

SRRTEP Committee Southern Dominion Supplemental Projects

September 17, 2026

Needs

Dominion Transmission Zone: Supplemental Operational Flexibility and Efficiency

Need Number: DOM-2025-0048

Process Stage: Need Meeting 09/17/2026

Project Driver: Operational Flexibility and Efficiency

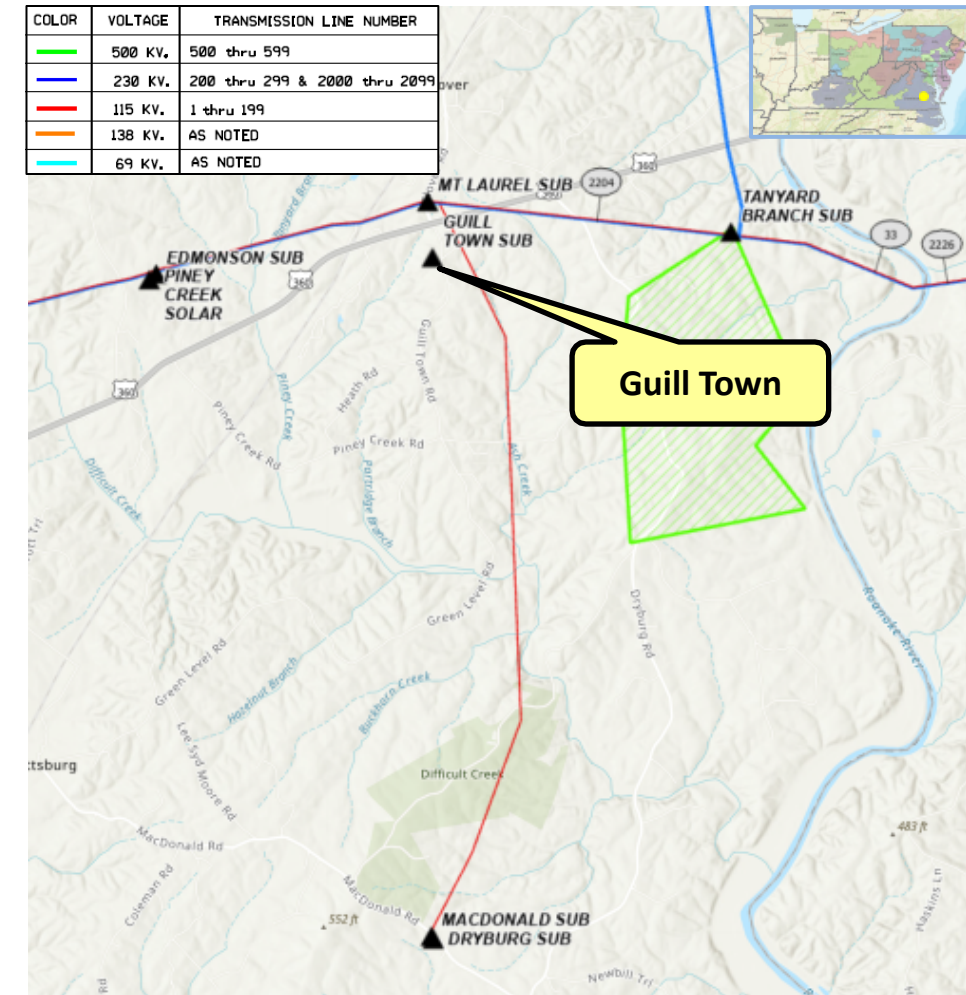
Specific Assumption References:

See details on Operational Flexibility and Efficiency in Dominion's Planning assumptions presented in December 2025.

Problem Statement:

The updated version of the FIR Attachment 3 Generator Protection Requirements has a Section 3.1.2 that requires a three-breaker ring bus at the tap location anytime generation exceeds 20 MW on the tap line. The existing generator (47 MW) at Dryburg in TC1 was installed before this requirement was put in place. In TC2 there is an update to this same generator which proposes to add an additional 11 MW for a total of 58 MW.

To conform with the new Generator Protection requirements, a new breaker substation (Guill Town) should be constructed for this generation.



Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2025-0092

Process Stage: Need Meeting 09/17/2026

Project Driver: Customer Service

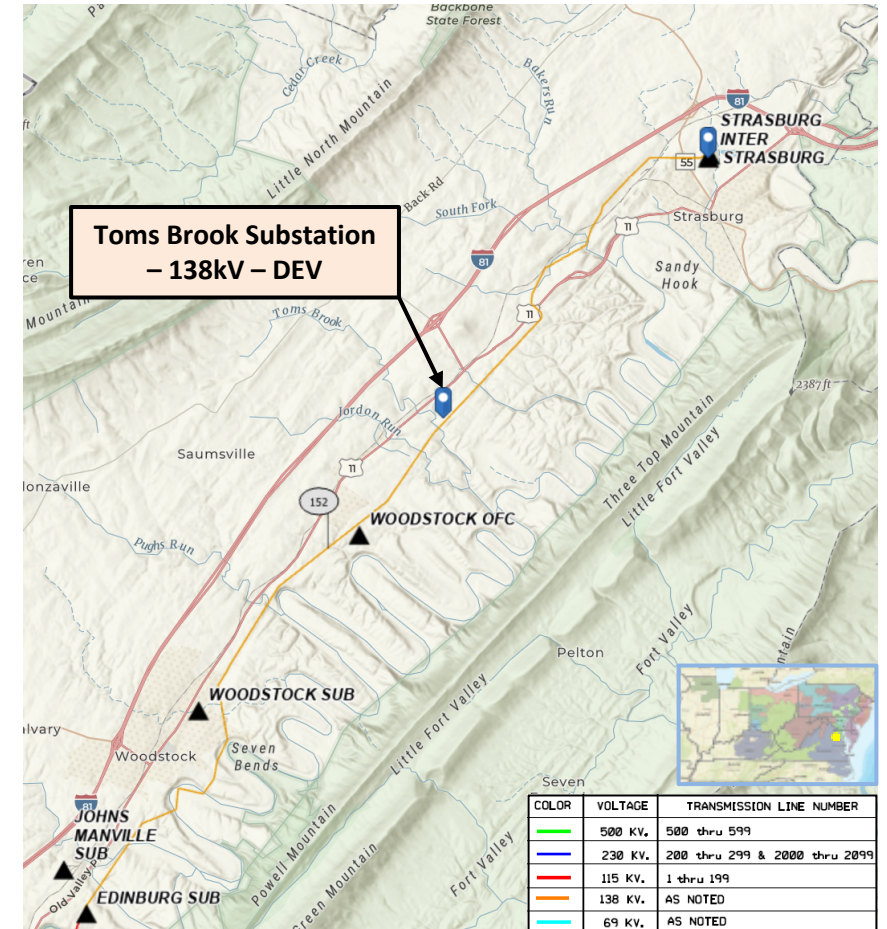
Specific Assumption References:

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 Toms Brook Substation on the existing Line #152 (138kV) right-of-way in Shenandoah County, VA. The driver of this request is to relieve the loading on the existing Line #152, and support forecasted load growth in the area. In addition, Toms Brook Substation will provide an alternative to Strasburg substation which serves as the only delivery point to SVEC co-op. Requested in-service date is 12/31/2028.

Initial In-service Load	Projected 2035 Load
Summer: 14.5 MW	Summer: 15.5 MW
Winter: 20.8 MW	Winter: 22.4MW



Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2026-0035

Process Stage: Need Meeting 09/17/2026

Project Driver: Customer Service

Specific Assumption References:

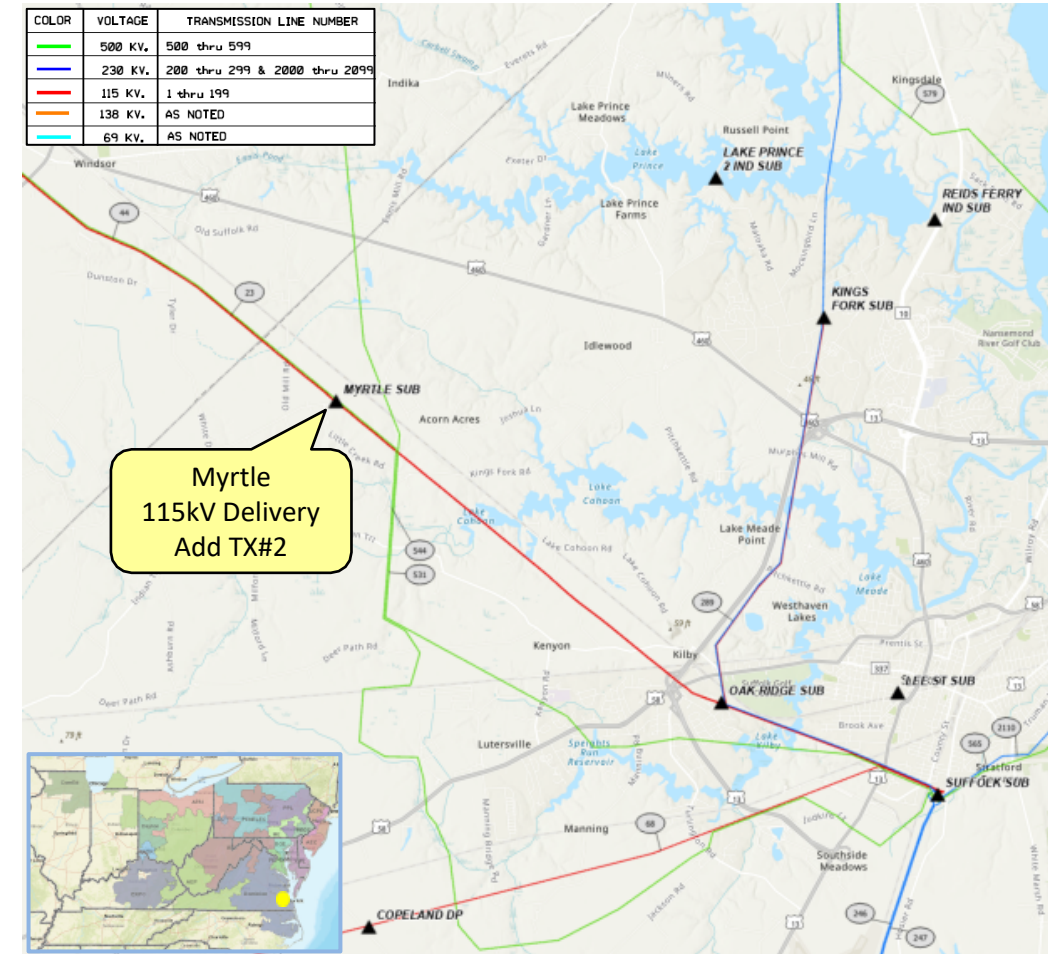
Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

Problem Statement:

DEV Distribution has submitted a Delivery Point (DP) Request to add a 2nd 115kV-34.5kV distribution transformer (TX#2 with 56 MVA rating) at Myrtle Substation in Suffolk County, Virginia. Myrtle Substation is a tap in 115 kV Line #44 Suffolk<>Bell Ave.

Port 460 Logistics Center Phase II expansion is adding approximately 9.1 MVA of load in the area. Distribution circuits out of Kings Fork, accounting already for other projects (including Port 460 Phase I) and expected load growth, will be at their limit if this load is added. Substantial economic development is ongoing in this area, and more capacity will be needed to serve not only Port 460 Phase II, but also potential Phase III and future load growth (forecasted at 34.8 MVA by 2030 and 41.6 MVA by 2042).

Requested in-service date is 01/28/2028.



