Subregional RTEP Committee – Mid-Atlantic
FirstEnergy Supplemental Projects

April 10, 2025

Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Penelec Transmission Zone M-3 Process
Altoona - Hollidaysburg 46 AH kV Line

Need Number: PN-2024-005

Process Stage: Solution Meeting SRRTEP-MA - 04/10/2025

Previously Presented: Need Meeting 03/14/2024

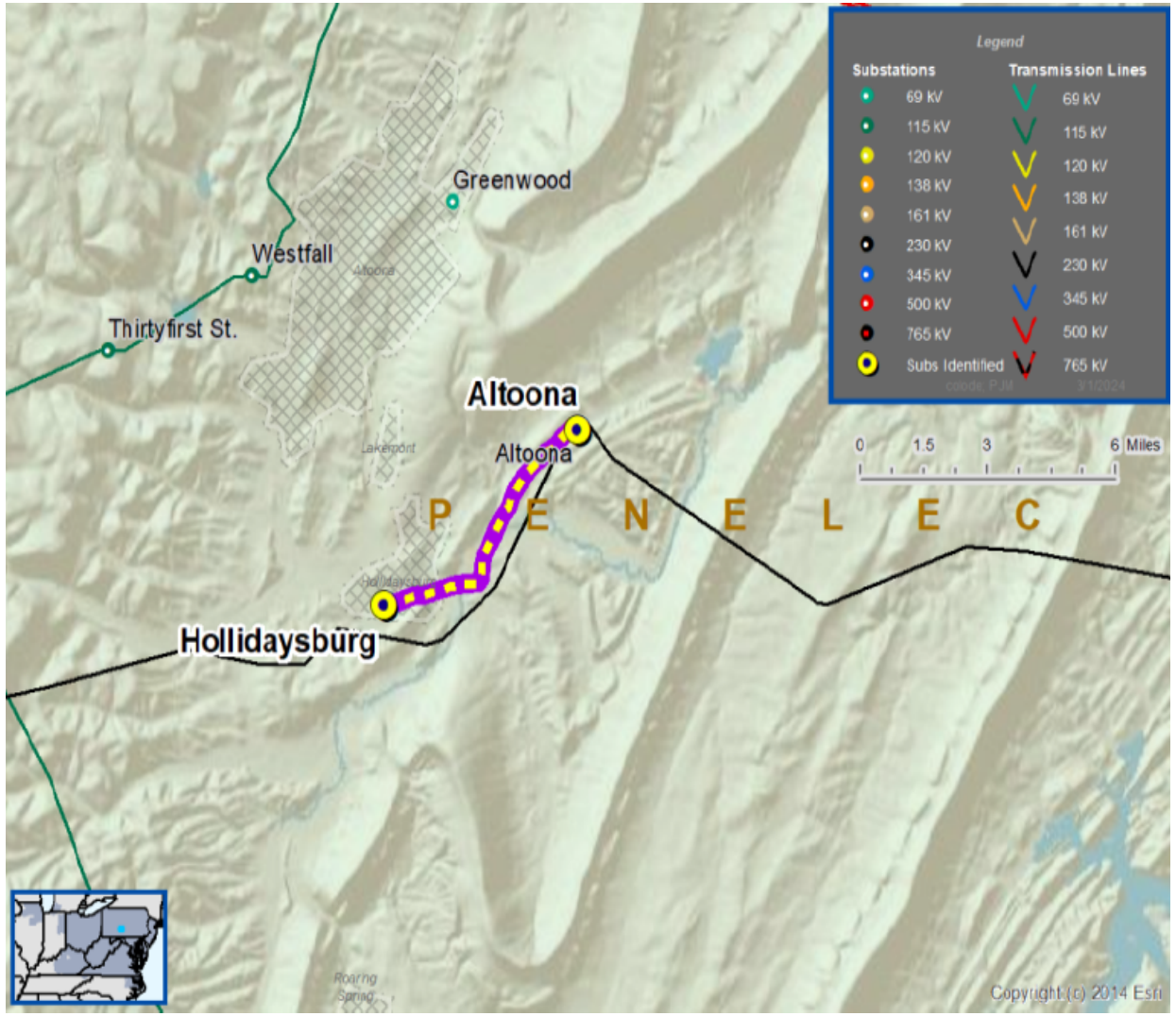
Project Driver: Equipment Condition/Performance/Risk

