

Dominion Supplemental Projects

Transmission Expansion Advisory
Committee
September 1, 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-2020-0019

Process Stage: Need Meeting 09/01/2020

Project Driver: Customer Service

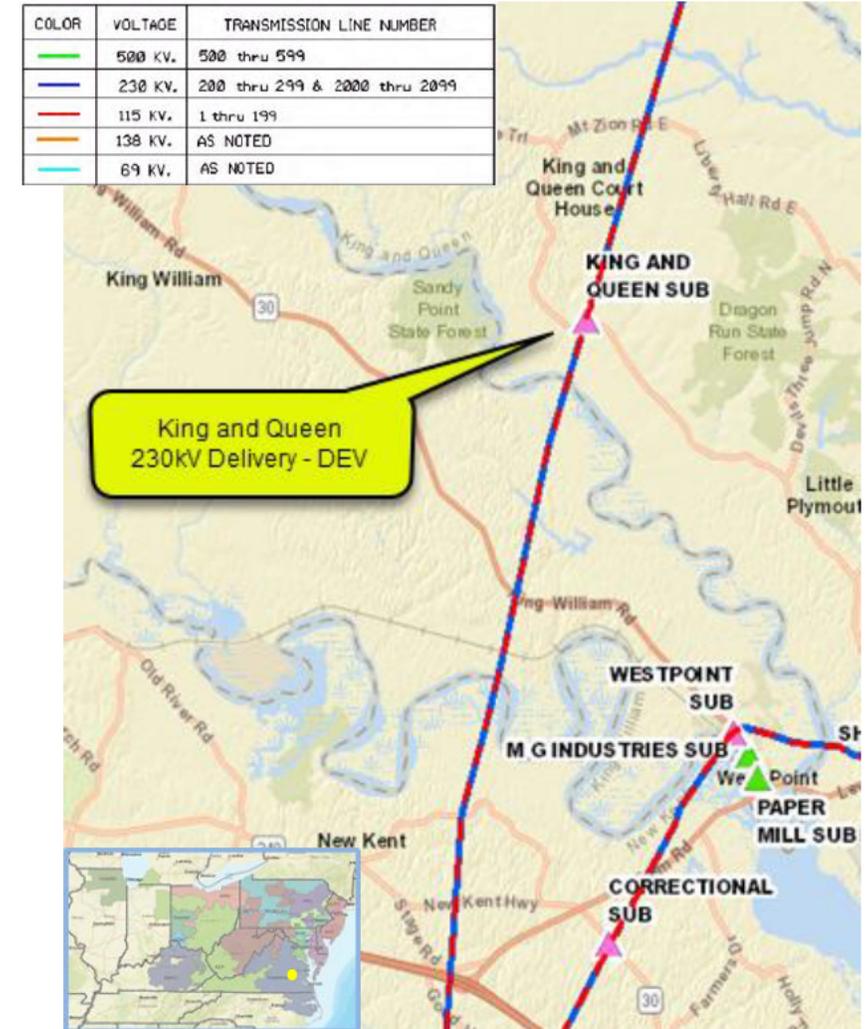
Specific Assumption References:

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 (King and Queen) to replace the source to an island of load that will be lost when a river crossing is eliminated as part of the 230kV Line #224 (Lanexa-Northern Neck) rebuild project. Requested in-service date is 06/01/2023.

