TEAC Committee
PECO
Supplemental Projects

November 4, 2025

Needs

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

Need Number: PE-2025-006

Process Stage: Need Meeting 11/4/2025

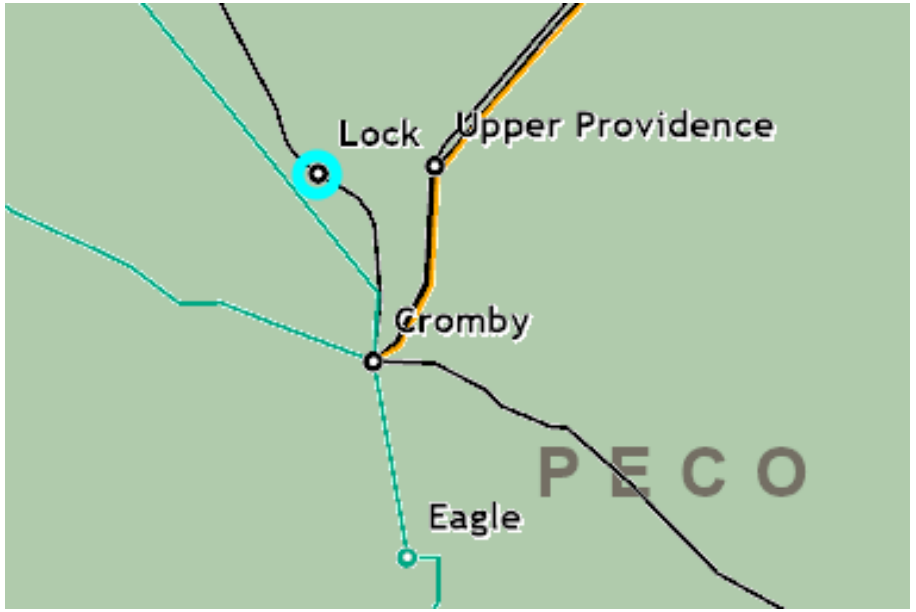
Project Driver: Customer Service

Specific Assumption Reference:

- Transmission System configuration changes due to new or expansion of existing distribution substations

Problem Statement:

- Lock substation has only a single distribution transformer, impacting reliability to customers in the region.
- Capacity planning forecasted additional load growth in the area that Lock substation currently does not have the capacity required to support in its current configuration.