Solutions

Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2026-0007

Process Stage: Solution Meeting 09/17/2026

Previously Presented: Need Meeting 02/12/2026

Project Driver: Customer Service

Specific Assumption References:

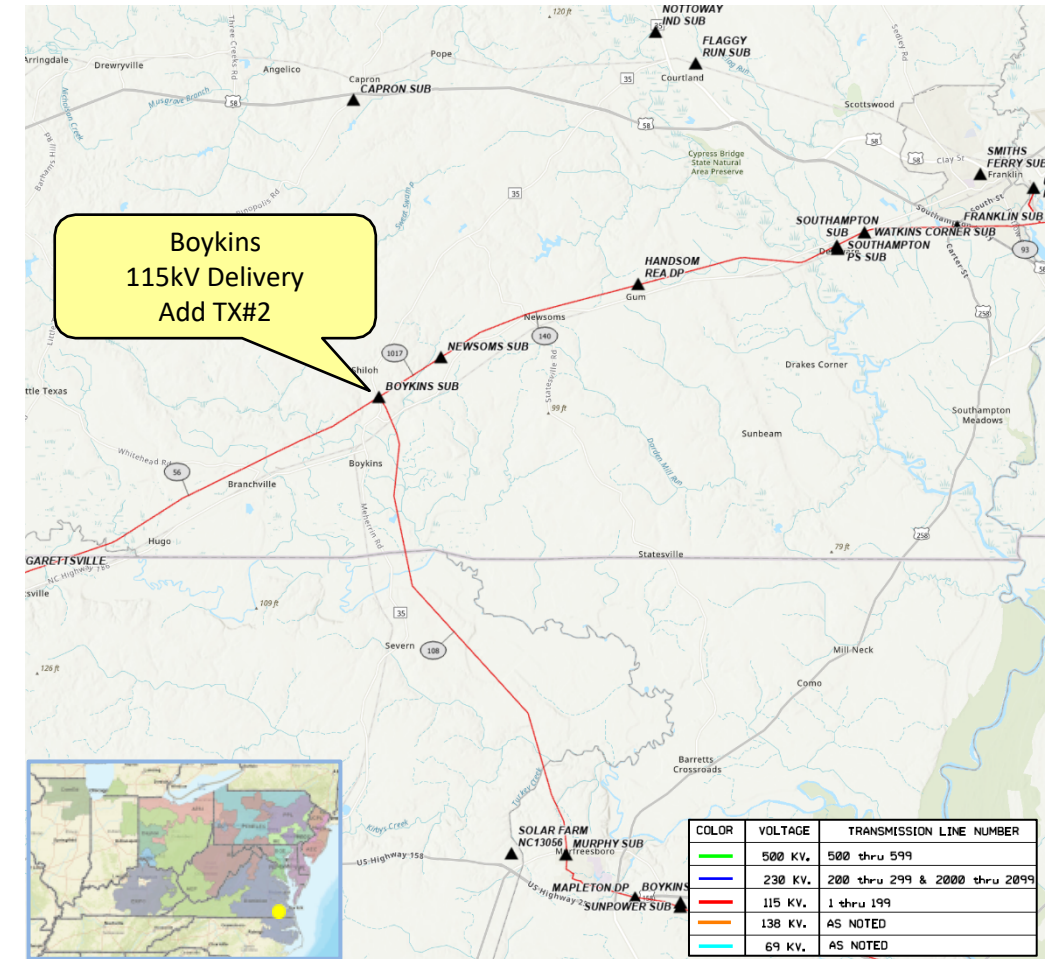
Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

Problem Statement:

DEV Distribution has submitted a Delivery Point (DP) Request to add a 2nd distribution transformer (TX#2 with 22.4 MVA rating) at Boykins Substation in Southampton County, Virginia. Boykins Substation has been identified as a voltage island and is mobile dependent around the year. Distribution TX#2 will feed 34.5 kV loads to improve service resilience within contingencies. The initial load is projected to be approximately 8.0 MW in 2028, and total load is project to be 8.9MW by 2035.

This upgrade is within the scope of Virginia's SCC GTP Phase III Substation Technology Deployment and will enable real-time monitoring and control, advanced protection, automation and control, and power quality monitoring.

Requested in-service date is 12/31/2027.



