PJM Facilities Study Report

For

Network Upgrade N8492.1

Transition Cycle #1

July 2025

Introduction

This Facilities Study has been prepared in accordance with the PJM Open Access Transmission Tariff and PJM Manuals. The Transmission Owner (TO) is Virginia Electric and Power Company (VEPCO or Dominion).

A. Project Description

The System Impact Study for PJM Interconnection Transition Cycle #1 has identified the need for PJM Network Upgrade N8492.1. The scope of this Network Upgrade includes the following:

- Expansion of the Fentress Substation to connect the new 500 kV line 5005.

B. Transmission Owner Facilities Study Results

1. Detailed Scope of work for Network Upgrade N8492.1

The following is a detailed description of Transmission Owner Upgrades for Network Upgrade N8492.1. These facilities shall be designed according to the Transmission Owner's Applicable Technical Requirements and Standards. Once built the Transmission Owner will own, operate, and maintain these facilities.

- See Preliminary Scoping Summary located in the Appendices, Attachment #1

2. MILESTONE SCHEDULE FOR COMPLETION OF DOMINION WORK

Facilities outlined in this report are being constructed under an IISA/IICAS agreement. The work is scheduled to be completed by 7/1/2026.

Description	Start	Finish
Engineering	Complete	Complete
Permitting/Procurement	Complete	Complete
Construction	On-going	7/1/2026

3. ASSUMPTIONS IN DEVELOPING SCOPE/COST/SCHEDULE

- N8492.1 is currently under construction.
- See Attachment 1 – Preliminary Scoping Summary – Substation for additional assumptions

4. LAND REQUIREMENTS

Dominion will be responsible for the following expectations in the area of Real Estate:

- Any additional land needed for Storm Water Management, Landscaping, and Wetlands/Wetlands Mitigation.
- Any other Land/Permitting requirements required by the Network Upgrade

5. ENVIRONMENTAL AND PERMITING

The Dominion will be responsible for the following expectations in the area of Environmental and Permitting:

- Assessment of environmental impacts related to the Network Upgrade including:
    - Environmental Impact Study requirements
    - Environmental Permitting
- A stormwater easement and/or specific stormwater design BMP's to allow access to and use of the facilities, including a maintenance agreement for said stormwater facilities.
- Conditional Use Permit for Substation
- Any additional land needed for Storm Water Management, Landscaping, and Wetlands/Wetlands Mitigation
- Any other Permitting requirements required by the Network Upgrade

C. APPENDICES

Attachment #1: Preliminary Scoping Summary – Substation

Attachment #1:

Project Number: N8492.1 – Fentress Substation

Project Description: New 500kV Line to Yadkin Substation

SUBSTATION SCOPE OF WORK

Date: 7/1/2025

Revision Number: 0

Project Summary

Project number N8492.1 provides for the construction of one new 500kV Line at Fentress Substation in Chesapeake, Virginia.

Assumption:

Currently, the scope and estimate assume Dominion standard spread footer foundations. Once the soil information is available and it is prudent to change the design to “helical pile foundations” the Dominion team should be informed to adjust the project estimate at the earliest possible opportunity.

Purchase and install substation material – Network Upgrade:

1. Three (3), 500kV, relay accuracy CCVT
2. One (1) 500kV GIS equipment addition
    a. Two (2), 500kV, 5000A, 63kAIC circuit breaker
    b. Four (4), 5000kV, 5000A, 3-phase breaker disconnect switch
    c. Three (3), 500kV, 3000:5, relay accuracy CT
    d. Three (3), 396kV, 318kV MCOV arrester
3. Three (3), 500kV GIS to air transition structure
4. Approximately 1650 linear feet of GIL
5. Station stone as required
6. Station lighting as required
7. Steel structures as required including switch stands, bus supports, station service transformers, and CCVT supports
8. Foundations as required including control house, equipment, and bus support stands

9. Conductors, connectors, conduits, control cables, cable trough, and grounding materials as per engineering standards

Purchase and install relay material – Network Upgrade:

1. One (1), 1340 – 24” dual SEL-411L CD/Fiber, DCB/Fiber line panel
2. Two (2), 1510 – 24” dual SEL-351-7 transmission breaker with reclosing panel
3. Two (2), 4510 – SEL-2411 breaker annunciator
4. Two (2), 4526_A – circuit breaker fiber optic make-up box
5. One (1) 4506 – 3-phase CCVT potential make-up box