

Dominion Supplemental Projects

Transmission Expansion Advisory
Committee
May 9, 2023

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-2023-0033

Process Stage: Need Meeting 05/09/2023

Project Driver: Customer Service

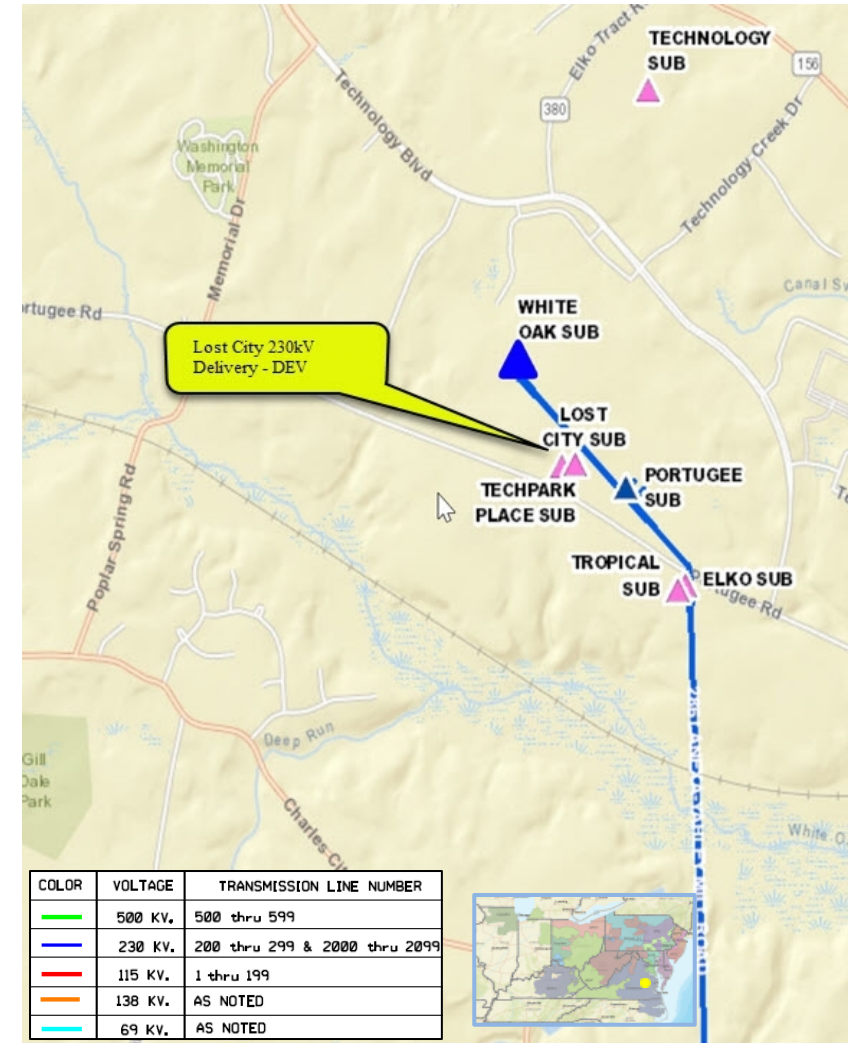
Specific Assumption References:

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 (Lost City) to serve a data center in Henrico County with a total load in excess of 100 MW. The requested in-service date is 04/30/2025.

Initial In-Service Load	Projected 2028 Load
Summer: 126.0 MW Winter: 0.0 MW	Summer: 192.0 MW Winter: 180.0 MW



Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2023-0034

Process Stage: Need Meeting 05/09/2023

Project Driver: Customer Service

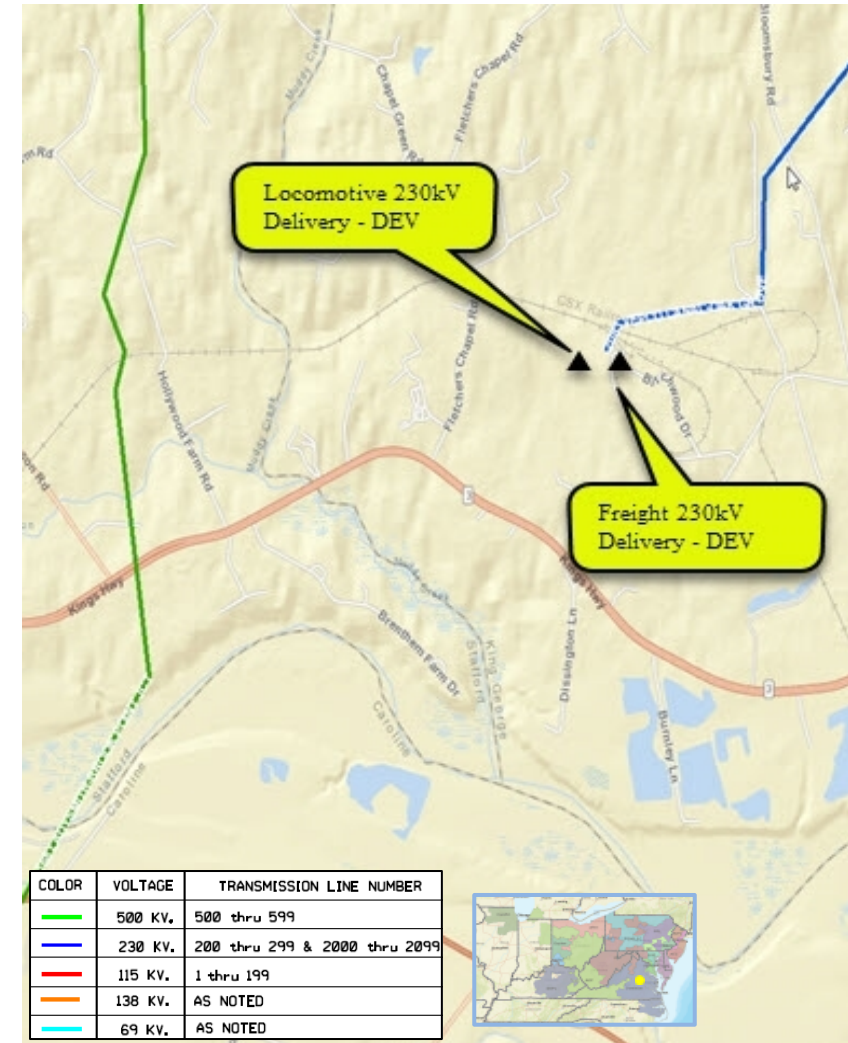
Specific Assumption References:

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 (Freight) to serve a data center in King George County with a total load in excess of 100 MW. The requested in-service date is 08/05/2028.

Initial In-Service Load	Projected 2028 Load
Summer: 2.0 MW Winter: 0.0 MW	Summer: 2.0 MW Winter: 0.0 MW



Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2023-0031

Process Stage: Need Meeting 05/09/2023

Project Driver: Customer Service

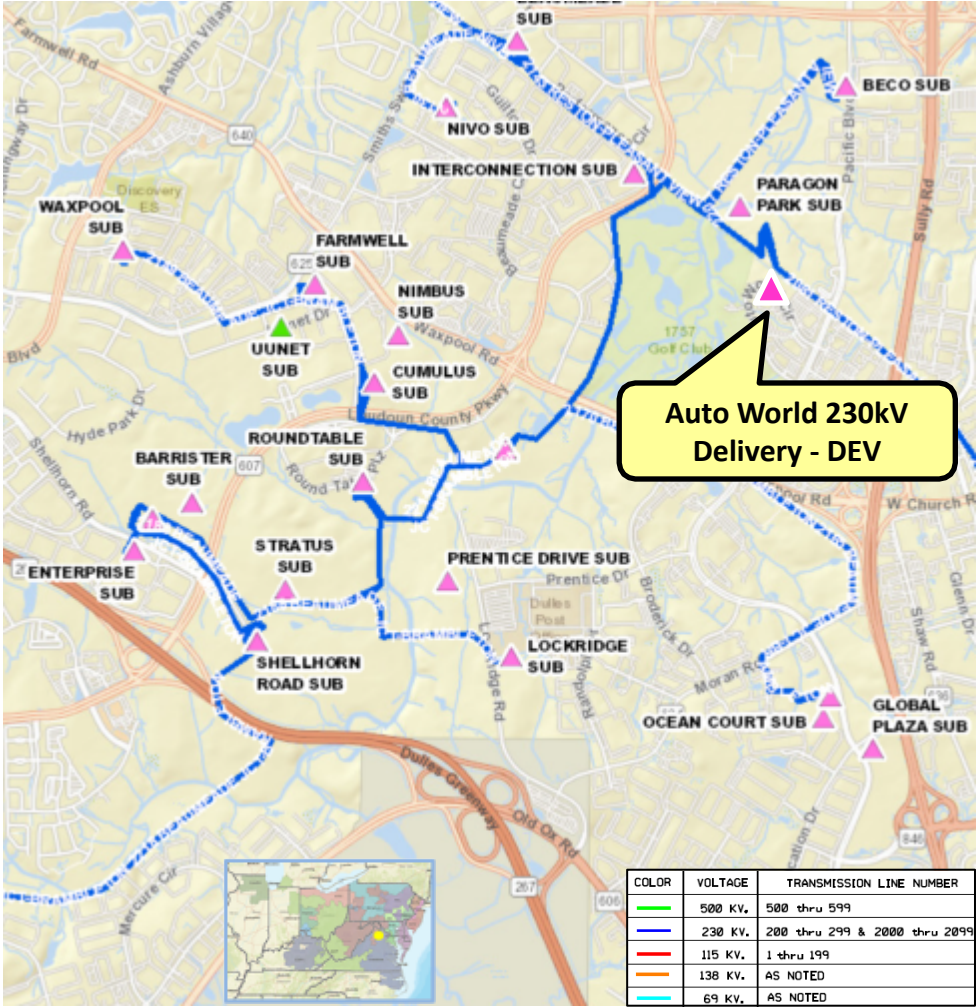
Specific Assumption References:

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 (Auto World) to serve a data center campus in Loudoun County with a total load in excess of 100 MW. Requested in-service date is 06/15/2026.

