



# Sub Regional RTEP Committee PJM South

March 28, 2019

- 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)
  - FERC 715 (TO Criteria) Exclusion: 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 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)

# Immediate Need

**Baseline Reliability: TO Criteria Violation (FERC 715 (TO Criteria) Exclusion)**

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

Approximately 1 mile of 115 kV Line #72 (Plaza – Chesterfield) and 115 kV Line #53 (Kevlar – Chesterfield) was constructed in 1956 on double circuit 3 pole wood H-frame structures. This line section has ACSR conductor and 3/8” steel static. 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. This 1 mile line section has been identified for rebuild based on the company’s End of Life criteria.

Line #72 provides service to National Cylinder Gas, Bellwood, Brown Boveri, Kingsland and Reymet substations with a total load of 21.5 MWs. Brown Boveri substation is tapped from the identified 1-mile line section to be rebuilt.

**Solution:**

Rebuild approximately 1 mile of 115 kV Line #72 and #53 to current standards with a minimum summer emergency rating of 393 MVA. The resulting summer emergency rating of Line #72 segment from Brown Boveri to Bellwood is 180 MVA. There is no change to Line #53 ratings.

**(b3113)**

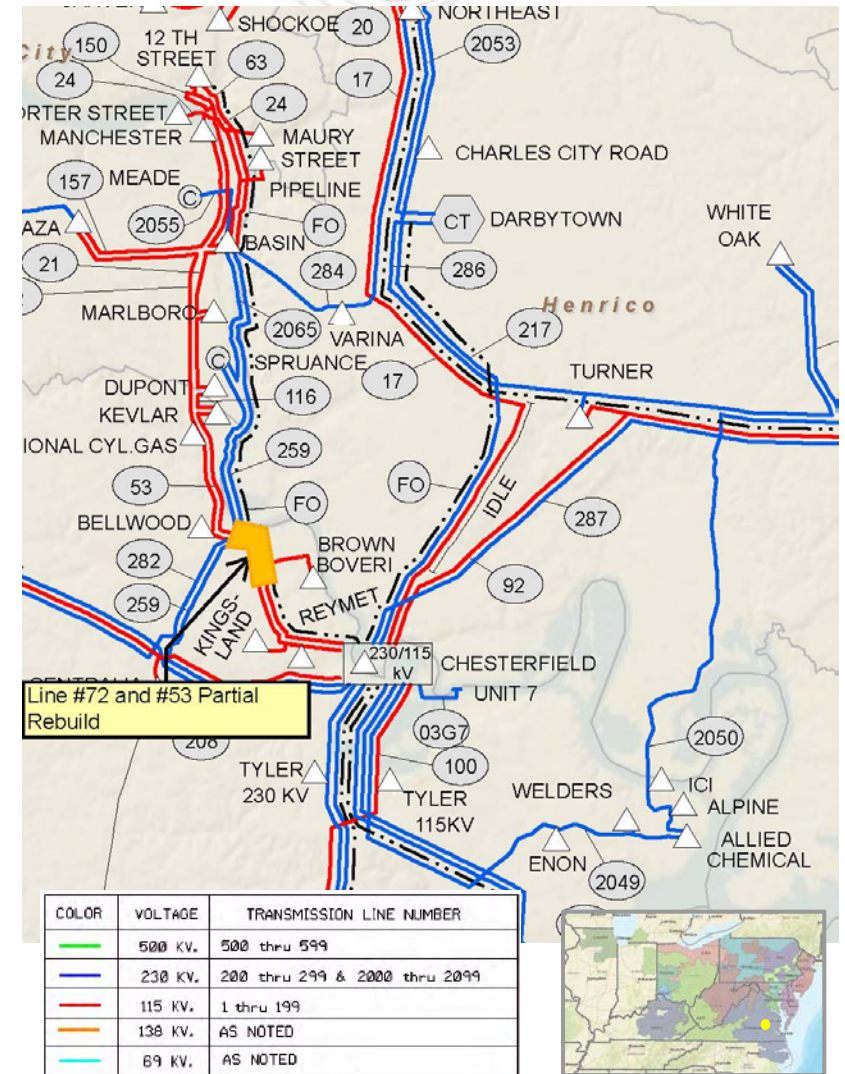
**Alternative:** No feasible alternatives.

