



Sub Regional RTEP Committee PJM South

February 11, 2020

- The following definitions explain the basis for excluding flowgates and/or projects from the competitive planning process and designating projects to the incumbent Transmission Owner.
- Flowgates/projects excluded from competition will include the underlined language on the corresponding slide.
 - Immediate Need Exclusion: Due to the immediate need of the violation (3 years or less), the timing required for an RTEP proposal window is infeasible. As a result, the local Transmission Owner will be the Designated Entity. - Operating Agreement, Schedule 6 § 1.5.8(m)
 - Below 200kV Exclusion: Due to the lower voltage level of the identified violation(s), the driver(s) for this project are excluded from the competitive proposal window process. As a result, the local Transmission Owner will be the Designated Entity - Operating Agreement, Schedule 6 § 1.5.8(n)
 - Substation Equipment Exclusion: Due to identification of the limiting element(s) as substation equipment, the driver(s) for this project are excluded from the competitive proposal window process. As a result, the local Transmission Owner will be the Designated Entity - Operating Agreement, Schedule 6 § 1.5.8(p)

Recommended Solution



Dominion Transmission Zone: Baseline Line #72 (Chesterfield-Plaza)

Process Stage: Second Review

Previously Presented: 12/16/2019

Criteria: Dominion’s FERC 715 Planning Criteria (C.2.7 – Limitations on Direct Connect Loads)

Assumption Reference: Dominion Energy’s Facility Interconnection Requirements

Model Used for Analysis: 2024 RTEP Summer

Proposal Window Exclusion: Below 200kV, FERC 715 (TO Criteria)

Problem Statement: 115kV Line #72 (Chesterfield to Plaza) exceeds the Company’s limitation of serving 4 tapped facilities on one transmission line. The line serves 5 tap stations: National Cylinder Gas, Bellwood, Brown Boveri, Kingsland, and Reymet. Also, the tap line serving Brown Boveri, built in the 1970’s with a length of 1.1 miles, does not meet the company’s requirement of a terminal station for tap lines longer than one mile.

Existing & Preliminary Facility Rating: 176 MVA (summer - Normal)

Proposed Solution:

- Split Line #72 by rebuilding the Brown Boveri tap line as double circuit loop in-and-out of the station. **(b3161.1)**

Estimated Cost: \$3.0M

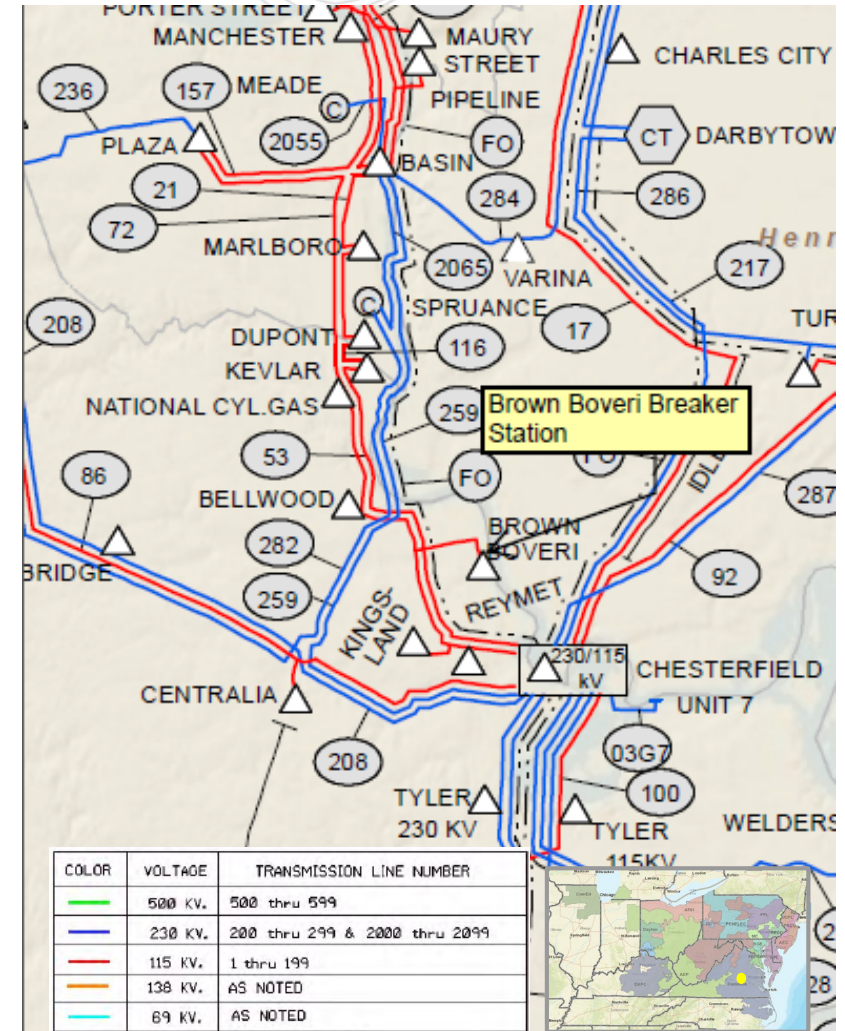
- Install a 115kV breaker at the station. Site expansion is required to accommodate the new layout. **(b3161.2)**