Initial In-Service Load	Projected 2028 Load
Summer: 26.0 MW	Summer: 181.2 MW
Winter: 0.0 MW	Winter: 160.0 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-2023-0027

Process Stage: Solutions Meeting 05/09/2023

Previously Presented: Need Meeting 04/11/2023

Project Driver: Customer Service

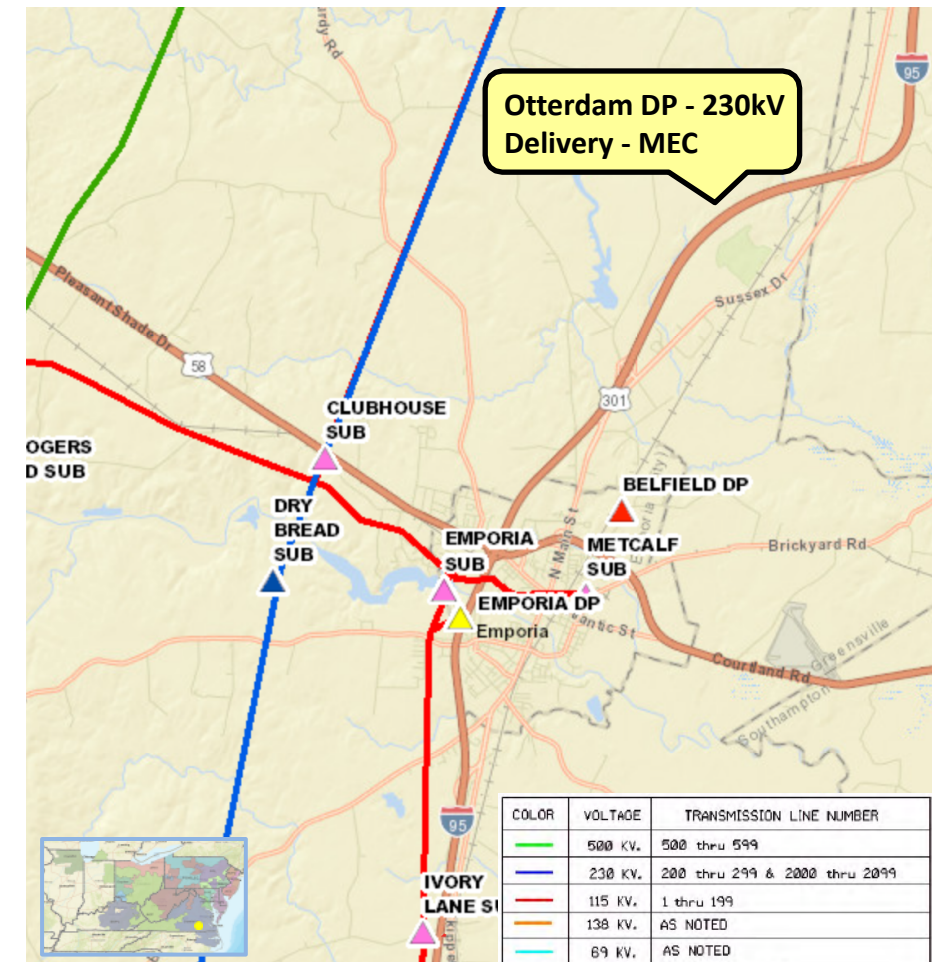
Specific Assumption References:

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

Problem Statement:

ODEC on behalf of Mecklenburg Electric Cooperative (MEC) has submitted a delivery point request for a new delivery point at the MAMaC site in Greensville County, VA. MEC is requesting to construct a transmission line under the economic development legislative pilot program for business parks. The total load is in excess of 100 MW. The customer requests service by December 31, 2026.

Initial In-Service Load	Projected 2028 Load
Summer: 30.0 MW	Summer: 80.0 MW



Dominion Transmission Zone: Supplemental Otterdam 230kV Delivery - MEC

Need Number: DOM-2023-0027

Process Stage: Solutions Meeting 05/09/2023

Proposed Solution:

- Split Line #238 (Clubhouse - Carson) near structure 238/11 and extend double circuit 230kV lines for approx. 3 miles to the proposed Otterdam Substation.
- Terminate the two 230kV lines into 4 breaker ring bus to create a Clubhouse - Otterdam line and a Carson - Otterdam line.