Dominion Transmission Zone: Supplemental Boykins – 115kV Delivery – Add TX#2 - DEV

Need Number: DOM-2026-0007

Process Stage: Solution Meeting 09/17/2026

Previously Presented: Need Meeting 02/12/2026

Project Driver: Customer Service

Proposed Solution:

- Install necessary bus work to support the addition of Boykins distribution TX#2 (115kV-34.5kV with 22.4MVA rating)
- Install standard high-side protection scheme of distribution TXs with a 2000A MOAB switch and a 1200A 25kAIC circuit switcher

Estimated Project Cost: \$1.22M (Substation only)

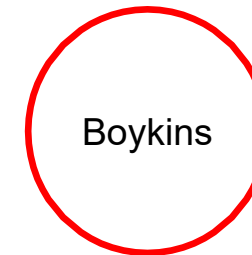
Alternatives Considered:

- No feasible alternatives.

Projected In-Service Date: 12/31/2027

Project Status: Engineering

Model: 2025 RTEP (for 2030)



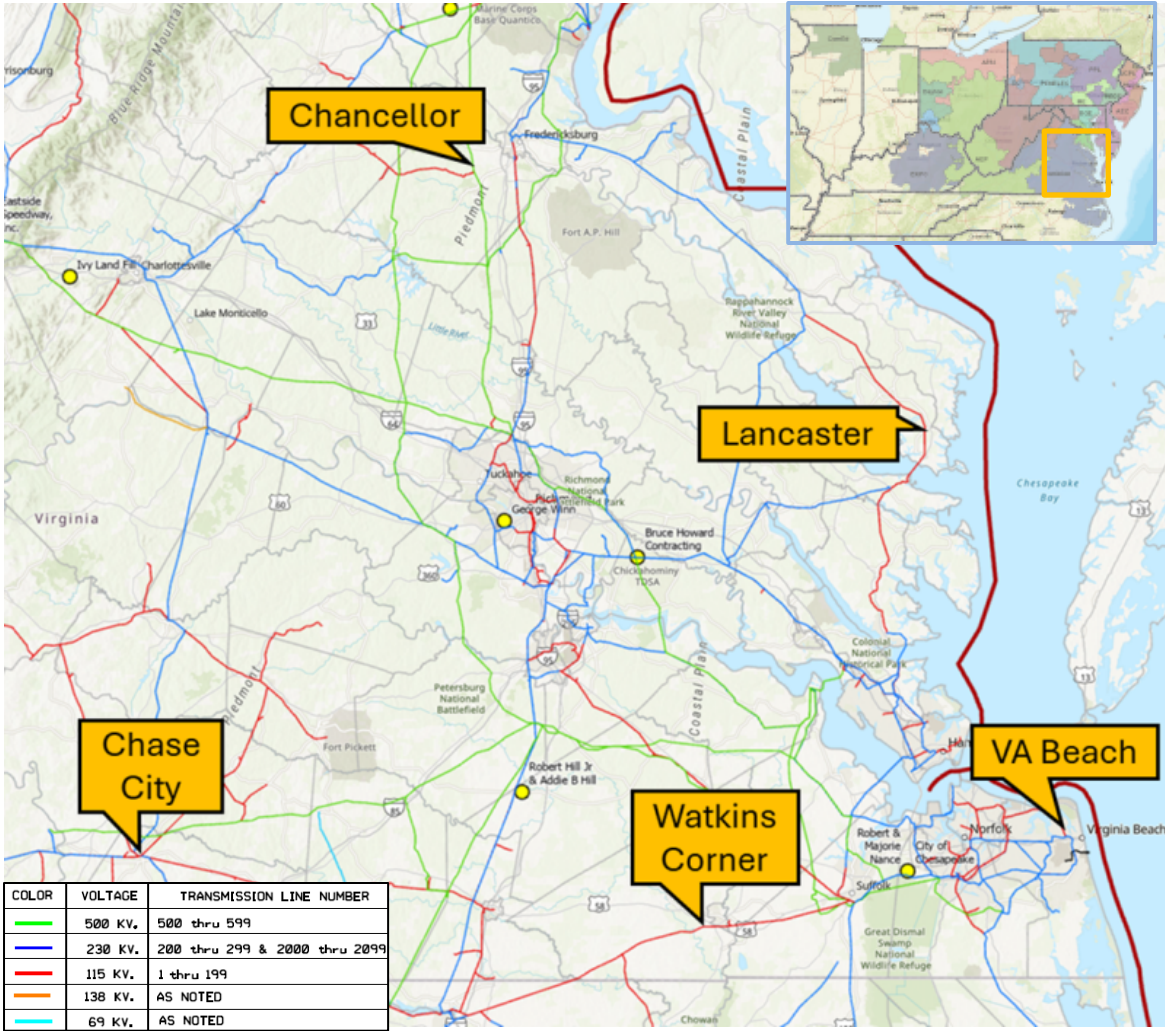
Dominion Transmission Zone: Supplemental Equipment Material Condition, Performance Risk