Initial In-Service Load	Projected 2025 Load
Summer: 3.3 MW	Summer: 3.5 MW



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

Need Number: DOM-2020-0028

Process Stage: Need Meeting 9/1/2020

Project Driver: End of Life – Transmission Lines Below 500 kV

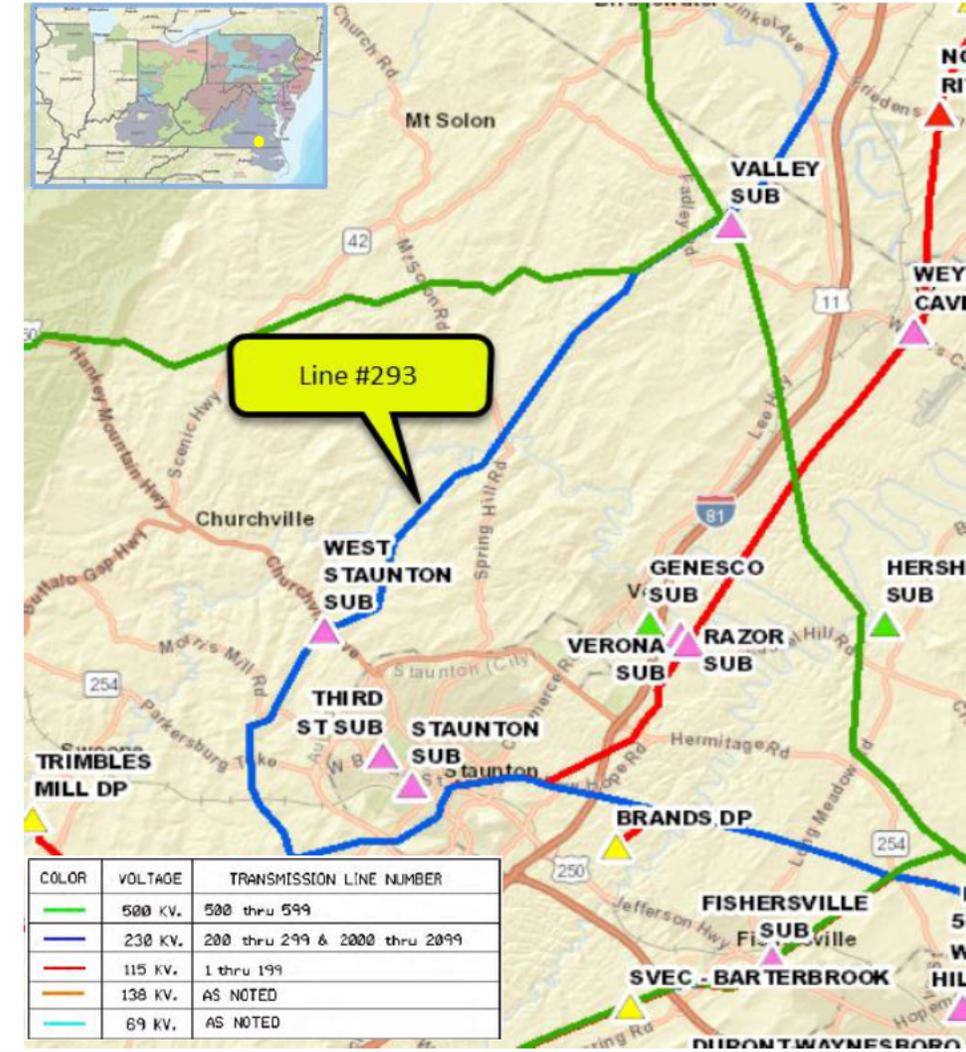
Specific Assumption References:

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 replace 47 existing transmission towers (Staunton – Valley) of Line#293.

- The 293 line was constructed largely on wood H-frame structures in timeframe between 1971 and 1981. Approximately 17.8 miles of 21.27 miles of this line was constructed on wood H-frame structures and these structures are at the end of their useful life.
- Industry guidelines indicate equipment life for wood structures is 35-55 years.
- The Line #293 provides service to West Staunton substations (Dominion Distribution) with approximately 46.6 MW tapped load.