Estimated Project Cost: \$25.0 M (Total)

Transmission Line	\$13M
Substation	\$12M

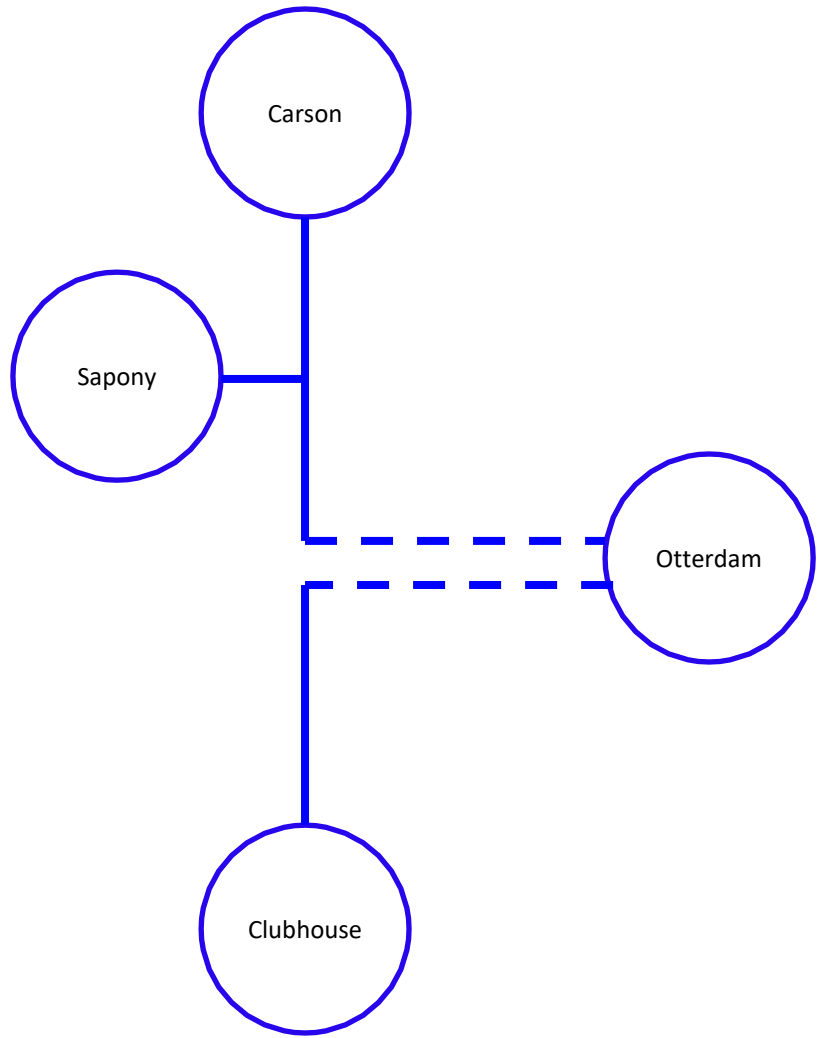
Alternatives Considered:

None – The 115kV system in the area is inadequate.