Need Number: DOM-2026-0017
Process Stage: Solution Meeting 9/17/2026
Previously Presented: Need Meeting 4/16/2026
Project Driver: Equipment Material Condition, Performance Risk
Specific Assumption References: See details on Equipment Material Condition, Performance and Risk in Dominion’s Planning Assumptions presented in December 2025.

Problem Statement:
Multiple cap banks have been identified needing replacement within Dominion’s transmission system. Field assessments indicate these cap banks are approaching the end of useful service life. These will need to be replaced to avoid future equipment failures which would lead to voltage violations and potential cascading outage scenarios.

Useful lifespan for shunt capacitor banks is generally considered to be 20-25 years in a typical application; however, this is greatly affected by the local network and in-service conditions. The integrity of the dielectric media in high voltage capacitor banks can be degraded over time by factors such as increased duty (time in service and number of on/off cycles), overvoltage transients (110%+ of rated), increasing magnitude of inrush currents, harmonics, etc., all of which we are experiencing. Over time, the accumulated effect of these phenomenon leads to increased stress and accelerated aging of the insulating material inside of a capacitor can, leading to dielectric breakdown and ultimately protection lockouts. Due to the increasing load in Dominion Energy territory, the need for reliable capacitive compensation is more necessary than ever. For this reason, we find it prudent to replace the proposed banks based on a combination of age, expected duty, and effect of an outage on grid reliability.

The 115 kV cap banks needing replacement between 2027 and 2028 are located at Chancellor, Lancaster, Chase City, Watkins Corner, and Virginia Beach substations.



Dominion Transmission Zone: Supplemental Equipment Material Condition, Performance Risk

Need Number: DOM-2026-0017
Process Stage: Solution Meeting 09/17/2026
Project Driver: Equipment Material Condition, Performance Risk

Proposed Solution: Replace the 115 kV cap banks at Chancellor, Lancaster, Chase City, Watkins Corner, and Virginia Beach with like-for-like replacements. Table provides replacement cap bank sizes.

- Estimated Project Cost:**
- Chancellor: \$1M
 - Lancaster: \$1M
 - Chase City: \$1M
 - Watkins Corner: \$1M
 - Virginia Beach: \$1M

Alternatives Considered: No feasible alternatives. Existing equipment.
Projected In-Service Date: Provided in table.
Project Status: Planning
Model: 2024 RTEP (for 2029)



Substation Location	Cap Bank Size (MVAR)	In-Service Date
Chancellor	33.67	2/1/28
Lancaster	25.26	2/1/29
Chase City	25.26	2/1/29
Watkins Corner	25.26	2/1/29
Virginia Beach	75.77	2/1/29