Estimated Cost: \$2.3M

Total Estimated Baseline Cost: \$5.3M

Required In-service Date: 6/1/2024

Projected In-service Date: 12/31/2023





Dominion Transmission Zone: Baseline Line #153 (Spotsylvania-Oak Green) and Culpeper 115kV Delivery

Process Stage: Second Review

Previously Presented: 12/16/2019

Criteria: Dominion’s FERC 715 Planning Criteria (Post-Contingency Radial - Thermal and Voltage)

Assumption Reference: Dominion Energy’s Facility Interconnection Requirements

Model Used for Analysis: 2024 RTEP Summer

Proposal Window Exclusion: Below 200kV, FERC 715 (TO Criteria)

Problem Statement:

- 115kV Line #153 (Spotsylvania-Oak Green) exceeds 100% of its emergency rating for the N-1-1 loss of 115kV Line #11 (Gordonsville-Somerset) and 115kV Line #70 (Remington-Mt. Run).
- Voltage at Culpeper drops below 85% for the N-1-1 loss 115kV Line #153 (Spotsylvania-Oak Green) and 115kV Line #70 (Remington-Mt. Run).

Existing & Preliminary Facility Rating:

Spotsylvania-Paytes Tap = 226 MVA (summer – Normal and Emergency)

Locust Grove-Unionville = 204 MVA (summer – Normal and Emergency)

Proposed Solution:

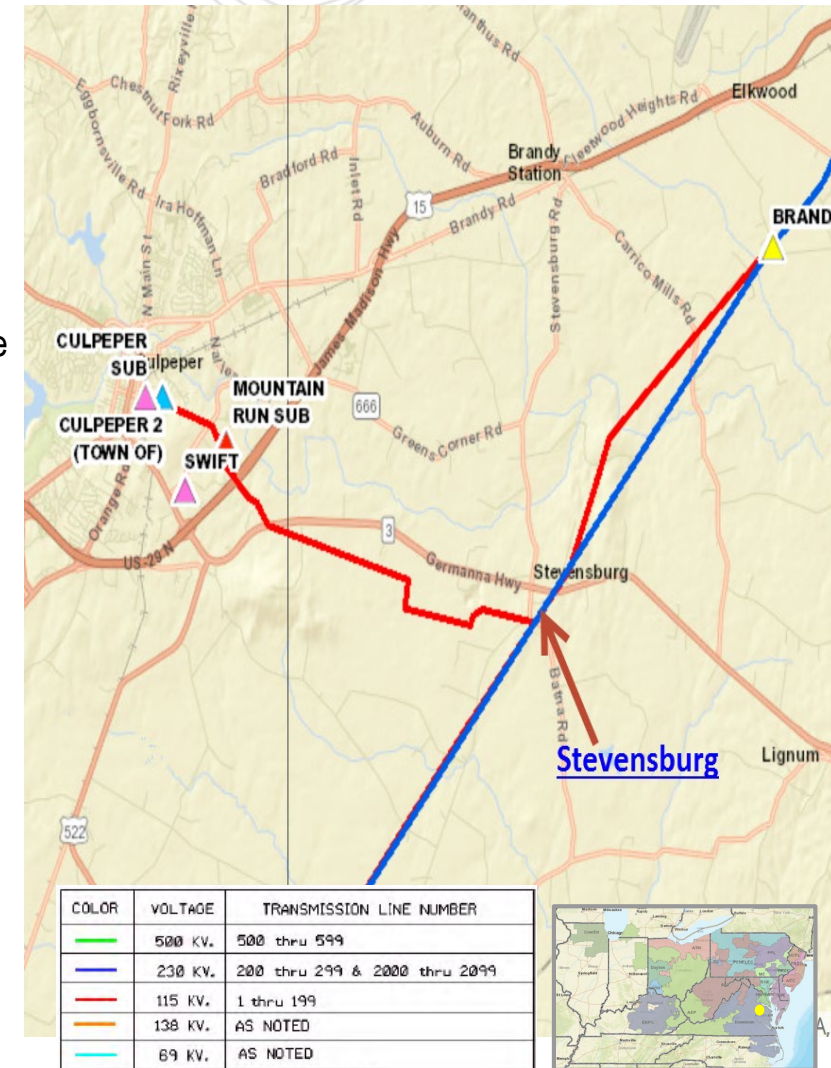
- Acquire land and build a new 230kV switching station (Stevensburg) with a 224MVA, 230-115kV transformer. 230kV Line #2199 (Gordonsville-Remington) will be cut and connected to the new station. 115kV Line #70 (Remington-Mt. Run) and 115kV Line #2 (Mt. Run-Oak Green) will also be cut and connected to the new station. This will provide Culpeper another source to support voltage in the area as well as eliminating the thermal issue.

(b3162)

Total Estimated Baseline Cost: \$22M

Required In-service Date: 6/1/2024

Projected In-service Date: 12/31/2023



Next Steps

Questions?





Revision History

02/05/2020 – V1 – Original version posted to pjm.com