Projected In-service Date: 12/31/2026

Project Status: Engineering

Model: 2027 RTEP



Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2023-0006

Process Stage: Solutions Meeting 05/09/2023

Previously Presented: Need Meeting 03/07/2023

Project Driver: Customer Service

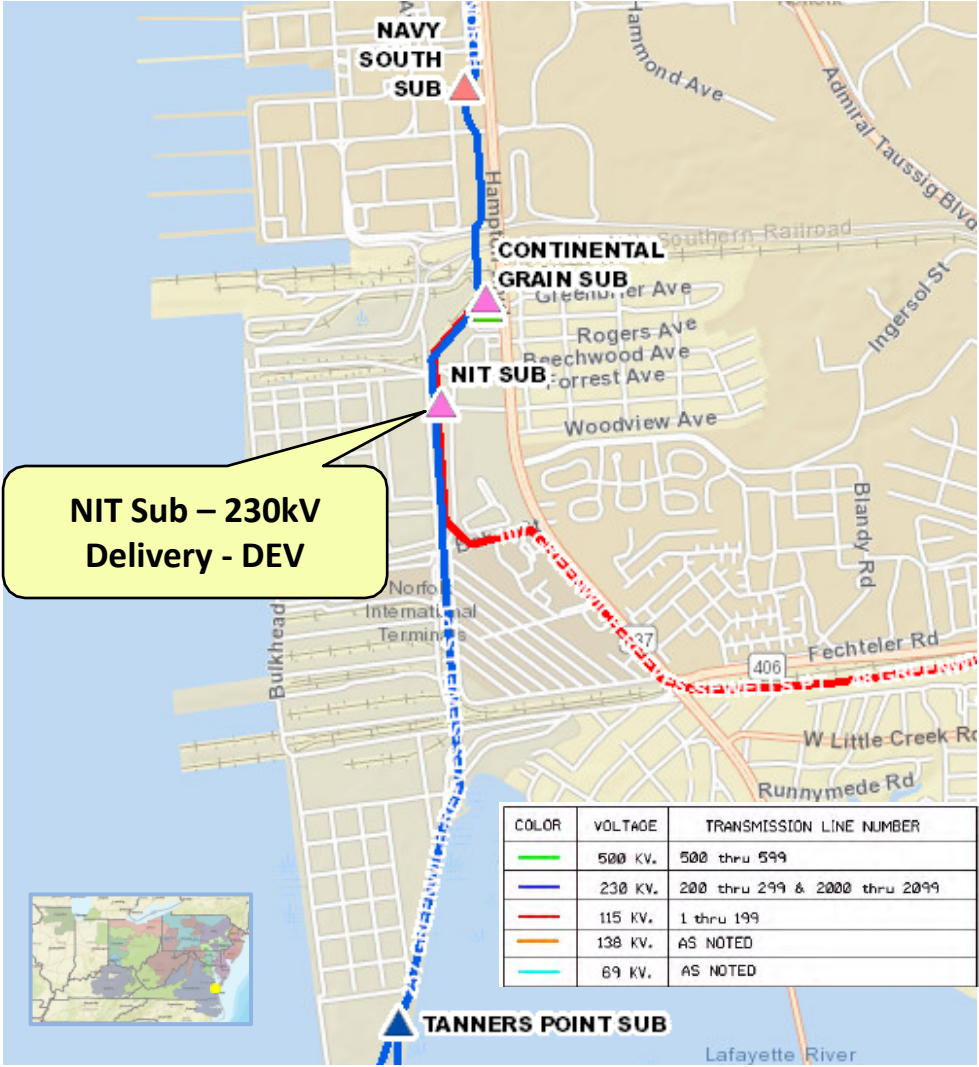
Specific Assumption References:

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 delivery point request for a new substation (NIT) in Norfolk, VA with a total load less than 100MW. The customer requests service by June 1, 2025.

Initial In-Service Load	Projected 2028 Load
Summer: 49.3 MW Winter: 49.3 MW	Summer: 49.3 MW Winter: 49.3 MW



Dominion Transmission Zone: Supplemental NIT Substation 230kV Delivery - DEV

Need Number: DOM-2023-0006

Process Stage: Solutions Meeting 05/09/2023

Proposed Solution:

Tap Line #257 (Sewells Point - Churchland) near structure 257/56,2099/56 and extend a single circuit 230kV tap to NIT substation.

Estimated Project Cost: \$5.7 M (Total)

Transmission Line \$4.5M

230kV Substation \$1.2M

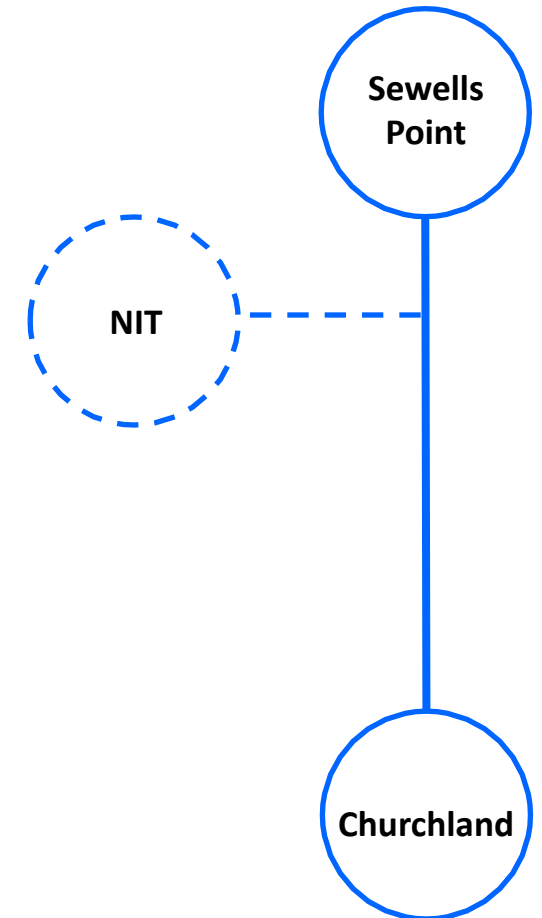
Alternatives Considered:

None – The new substation is adjacent to an existing transmission line.