Specific Assumption References:

System Performance Projects Global Factors - System reliability and performance - Substation/line equipment limit Upgrade Relay Schemes - Obsolete and difficult to repair communication equipment - Communication technology upgrades

Problem Statement:

The Altoona - Hollidaysburg 46 kV AH Line has vintage electromechanical relays for overcurrent protection that have directional tripping. The relays limit the line and cause an operation monitoring issue. Existing line rating is limited on the Altoona – AH-26 Tap 46 kV Line: - 53 / 55 / 55 / 55 MVA (SN/SE/WN/WE)



Penelec Transmission Zone M-3 Process
Altoona - Hollidaysburg 46 AH kV Line

Need number(s): PN-2024-005

Process Stage: Solution Meeting SRRTEP-MA - 04/10/2025

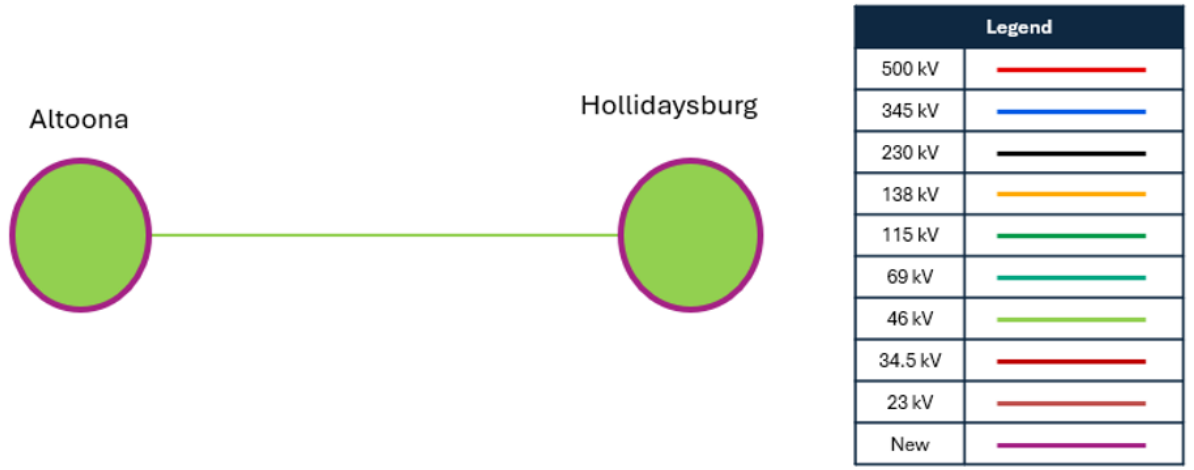
Proposed Solution:

Altoona - Hollidaysburg 46 kV AH Line: Terminal Upgrades:
Replace line relaying at Altoona and Hollidaysburg substations.
Estimated Cost: $2.21 M

Transmission Cost Estimate: $2.21 M

Alternatives Considered:

Maintain existing condition with directional relays limiting the capacity of the line.



