

PJM Facilities Study Report
For
Network Upgrade N9225
“Shelocta 230 kV Upgrade”

Revision 0: 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 Mid-Atlantic Interstate Transmission, LLC (MAIT).

A. Project Description

The System Impact Study for PJM Interconnection Cycle TC-1 has identified the need for PJM Network Upgrade N9225. The scope of this Network Upgrade includes the following:

- Replace 230 kV substation conductor and line drops at Shelocta substation for the Homer City-Shelocta 230 kV line terminal.

Upon completion of the Network Upgrade above, the expected final ratings will be:

<u>Unit</u>	<u>Normal</u>	<u>LTE</u>	<u>STE</u>	<u>LD</u>
MVA	913	1147	1147	1318

The scope of Network Upgrade is shown in Attachment #1.

B. Transmission Owner Facilities Study Results

1. Detailed Scope of work for Network Upgrade N9225:

The following is a detailed description of Transmission Owner Upgrades for Network Upgrade N9225. 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.

1.1 Shelocta 230 kV Substation

Replace 230 kV substation conductor and line drops for Shelocta-Homer City Line Terminal

- Below Grade Scope of Work
 - None
- Above Grade Scope of Work
 - Replace transmission line drops to Switch A8 and bus drops on phases X and Y.
- Relay & Controls
 - None
- Scope of Work Assumptions
 - Note this estimate one of 14 projects tied to upgrades for the Keystone-Shelocta-Homer City 230 kV lines.
 - Reference and coordination with other Shelocta upgrades.
 - Activities dates are based upon the assumption that the authorization to begin will be shortly after the sponsor need date of 12/31/2028 and that the Transmission line

upgrade on RPA PN-25-240913-133146 for Homer City - Shelocta 230 kV line will be completed before January 2030.

- Project Management
 - Provide project management, coordination, administration, scheduling, material management and project development if required
- Testing & Commissioning
 - Test and commission all power assets.

2. MILESTONE SCHEDULE FOR COMPLETION OF MAIT WORK

Facilities outlined in this report are estimated to take 13 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.

Activity	Start Month	End Month
Preliminary Engineering	1	2
Siting, Permits & Real Estate	5	7
Detailed Engineering	3	7
Equipment Delivery	9	9
Construction	10	12
Testing & Commissioning	12	13

3. ASSUMPTIONS IN DEVELOPING SCOPE/COST/SCHEDULE

3.1 Scope Assumptions:

- N/A

3.2 Cost Estimate Assumptions:

- The cost estimates provided in this report were developed as of February 7, 2025, based upon current market conditions. Hence, they are subject to significant changes in the event that project implementation is delayed. Notwithstanding the cost estimates from this report being used in the applicable Interconnection Agreement for the related project, FirstEnergy reserves the right to re-evaluate and provide a more accurate cost estimate during the implementation phase of the project.

3.3 Schedule Assumptions:

- FirstEnergy's ability to support this schedule also depends on the feasibility of taking the required outages to support construction. Outages that are determined to negatively impact system reliability or cause congestion may be delayed or denied, at any time, even if they are submitted on time based on the Outage Submittal Rules in section 4.2.1 of PJM Manual 03. This includes, but is not limited to, outages requested between the months of June and September, as well as January and March, which typically get denied due to summer and winter peak conditions. Therefore, the construction schedule will be adjusted as needed to accommodate any outage restrictions that have been identified by FirstEnergy or the Transmission Provider.

4. LAND REQUIREMENTS

Not Applicable

5. ENVIRONMENTAL AND PERMITTING

Not Applicable

C. APPENDICES

Attachment #1: Single line Diagram for Network Upgrade