Projected In-service Date: 6/01/2025

Project Status: Engineering

Model: 2027 RTEP



Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2023-0018

Process Stage: Solutions Meeting 05/09/2023

Previously Presented: Need Meeting 04/11/2023

Project Driver: Customer Service

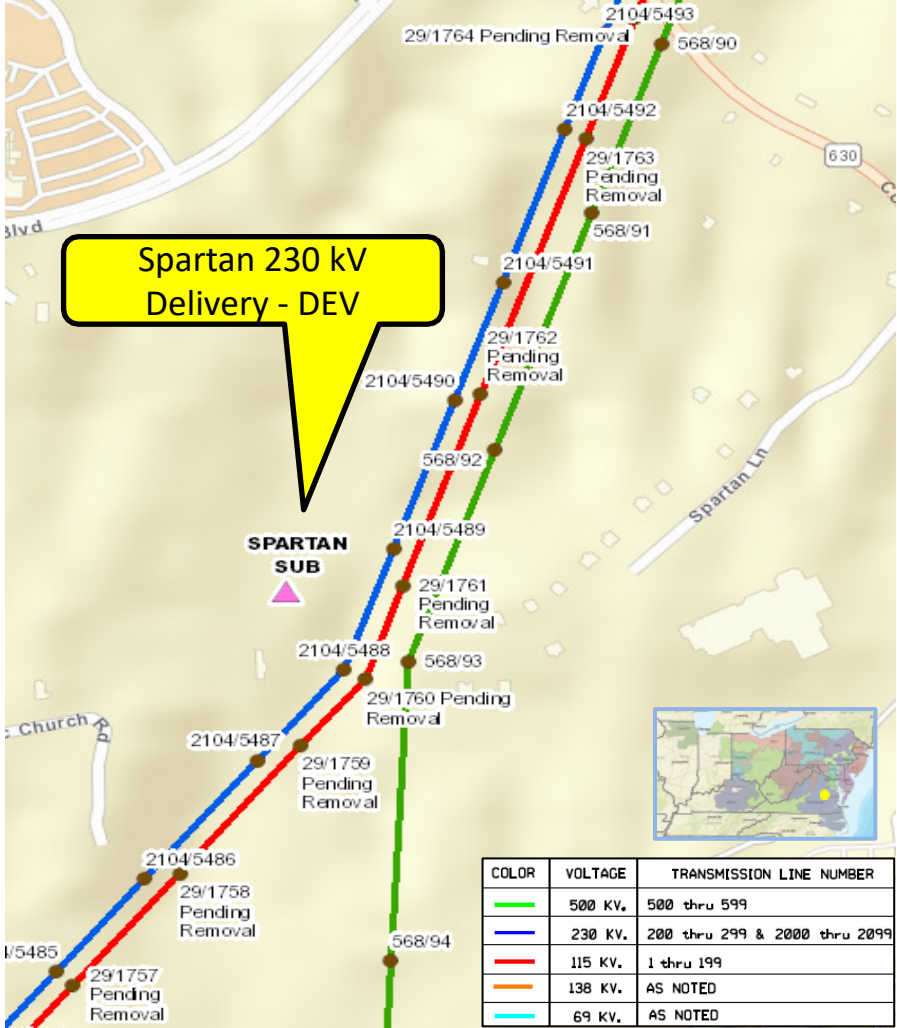
Specific Assumption References:

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 (Spartan) to serve a new data center in Stafford County with a total load in excess of 100 MW. The requested in-service date is 05/02/2025.

Initial In-Service Load	Projected 2028 Load
Summer: 69.0 MW Winter: 0.0 MW	Summer: 110.0 MW Winter: 105.0 MW



Dominion Transmission Zone: Supplemental Spartan 230kV Delivery Point

Need Number: DOM-2023-0018

Process Stage: Solutions Meeting 05/09/2023

Proposed Solution:

Interconnect the new substation by cutting and extending Line #2104 to the proposed Spartan Substation. Lines to terminate in a 230kV four-breaker ring arrangement with an ultimate arrangement of a six-breaker ring.

Estimated Project Cost: \$48 M

Transmission Cost: \$12 M

Substation Cost: \$36 M

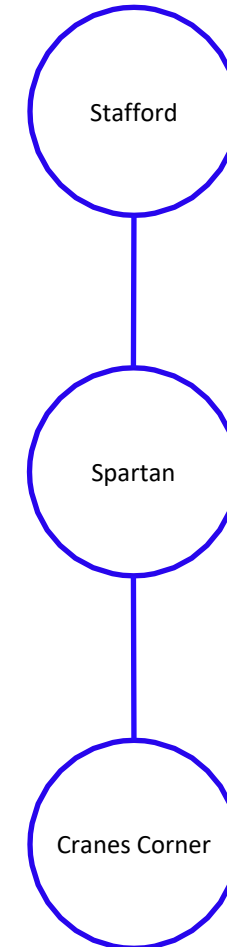
Alternatives Considered:

None – The new substation is adjacent to an existing transmission line.

