



# Sub Regional RTEP Committee PJM South

November 29, 2018

- 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: 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)
  - FERC 715 (TO Criteria): Due to the violation need of this project resulting solely from FERC 715 TO Reliability Criteria, 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(o)
  - Substation Equipment: 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)

# Immediate Need



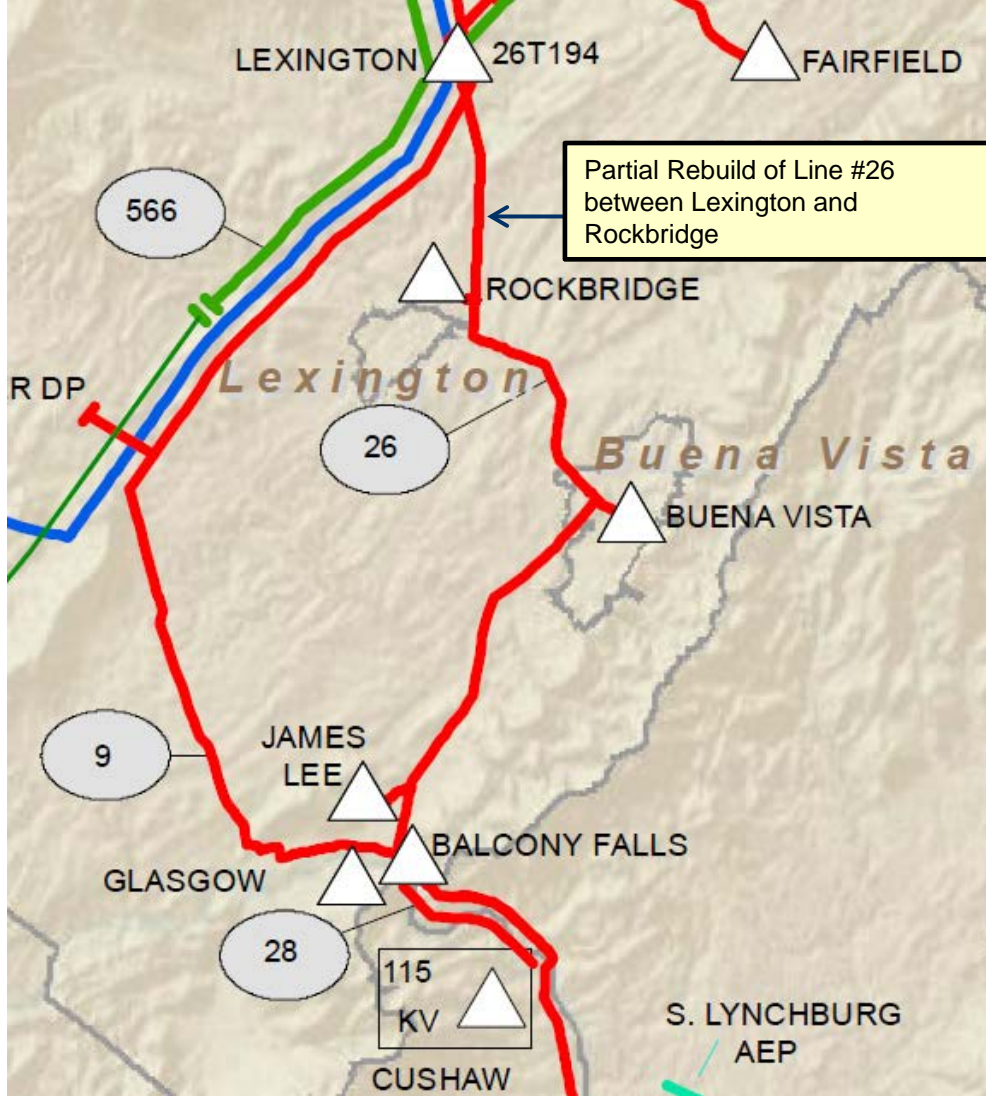
# Dominion Transmission Zone: Baseline 115 kV Line #26 Partial Rebuild

## Baseline Reliability: TO Criteria Violation

### Problem Statement: Dominion “End of Life Criteria”

115 kV Line #26 extends 20.82 miles between Lexington to Balcony Falls. The 4.75 mile section between Lexington and Rockbridge was constructed on wood H-frames in 1973 and includes ACAR conductor and 3#6 static. This line section has a current summer emergency rating of 248 MVA. Industry guidelines indicate equipment life for wood structures is 35-55 years, conductor and connectors are 40-60 years, and porcelain insulators are 50 years. Within this section there are 15 structure locations that need to be replaced due to condition which makes up approximately 10% of the segment structures.

