

Dominion Supplemental Projects

Transmission Expansion Advisory
Committee
March 10, 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-2020-0003

Process Stage: Need Meeting 03/10/2020

Project Driver: Customer Service

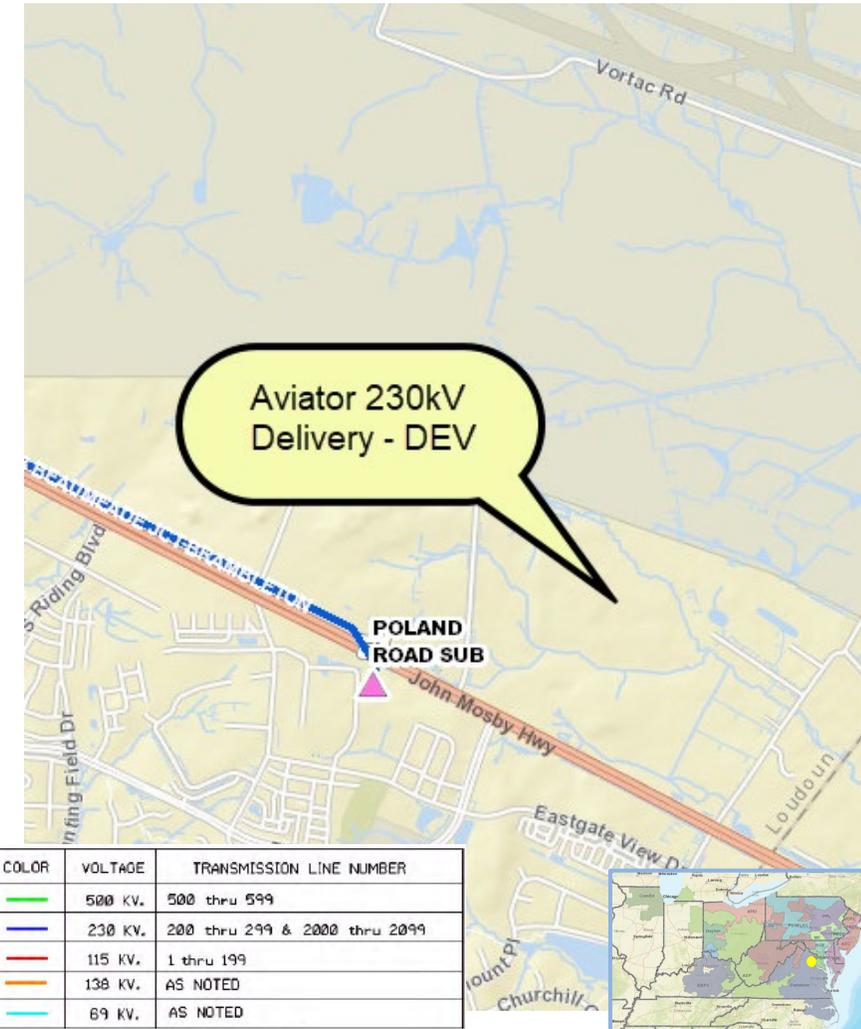
Specific Assumption References:

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 for a new substation (Aviator) to accommodate a new datacenter campus in Loudoun County with a total load in excess of 100MW. Requested in-service date is 6/01/2023.

Initial In-Service Load	Projected 2025 Load
Summer: 27.0 MW	Summer: 116.0 MW



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

Need Number: DOM-2020-0006

Process Stage: Need Meeting 03/10/2020

Project Driver: Equipment Material Condition, Performance and Risk

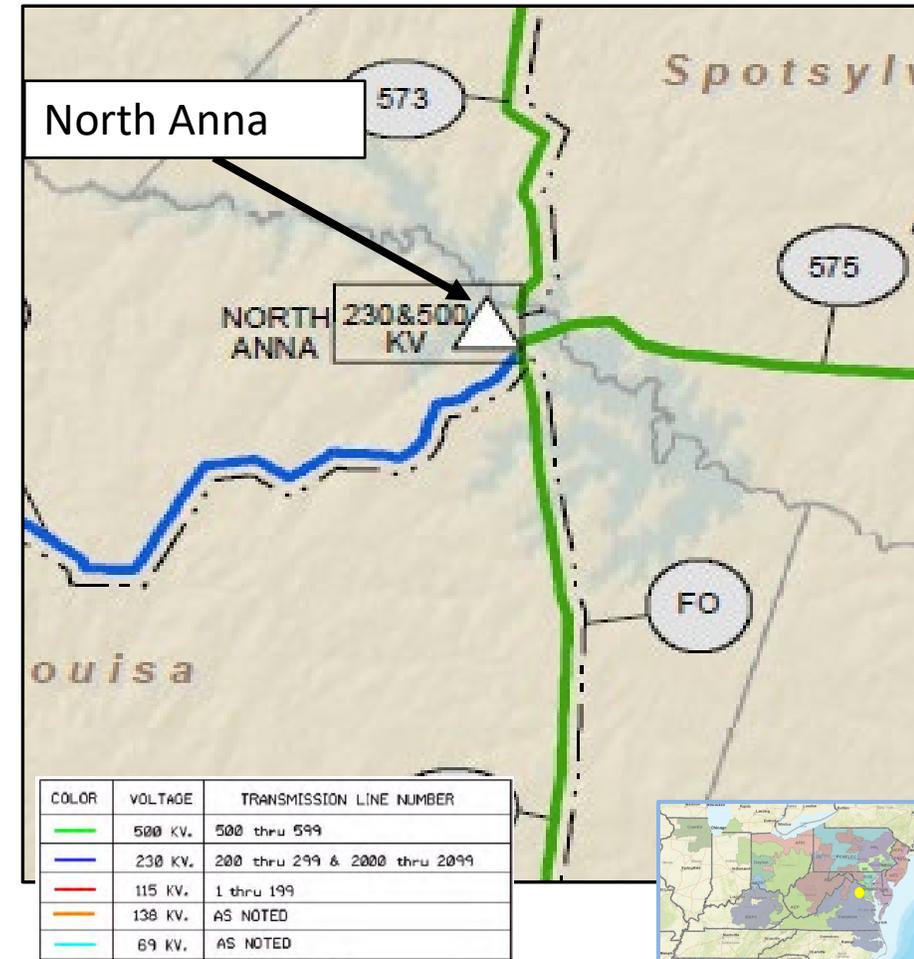
Specific Assumption References:

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

Problem Statement:

North Anna Station 500 kV Breakers 57302 & H602 are live tank breakers with external CTs and continue to have ongoing reliability issues. They were built in 2002.

No internal breaker condition monitoring is available with these type of breakers.



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 Customer Load Request

Need Number: DOM-2020-0001

Process Stage: Solutions Meeting 03/10/2020

Previously Presented: Need Meeting 02/04/2020

Project Driver: Customer Service

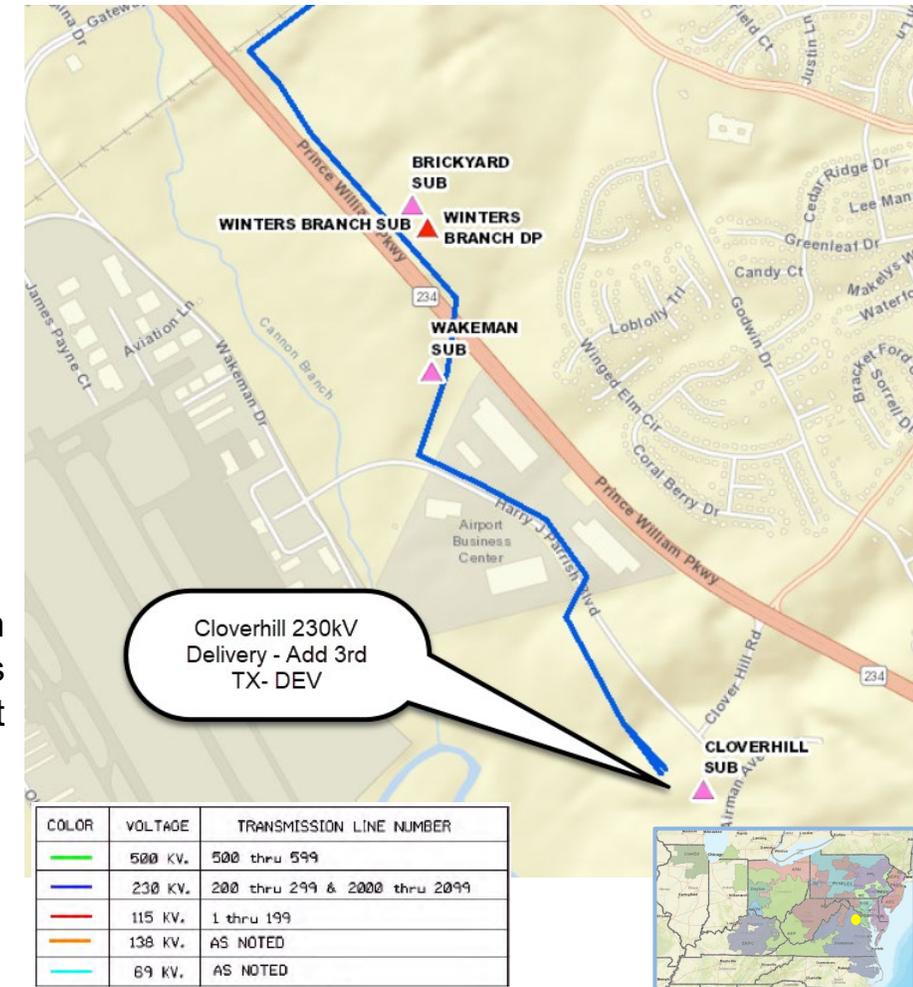
Specific Assumption References:

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 datacenter load growth and alternate feed contract reservations. Requested in-service date is 6/01/2022.