Projected In-service Date: 05/02/2025

Project Status: Engineering

Model: RTEP2027



Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2023-0008

Process Stage: Solutions Meeting 05/09/2023

Previously Presented: Need Meeting 03/07/2023

Project Driver: Customer Service

Specific Assumption References:

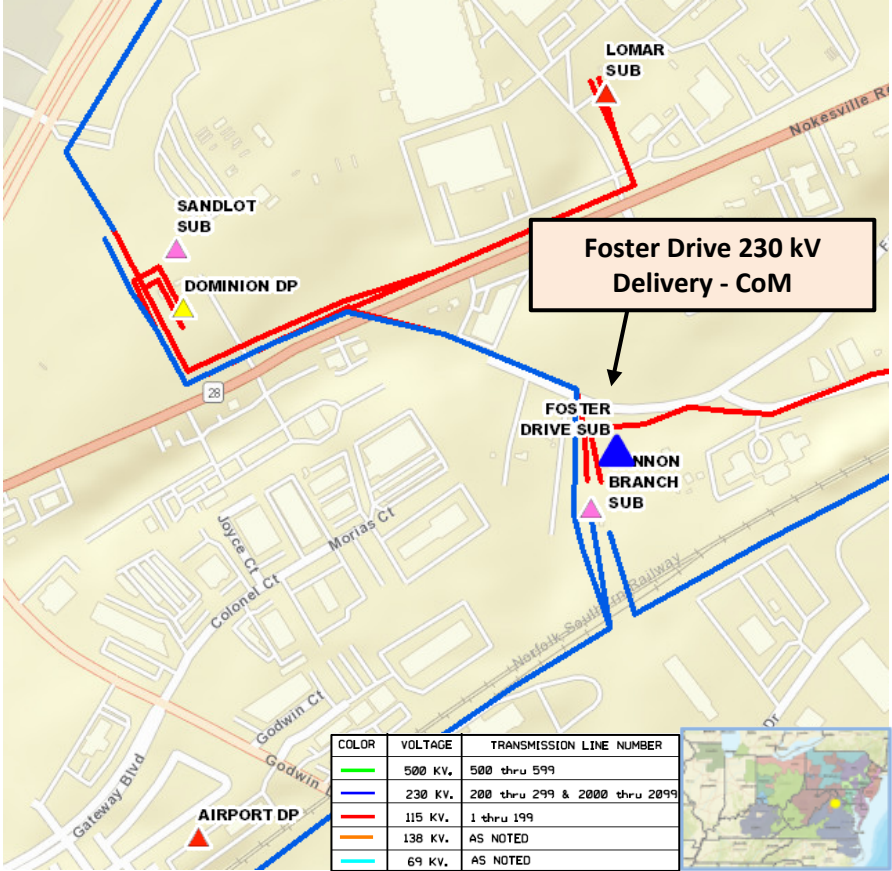
Customer load request will be evaluated per Dominion’s Facility Interconnection Requirements Document and Dominion’s Transmission Planning Criteria.

Problem Statement:

The City of Manassas has submitted a DP Request for a new substation (Foster Drive) to serve a data center complex in Manassas with a total load in excess of 100 MW.

Requested in-service date is 03/31/2025.

Initial In-Service Load	Projected 2028 Load
Summer: 100.0 MW Winter: 100.0 MW	Summer: 260.0 MW Winter: 260.0 MW



Dominion Transmission Zone: Supplemental Foster Drive 230kV Delivery - CoM

Need Number: DOM-2023-0008

Process Stage: Solutions Meeting 05/09/2023

Proposed Solution:

Interconnect the new substation by cutting and extending Line #2243 (Sandlot – Cannon Branch) to the proposed Foster Drive Substation. Lines to terminate into a 230 kV four-breaker ring arrangement with an ultimate arrangement of a six-breaker ring.

Estimated Project Cost: \$15.3M

Transmission Cost: \$0.3M

Substation Cost: \$15M

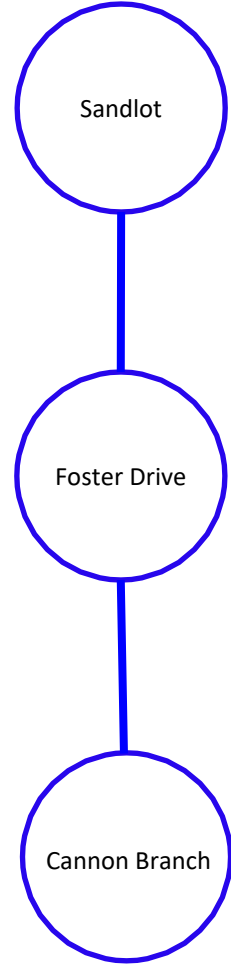
Alternatives Considered:

The new substation is adjacent to a 230kV source. 115kV in this area is being phased out.