Removing this segment of Line #26 from service creates a violation of Dominion Energy’s Transmission Planning Criteria whereby the loading on the resulting radial transmission line exceeds the 700 MW-Mile Exposure limit (MW-Mile = Peak MW X Radial Line Length).



COLOR	VOLTAGE	TRANSMISSION LINE NUMBER
Green	500 KV.	500 thru 599
Blue	230 KV.	200 thru 299 & 2000 thru 2099
Red	115 KV.	1 thru 199
Orange	138 KV.	AS NOTED
Cyan	69 KV.	AS NOTED







# Dominion Transmission Zone: Baseline 115 kV Line #26 Partial Rebuild

**Recommended Solution:**

It is more economical to replace all structures within the segment at once than to access various locations over the years. This segment of line will be rebuilt to current standards with a minimum rating of 261 MVA. (b3088)

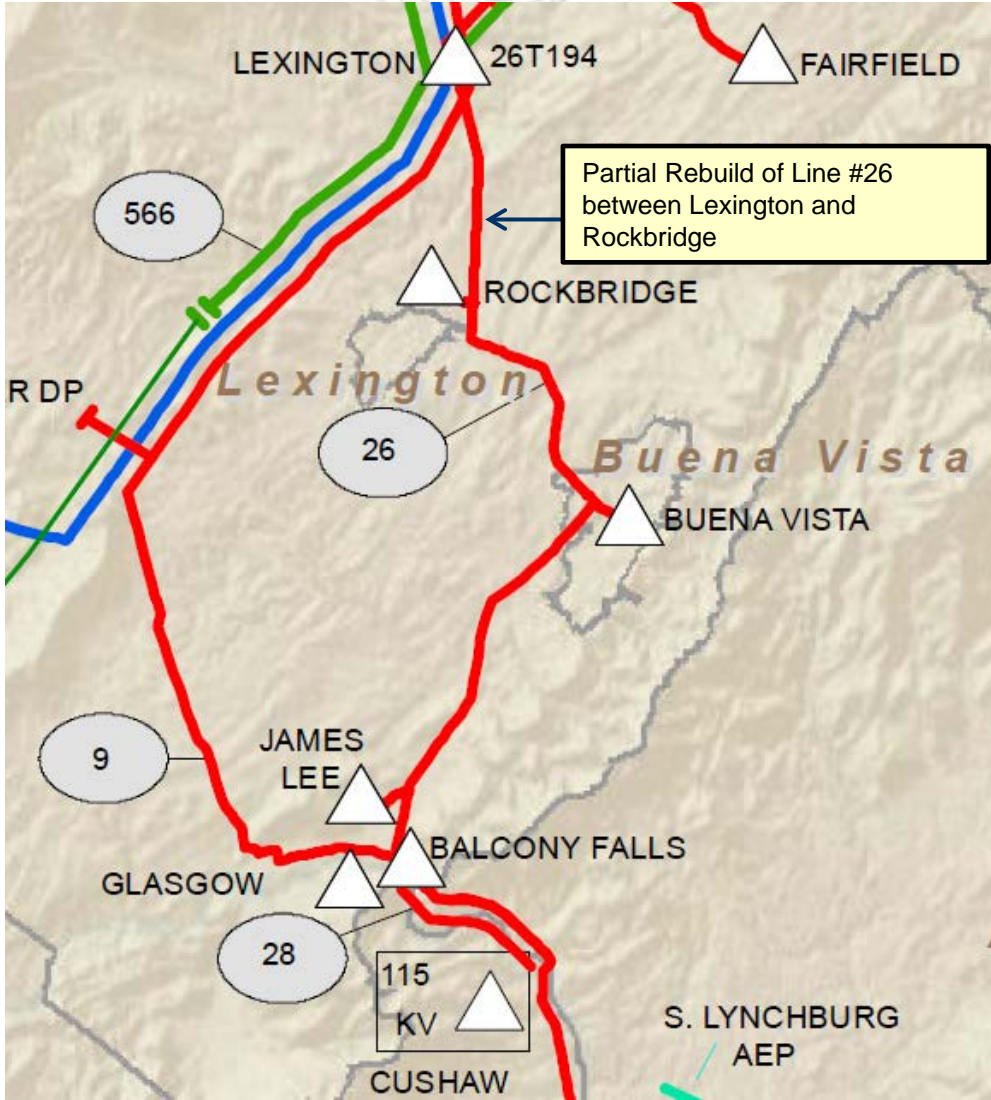
**Alternative:** No feasible alternatives.