**Estimated Project Cost:** \$3 M

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

**Projected In-service Date:** 12/31/2019

**Project Status:** Conceptual





115 kV Line #81 and 230 kV Line #2056 Partial Rebuild

**Baseline Reliability: TO Criteria Violation (FERC 715 (TO Criteria) Exclusion)**

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

115 kV Line #81 extends 21.6 miles from Carolina to South Justice Branch and serves 3 delivery points: Roanoke Rapids DP, Darlington DP, and Hornertown. The 18.6 mile section between Carolina and the tap to South Justice Branch is mostly wood H-frames constructed in 1959. There are two sections, 1.7 miles total, within the 18.6 mile section that have double circuit structures that are V series Corten. 115 kV Line #81 and 230 kV Line #2056 are on these double circuit structures. The conductor on this line is ACSR and the static wire is 3/8 inch steel. 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.

The 3 mile double circuit tap, 115 kV Lines #81 and #1001, to South Justice Branch was constructed in 2015.

**Solution:**

Rebuild the 18.6 mile section of 115 kV Line #81 which includes 1.7 miles of double circuit Line #81 and 230 kV Line #2056. This segment of line of 81 will be rebuilt to current standards with a minimum rating of 261 MVA. Line 2056 rating will not change. **(b3114)**

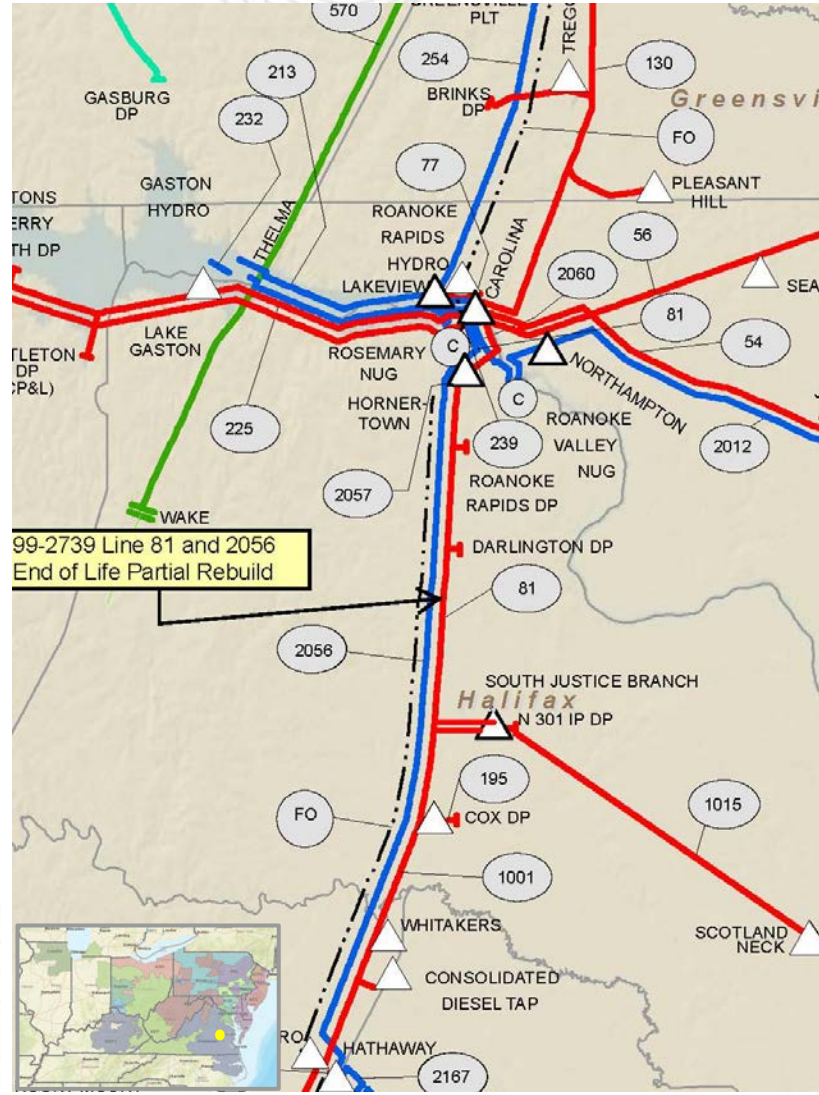
**Alternative:** No feasible alternatives.

**Estimated Project Cost:** \$25M

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

**Projected In-service Date:** 12/31/2025

**Project Status:** Conceptual



| 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                      |



# Next Steps

- V1 – 03/22/2019 – Original Slides Posted