Projected In-service Date: 03/31/2025

Project Status: Engineering

Model: 2027 RTEP



Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2023-0014

Process Stage: Solutions Meeting 05/09/2023

Previously Presented: Need Meeting 03/07/2023

Project Driver: Customer Service

Specific Assumption References:

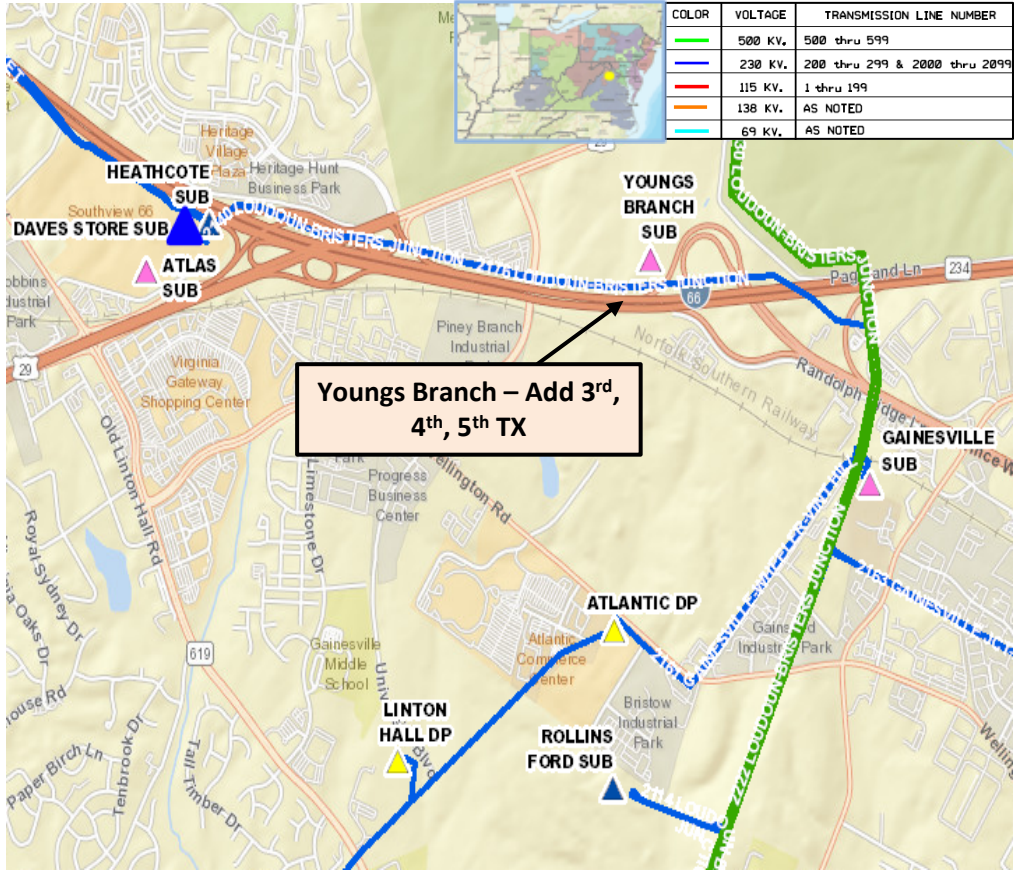
Customer load request will be evaluated per Dominion’s Facility Interconnection Requirements Document and Dominion’s Transmission Planning Criteria.

Problem Statement:

DEV Distribution has submitted a DP Request to add a 3rd, 4th, and 5th distribution transformer at Youngs Branch Substation in Gainesville. The new transformers are being driven by significant area load growth.

Requested in-service date is 07/01/2024.

Initial In-Service Load	Projected 2028 Load
Summer: 204.0 MW Winter: 117.0 MW	Summer: 270.0 MW Winter: 270.0 MW



Dominion Transmission Zone: Supplemental Youngs Branch - Add 3rd, 4th, and 5th TX - DEV

Need Number: DOM-2023-0014

Process Stage: Solutions Meeting 05/09/2023

Proposed Solution:

Install (3) 1200 Amp, 50kAIC circuit switchers and associated equipment (bus, relaying, etc.) to feed the new transformers at Youngs Branch.

Estimated Project Cost: \$3.0 M

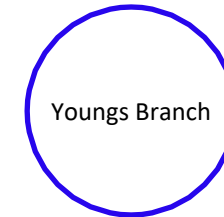
Alternatives Considered:

None – this is an existing substation

Projected In-service Date: 07/01/2024

Project Status: Engineering

Model: 2027 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

04/28/2023 – V1 – Original version posted to pjm.com

05/09/2023 – V2 – Supplemental solutions for DOM-2023-0009 – DOM-2023-0012 to be presented at a future date.