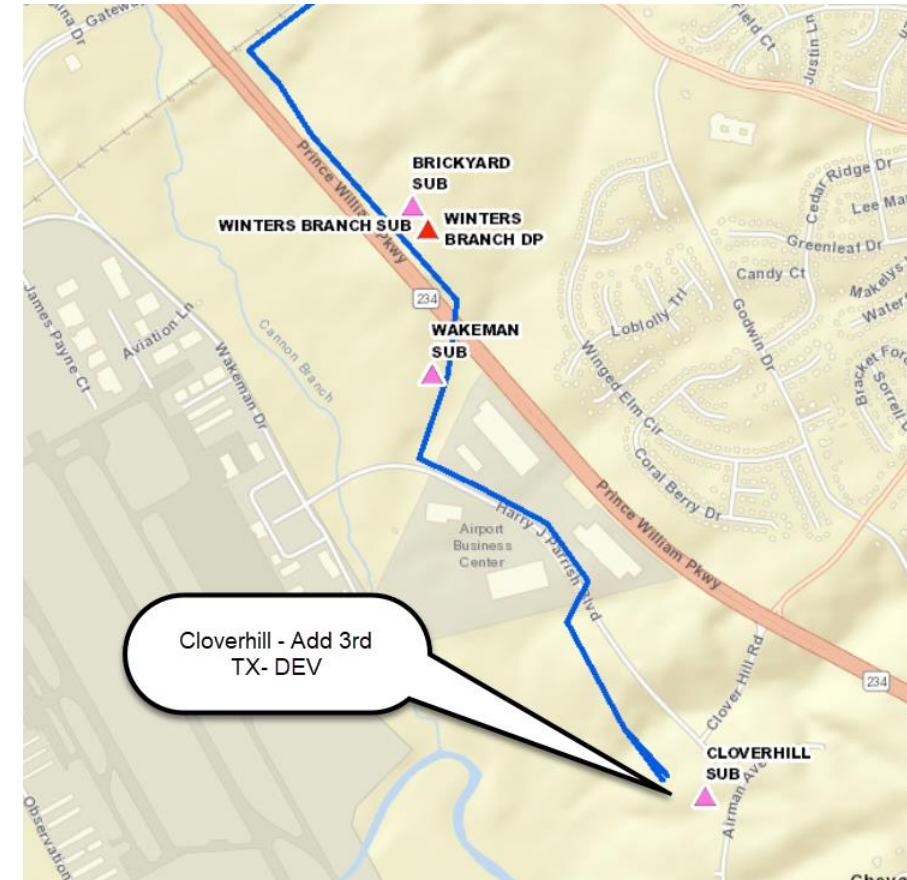
Specific Assumption References:

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 3rd, 84 MVA distribution transformer at Cloverhill Substation in Prince William County. The new transformer is being driven by continued load growth in the area and contingency loading for loss of one of the existing transformers. Requested in-service date is 06/01/2022.

Initial In-Service Load	Projected 2025 Load
Summer: 137.2 MW	Summer: 272.2 MW



COLOR	VOLTAGE	TRANSMISSION LINE NUMBER
Green	500 KV.	500 thru 599
Blue	230 KV.	200 thru 299 & 2000 thru 2099
Orange	115 KV.	1 thru 199
Red	138 KV.	AS NOTED
Cyan	69 KV.	AS NOTED

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 TX Health Assessment (THA)

Need Number: DOM-2019-0027

Process Stage: Solutions Meeting 02/04/2020

Previously Presented: Need Meeting – 07/11/2019

Project Driver: TX Health Assessment (THA)

Specific Assumption References:

See details on Equipment Material Condition, Performance and Risk in Dominion's Planning Assumptions presented in December 2018.