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

Need Number: DOM-2020-0030

Process Stage: Need Meeting 09/01/2020

Project Driver: End of Life – Transmission Lines Below 500kV

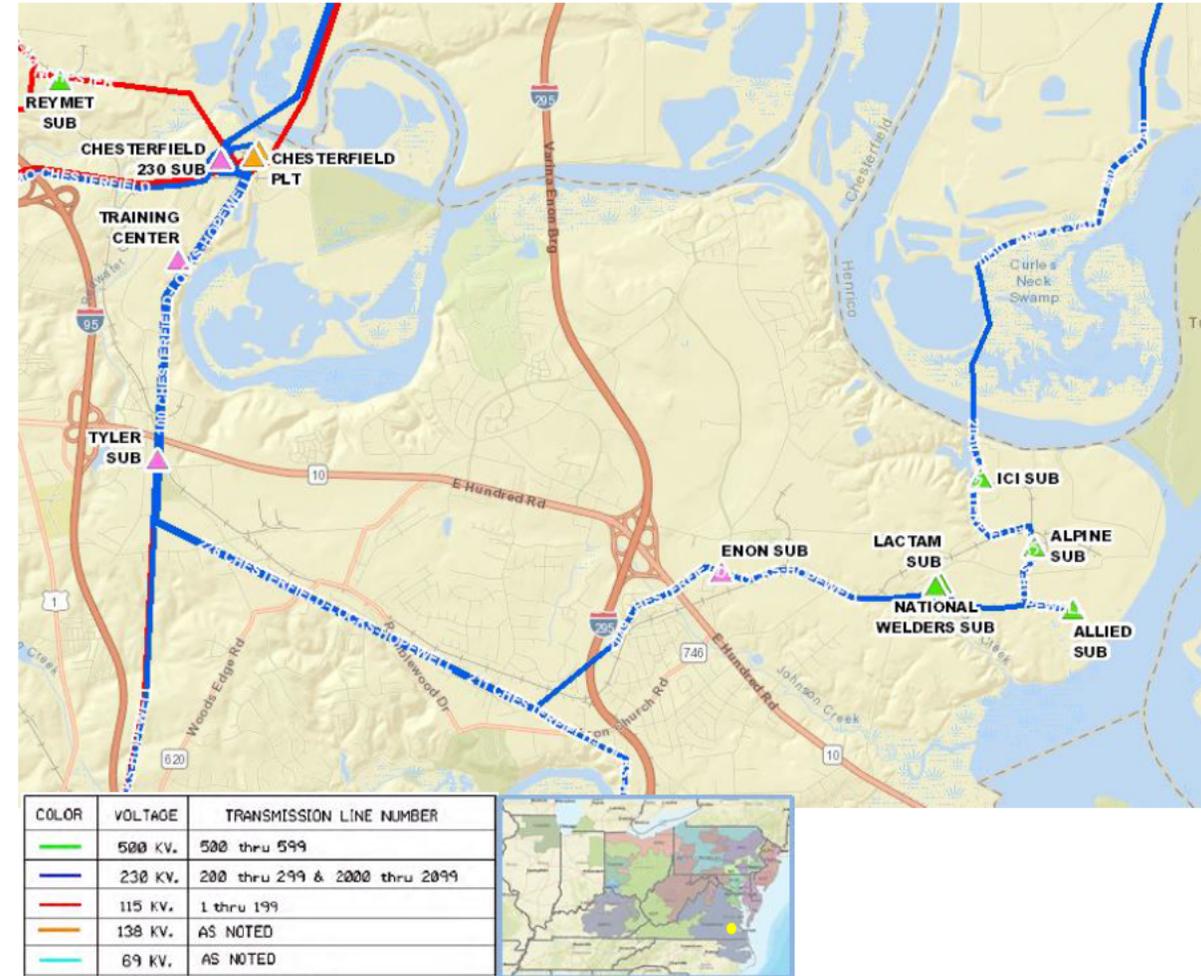
Specific Assumption References:

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 replace 16 existing transmission towers (Chesterfield – Enon segment) of Line#2049 (Chesterfield – Allied).

- Approximately 2.9 miles of 9.9 miles of this line was constructed on CORTEN structures and these structures are at the end of their useful life.
- The Line #2049 provides service to Enon and National Welders substations with approximately 33 MW and 15 MW tapped load.
- Removal of the Chesterfield – Enon segment will create a radial line exceeding Dominion’s 700 MW/miles criteria.



Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2020-0031

Process Stage: Need Meeting 09/01/2020

Project Driver: Customer Service

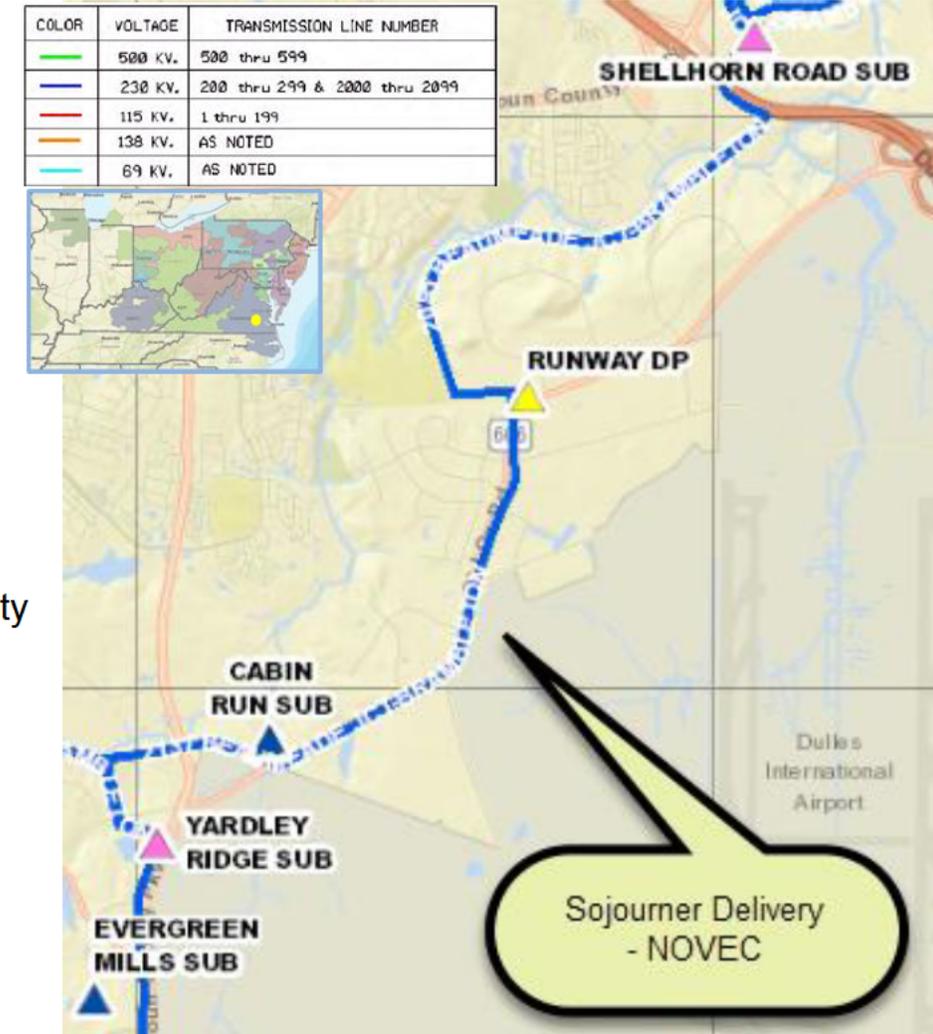
Specific Assumption References:

Customer load request will be evaluated per Dominion’s Facility Interconnection Requirements Document and Dominion’s Transmission Planning Criteria.

Problem Statement:

NOEVC has submitted a DP Request for a new substation (Sojourner) in Loudoun County with a total load in excess of 100MW. Requested in-service date is 03/15/2022.