Projected In-Service: 12/01/2027

Project Status: Conceptual

Penelec Transmission Zone M-3 Process
Tyrone North – Tipton 46 kV Line

Need Number: PN-2024-006

Process Stage: Solution Meeting SRRTEP-MA - 04/10/2025

Previously Presented: Need Meeting 02/15/2024

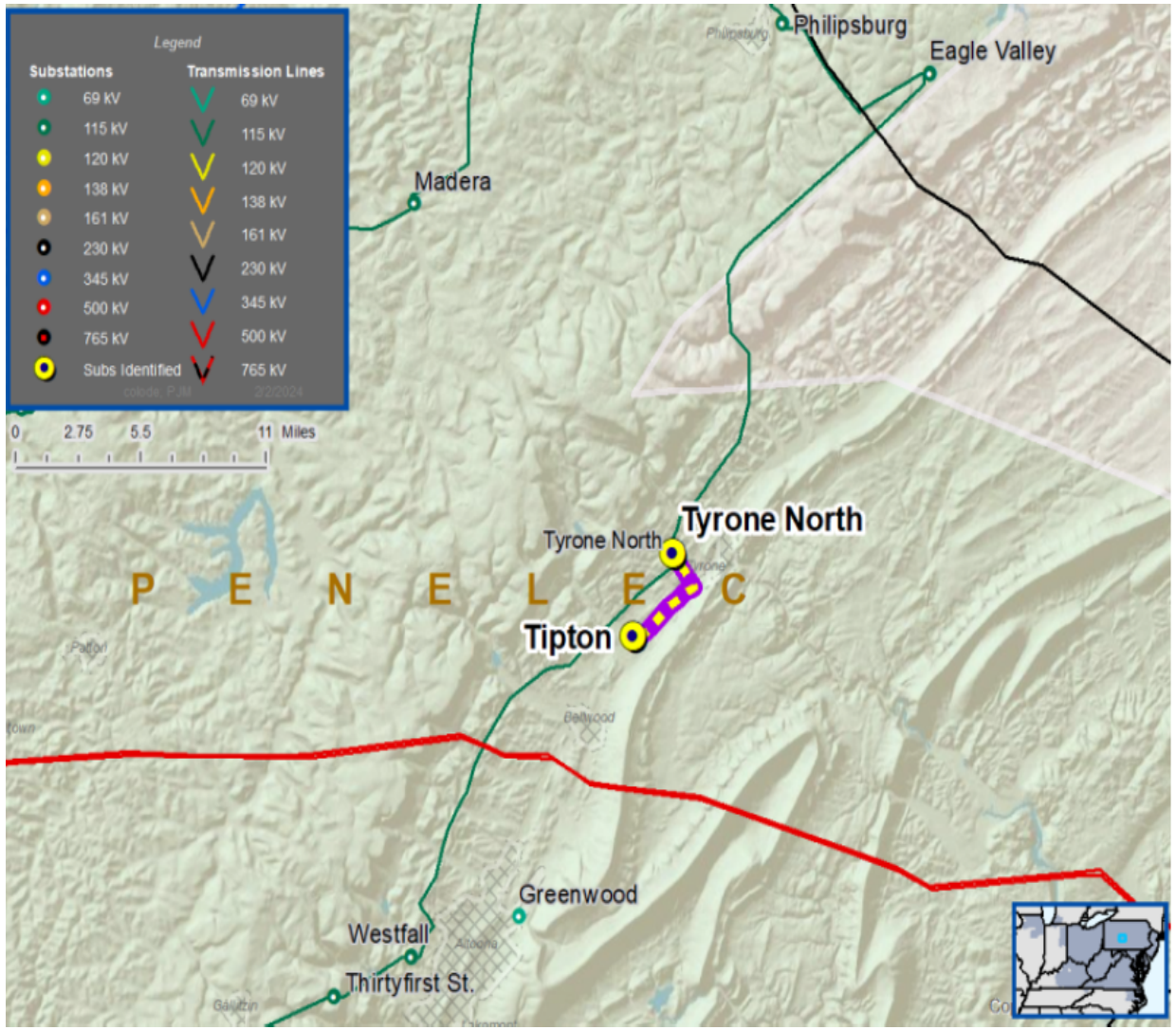
Project Driver: Equipment Condition/Performance/Risk