M-3 Process
PECO Transmission Zone

Need Number: PE-2025-007

Process Stage: Need Meeting 11/4/2025

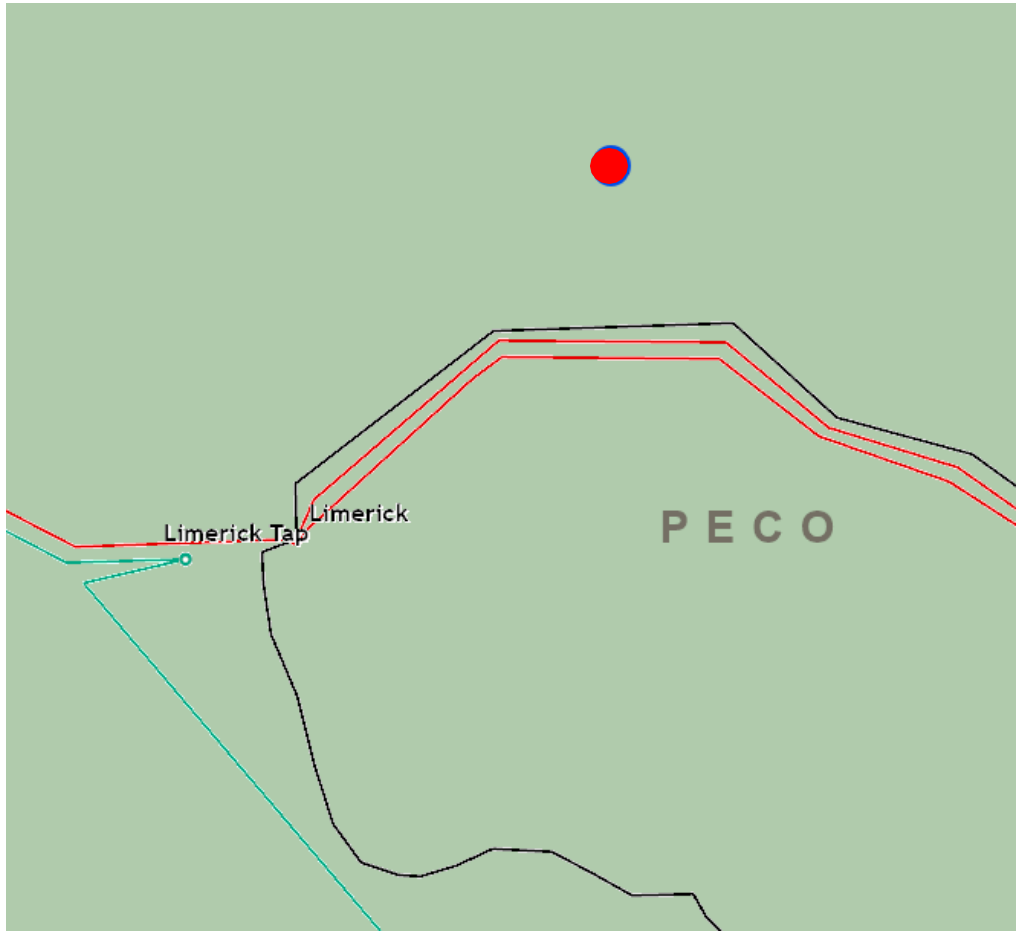
Project Driver: Customer Service

Specific Assumption Reference:

- New transmission customer interconnection or modification to an existing customer.

Problem Statement:

- A new customer in the Limerick, PA area has requested service for an initial load of 100 MW in 2029 and an ultimate load of 750 MW in 2032. Infrastructure in the area cannot adequately accommodate this load request.



M-3 Process
PECO Transmission Zone

Need Number: PE-2025-008

Process Stage: Need Meeting 11/4/2025

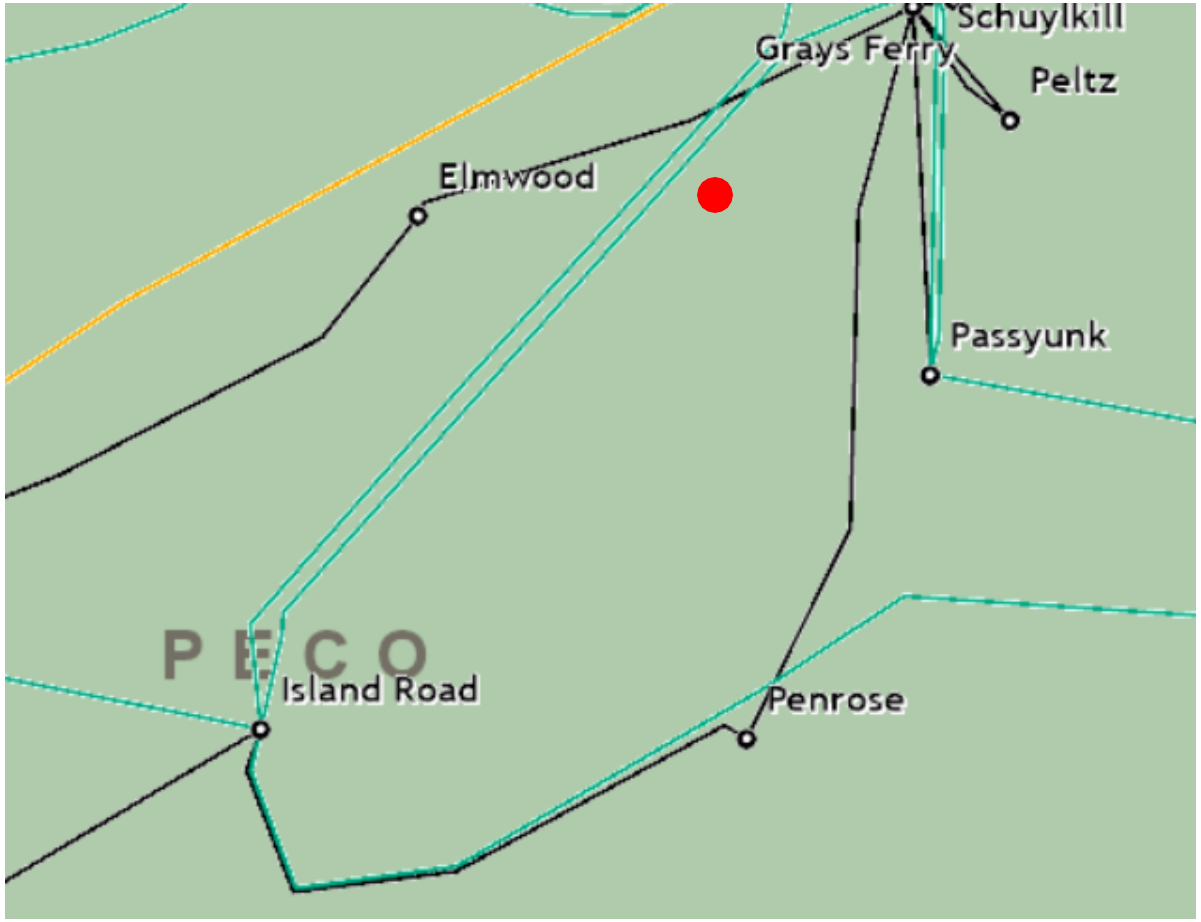
Project Driver: Customer Service

Specific Assumption Reference:

- New transmission customer interconnection or modification to an existing customer.