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

Need Number: DOM-2026-0032

Process Stage: Solution Meeting 09/17/2026

Previously Presented: Need Meeting 08/13/2026

Project Driver: Equipment Material Condition, Performance and Risk

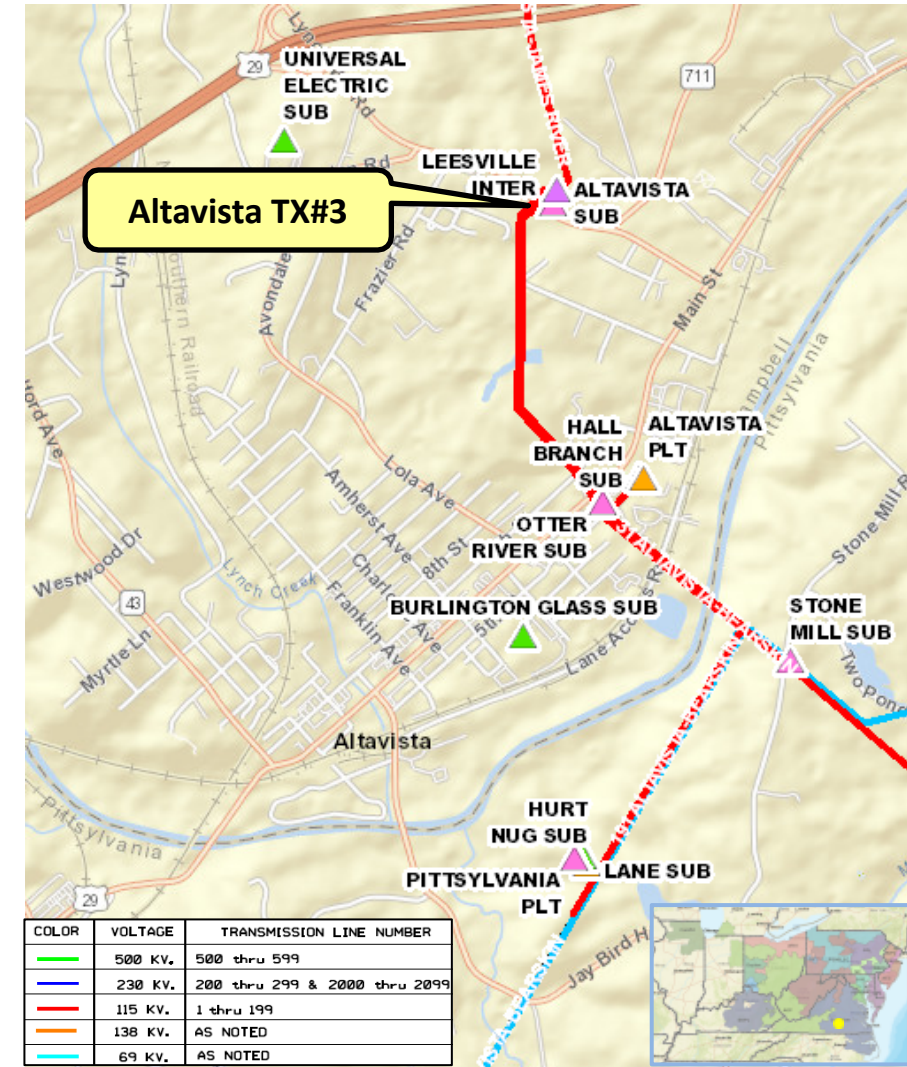
Specific Assumption References:

See details on Equipment Material Condition, Performance and Risk in Dominion's Planning Assumptions presented in December 2025.

Problem Statement:

Altavista TX#3 is a 112 MVA, 138/115/13.2 kV transformer bank that was manufactured in 1981. This transformer bank has been identified for replacement based on the results of Dominion's transformer health assessment (THA) process. Detailed drivers include:

- Age (45 years old).
- Reduced BIL ratings (2 levels below standard).
- Tertiary winding design not meeting current MVA requirement for loading.
- Degraded porcelain type bushings.
- THA score less than 80.
- Transformer paint is not in good shape.



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

Need Number: DOM-2026-0032

Process Stage: Solution Meeting 09/17/2026

Previously Presented: Need Meeting 08/13/2026

Project Driver: Equipment Material Condition, Performance and Risk

Proposed Solution: Replace Altavista TX#3 with one 138-115-13.2kV, 112MVA, Delta-Wye Transformer. Replace two (2) 2000A centers break switches H334 and 10434 on the high side of the transformer.

Estimated Project Cost: \$4.27M

Alternative Considered: No feasible alternatives. The scope of work is occurring at an existing substation.

Expected in-service date: 10/06/2026

Project Status: Construction

Model: 2030 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

09/08/2026 – V1 – Original version posted to pjm.com.