**Estimated Project Cost:** \$8 M

**Required In-service Date:** Immediate Need

**Projected In-service Date:** 12/31/2020

**Project Status:** Conceptual



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# B2505 Cost Increase & Target Date Change

### Existing b2505 Cost Increase

Date Project Last Presented: 06/24/2014 & 09/24/2014 Southern Sub-Regional

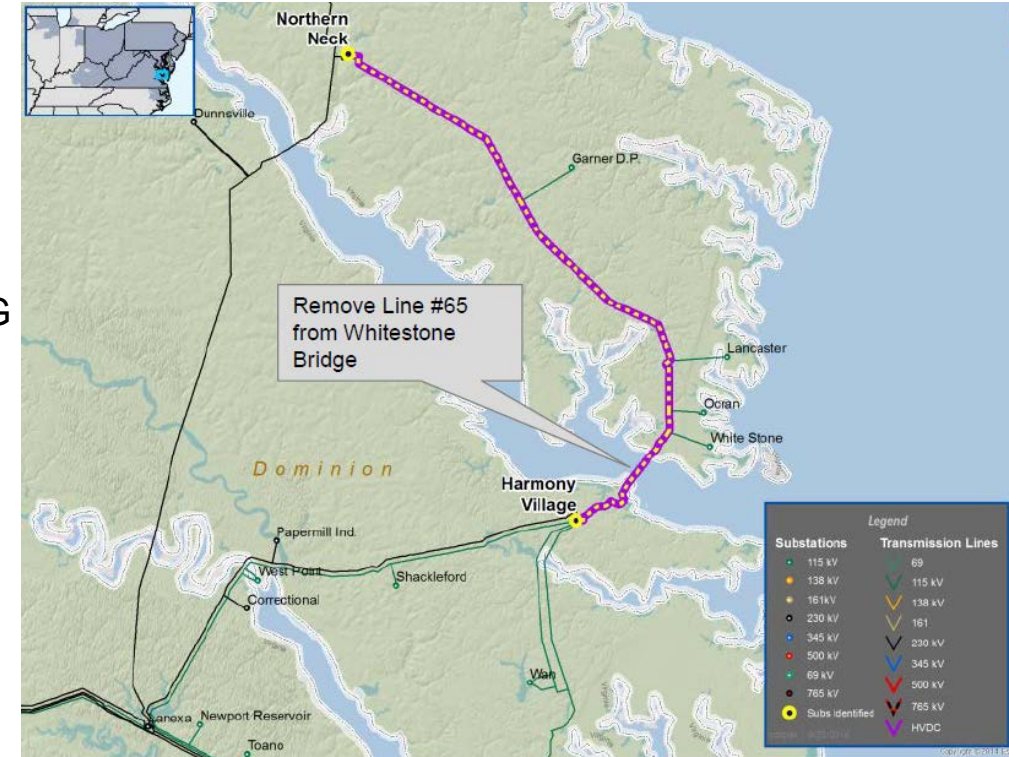
### Original Problem Statement:

- This project is to remove Line #65 Harmony Village to Northern Neck 115 kV from the Whitestone Bridge to improve operability and reliability.

### Revised Project Cost: From \$30 M to \$103.3 M due to:

- Virginia SCC ruling requiring this installation across the Rappahannock River to be UG utilizing Horizontal Directional Drilled High Pressure Fluid Filled cables.
- Two cables per phase to be installed on the UG crossing.
- Two OH-UG transition stations named Greys Point (south side) and Rappahannock Substation (north side). Rappahannock Substation to include a 115kV breaker to isolate the UG cable from the remaining 30 miles of OH line between Rappahannock and Northern Neck Substations that serves over 19,000 customers.
- Re-permitting with the Army Corps and Virginia Marine Resource Commission.
- Cost Breakdown
  - Substation – \$14.1 M
  - Transmission – \$82.8 M
  - Previous Expenditures – \$6.4 M

Revised In-service Date: 12/31/2020 (Original: 5/31/2016)



# Next Steps



<b>South</b>	<b>Start</b>	<b>End</b>
12/05/2018	8:30	12:00

- V1 – 11/19/2018 – Original Slides Posted
- V2 – 11/30/2018 – Added RTEP Baseline Number b3088 to Slide 5.