Initial In-Service Load	Projected 2025 Load
Summer: 10.0 MW	Summer: 80.0 MW



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-2020-0026

Process Stage: Solutions Meeting 09/01/2020

Previously Presented: Need Meeting 08/04/2020

Project Driver: Customer Service

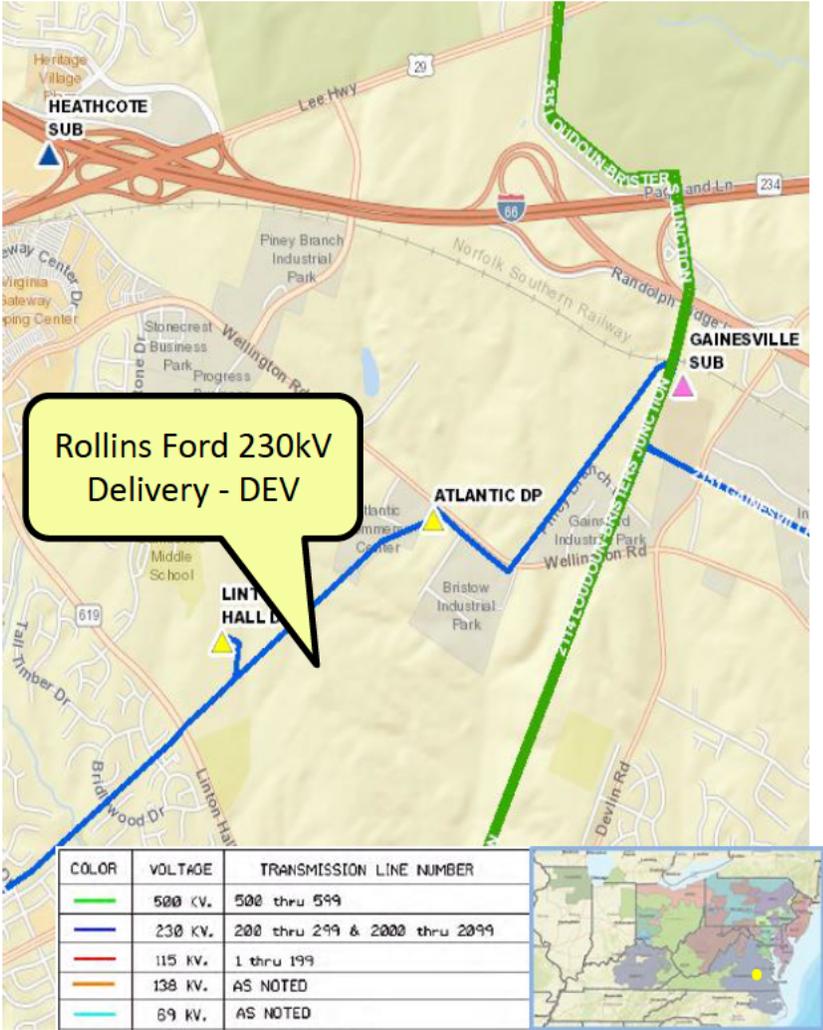
Specific Assumption References:

Customer load request will be evaluated per Dominion’s Facility Interconnection Requirements Document and Dominion’s Transmission Planning Criteria.

Problem Statement:

NOVEC has submitted a DP Request for a new substation (Rollins Ford) to accommodate a new datacenter campus in Prince William County. NOVEC has requested a 230kV ring bus connection. Due to the total load requested less than 100 MW, NOVEC will be required to pay excess facilities for all equipment required for the ring bus configuration above a T-tap. Requested in-service date is 12/31/2021.

Initial In-Service Load	Projected 2025 Load
Summer: 1.0 MW	Summer: 53.7 MW



Dominion Transmission Zone: Supplemental Rollins Ford 230kV Delivery - DEV

Need Number: DOM-2020-0026

Process Stage: Solutions Meeting 09/01/2020

Proposed Solution:

Interconnect the new substation by cutting and extending Line #2114 (Gainesville - Remington CT) to the proposed Rollins Ford Substation. Terminate both ends into a four-breaker ring arrangement to create a Rollins Ford - Gainesville line and a Rollins Ford - Remington CT line.

Estimated Project Cost: \$10.0 M

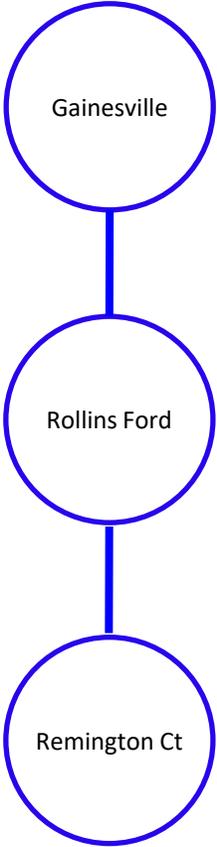
Alternatives Considered:

No feasible alternatives

Projected In-service Date: 12/31/2021

Project Status: Engineering

Model:



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

Need Number: DOM-2020-0027

Process Stage: Solutions Meeting 09/01/2020

Previously Presented: Need Meeting 08/04/2020

Project Driver: Equipment Material Condition, Performance, and Risk

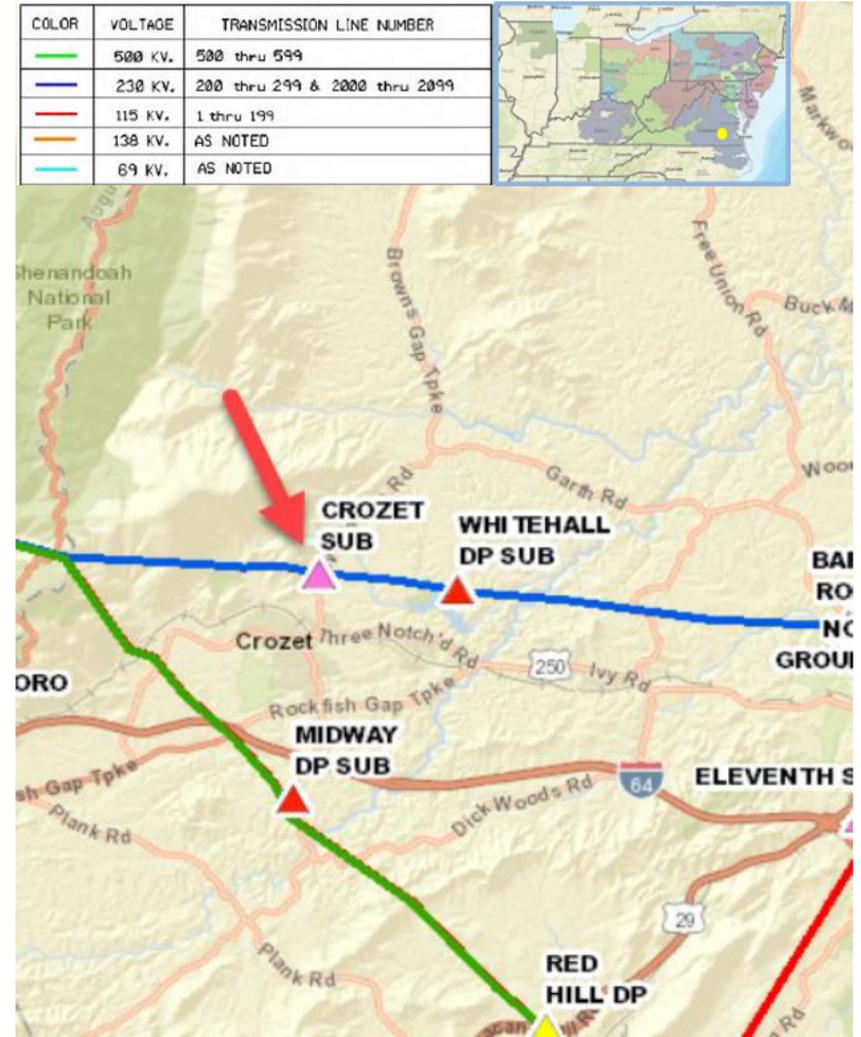
Specific Assumption References:

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:

Line #233 switches 23339 and 23336 are less than 15 years and have operating issues. These issues include the following:

- Multiple bottle failures
- The vertical drive pipe U-joints have broken multiple times
- System Control Center's records show they are inoperable (blue tagged)



Dominion Transmission Zone: Supplemental Replace switches 23339 and 23336 of Line# 233

Need Number: DOM-2020-0027

Process Stage: Solutions Meeting 09/01/2020

Proposed Solution:

Replace two backbone structures, modify existing tower structures along with some conductor work. The replacement switches will be 3000 Amp to align with Dominion's 230 kV system standard. The section of Line #233 from Doods to Crozet will have a summer rating of 925 MVA after the switches have been replaced.

Estimated Project Cost: \$1.5 M

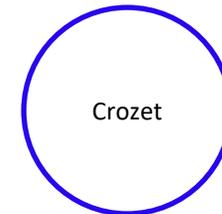
Alternatives Considered:

No feasible alternatives

Projected In-service Date: 10/27/2020

Project Status: Engineering

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

8/20/2020 – V1 – Original version posted to pjm.com.