Specific Assumption References:

System Performance Projects Global Factors - System reliability and performance - Substation/line equipment limit Upgrade Relay Schemes - Obsolete and difficult to repair communication equipment - Communication technology upgrades

Problem Statement:

- The Tyrone North – Tipton 46 kV Line has electromechanical relays with directional tripping. - The relays limit the line and cause errors in operational monitoring. - Substation conductor limits the line rating. - Existing line ratings: -- 34/44 MVA (SN/SE) -- 49/55 MVA (WN/WE)



Penelec Transmission Zone M-3 Process
Tyrone North – Tipton 46 kV Line

Need number(s): PN-2024-006

Process Stage: Solution Meeting SRRTEP-MA - 04/10/2025

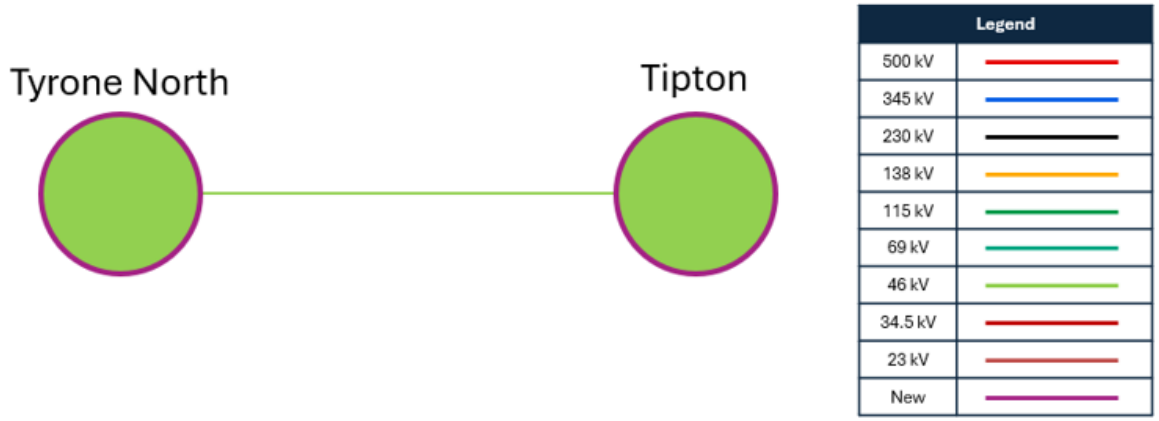
Proposed Solution:

Tyrone North - Tipton 46 kV Line: Upgrade line relaying and limiting substation conductor at Tyrone North Substation. Upgrade protection and terminal equipment at Tipton Substation.. Estimated Cost: $2.92 M

Transmission Cost Estimate: $2.92 M

Alternatives Considered:

Maintain existing condition with directional relays limiting the capacity of the line.



Projected In-Service: 12/31/2027

Project Status: Conceptual

Appendix

High level M-3 Meeting Schedule

Assumptions

Activity	Timing
Posting of TO Assumptions Meeting information	20 days before Assumptions Meeting
Stakeholder comments	10 days after Assumptions Meeting

Needs

Activity	Timing
TOs and Stakeholders Post Needs Meeting slides	10 days before Needs Meeting
Stakeholder comments	10 days after Needs Meeting

Solutions

Activity	Timing
TOs and Stakeholders Post Solutions Meeting slides	10 days before Solutions Meeting
Stakeholder comments	10 days after Solutions Meeting

Submission of Supplemental Projects & Local Plan

Activity	Timing
Do No Harm (DNH) analysis for selected solution	Prior to posting selected solution
Post selected solution(s)	Following completion of DNH analysis
Stakeholder comments	10 days prior to Local Plan Submission for integration into RTEP
Local Plan submitted to PJM for integration into RTEP	Following review and consideration of comments received after posting of selected solutions

Revision History

04/1/2025 – V1 – Original version posted to pjm.com