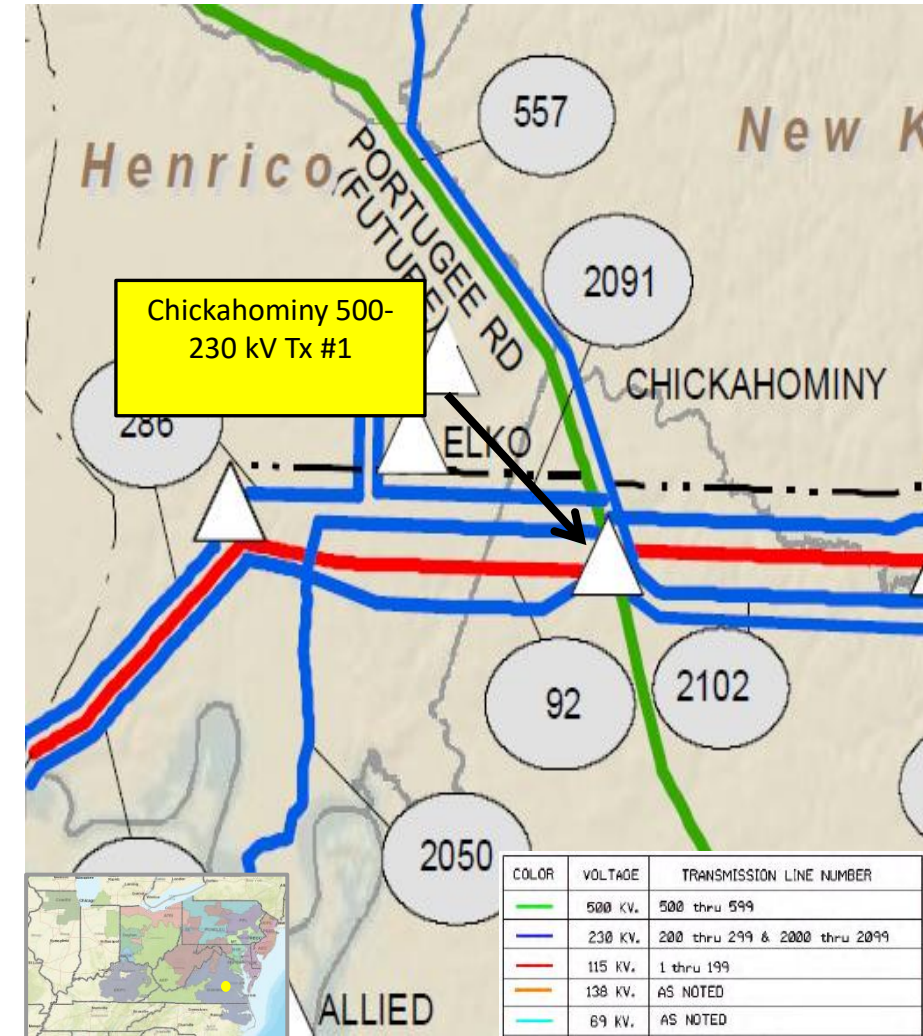
Problem Statement:

Chickahominy 500-230 kV 840 MVA transformer #1 needs to be replaced as a result of Dominion's ongoing transformer health assessment (THA) process. This process considers design characteristics, past electrical test results, dissolved gas-in-oil test results, age, ongoing maintenance issues, and past failures of similar designed transformers.

This transformer was manufactured in 1987 and is the last shell transformer on the Dominion System, these transformers have known issues.

Drivers for replacement are:

- Reduced BIL Ratings
- Previously remanufactured following failure
- Transformers of this manufacture are considered suspect due to previous transformer failures



Dominion Transmission Zone: Supplemental Chickahominy 500-230 kV TX #1

Need Number: DOM-2019-0027

Process Stage: Solutions Meeting 02/04/2020

Proposed Solution:

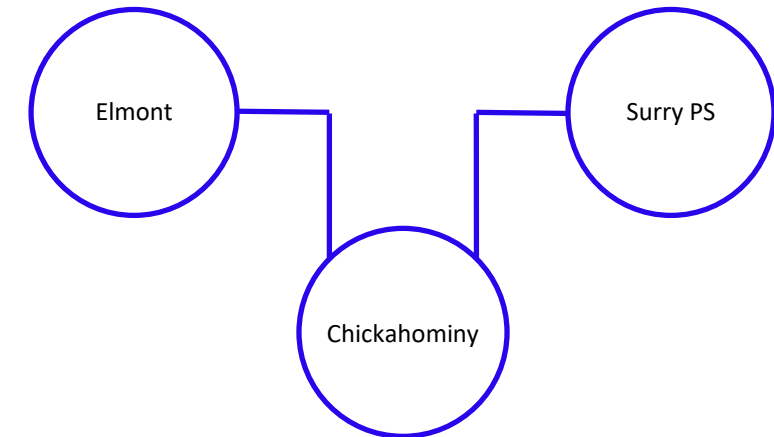
Replace the three single phase banks and one spare bank with new units.

Actual Project Cost: \$14.1M

Alternatives Considered: No feasible alternatives

Project Status: Complete

Model: 2023 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

01/24/2020 – V1 – Original version posted to pjm.com.

01/31/2020 – V2 – Updated transformer cost information on slide 6.