PJM Facilities Study Report

For

Network Upgrade N9652

Transition Cycle #1

August 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 N9652 The scope of this Network Upgrade includes the following:

- Replace wave trap at Northern Neck substation on the 1059 Line

The Preliminary Scoping Document located in the Appendices, Attachment #1.

B. Transmission Owner Facilities Study Results

1. Detailed Scope of work for Network Upgrade N9652.0:

The following is a detailed description of Transmission Owner Upgrades for Network Upgrade N9652 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 estimated to take 45 months to construct, from the time of full execution of the Generation Interconnection Agreement and completion of a construction kickoff call. This schedule may be impacted by the timeline for procurement and installation of long lead items and the ability to obtain outages to construct and test the proposed facilities.

Description	Start month	Finish month
Engineering	1	30
Permitting/Procurement	3	38
Construction	36	45

3. ASSUMPTIONS IN DEVELOPING SCOPE/COST/SCHEDULE

- The preliminary construction schedule was developed assuming the wave trap replacement would be completed in conjunction with the N9651 reconductoring the 1059 line from Northern Neck to Moon Corner.
- The preliminary construction schedule is dependent on outage availability.
- The scope of work depicted on the drawings assumes that there is no overlap with other designs and construction activities, except if mentioned in this Project Summary.
- Relay Settings and P&C design will be revised as part of the SPE Scope of Work.

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 Northern Neck

Attachment #1

Project Number: N9652 – Northern Neck Substation

SUBSTATION SCOPE OF WORK

Project Description: Replace Wave Trap on Line 1059

Date: 08/13/2025

Revision Number: 0

Project Summary

Network Upgrade N9652.0 provides for the replacement of the line trap on line 1059 to 3000A at Northern Neck Substation in Richmond County, Virginia.

Assumptions & Clarifications:

1. *The scope of work depicted on the drawings assumes that there is no overlap with other designs and construction activities, except if mentioned in this Project Summary.*
2. *Relay Settings and P&C design will be revised as part of the SPE Scope of Work.*

Purchase and install substation material – Network Upgrade:

1. One (1), 115kV, 3000A wave trap
2. One (1), 115kV line tuner
3. Three (3), 115kV, relay accuracy CCVT
4. Three (3), 90kV, 74kV MCOV surge arrester
5. Conductor, connectors, conduits, control cables, foundations, steel structures and grounding materials as per engineering standards

Remove substation material – Network Upgrade:

1. One (1), 115kV, 1200A wave trap
2. One (1), 115kV line tuner
3. Three (3), 115kV, relay accuracy CCVT
4. Conductor, connectors, conduits, control cables, foundations, steel structures and grounding materials as per engineering standards

Purchase and install relay material – Network Upgrade:

1. One (1), 4506 – 3Ø CCVT Potential Makeup Box

Remove relay material – Network Upgrade:

1. One (1), 4506 – 3Ø CCVT Potential Makeup Box