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



Dominion Transmission Zone: Supplemental Cloverhill 230kV Delivery- Add 3rd TX - DEV

Need Number: DOM-2020-0001

Process Stage: Solutions Meeting 03/10/2020

Proposed Solution:

Install a 1200 Amp, 50kAIC circuit switcher and associated equipment (bus, switches, relaying, etc.) to feed the new transformer at Cloverhill.

Estimated Project Cost: \$0.25 M

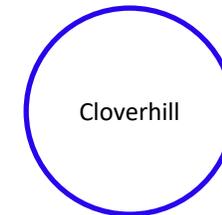
Alternatives Considered:

No feasible alternatives

Projected In-service Date: 06/01/2022

Project Status: Engineering

Model: 2023 RTEP



Supplemental Projects Pre-M3 Process

Dominion Transmission Zone: Supplemental Varina 230kV Delivery - DEV

Existing s0140 Scope Modification and Cost Increase

Date Project Last Presented: 06/05/2008 TEAC

Problem Statement:

DEV Distribution has revised their request for a new 230kV Varina Substation in Henrico County with a total expected load less than 100MW. County opposition has pushed this station from its original location to a new site near Darbytown, on a different transmission corridor. Requested in-service date is 11/15/2021.

Initial In-Service Load	Projected 2025 Load
Winter: 27.0 MW	Winter: 50.3 MW

Original Solution:

Cut 230kV Line #284 (Basin-Northeast) and install three switches to create a tee-tap to feed the new Varina Substation. Install a 230kV circuit switcher on the high side of the new transformer. Perform any necessary associated transmission level work to support this new delivery location.

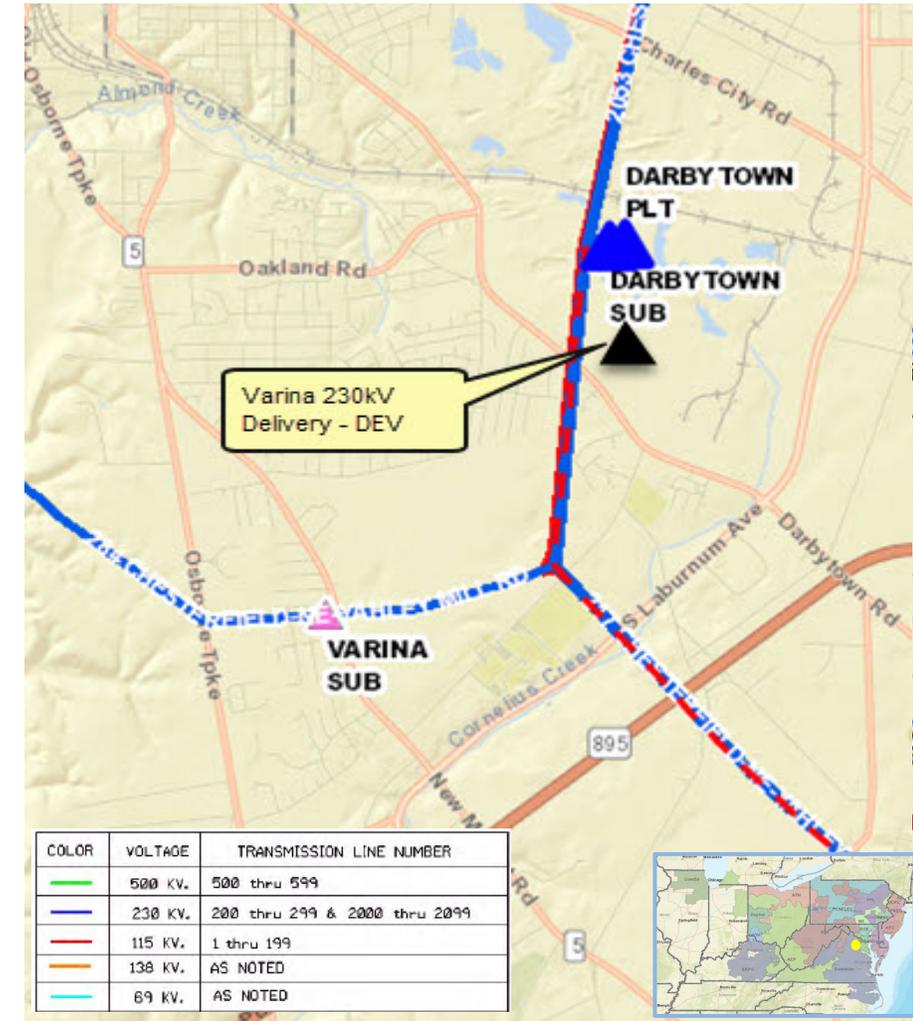
Revised Solution:

Cut 230kV Line #217 (Chesterfield-Lakeside) and install three switches to create a tee-tap to feed the new Varina Substation. Install a 230kV circuit switcher on the high side of the new transformer. Perform any necessary associated transmission level work to support this new delivery location.

Revised Estimated Project Cost: \$1.0 M (Original \$0.7 M)

Projected In-service Date: 11/15/2021

Project Status: Engineering



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

02/28/2020 – V1 – Original version posted to pjm.com.

03/10/2020 – V2 – Updated slide 7 to reference the correct substation.