Problem Statement:

- A new customer in the Philadelphia, PA area has requested service for an initial load of 75 MW in 2027 and an ultimate load of 500 MW load in 2029. Infrastructure in the area cannot adequately accommodate this load request.



M-3 Process
PECO Transmission Zone

Need Number: PE-2025-009

Process Stage: Need Meeting 11/4/2025

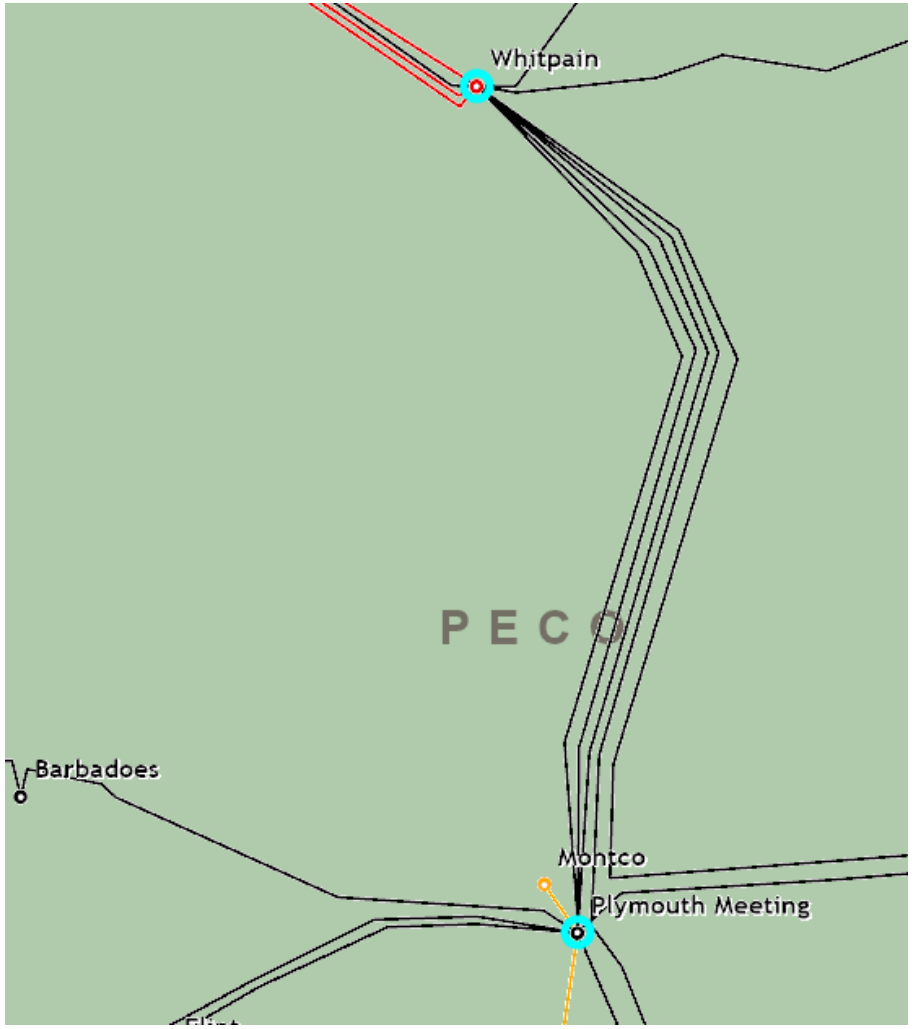
Project Driver: Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

- Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions

Problem Statement:

- The 230 kV line 220-13 Plymouth Meeting – Whitpain is a 5.12 mile line with 795 kcmil 30/19 ACSR conductor that was constructed in 1930. This line is 95 years old and nearing end of useful life.
- The static conductor is estimated to be around 65 years old and is nearing end of useful life.
- Tower bolts and paint coatings on all structures are 95 years old and need to be replaced.



M-3 Process
PECO Transmission Zone

Need Number: PE-2025-010

Process Stage: Need Meeting 11/4/2025

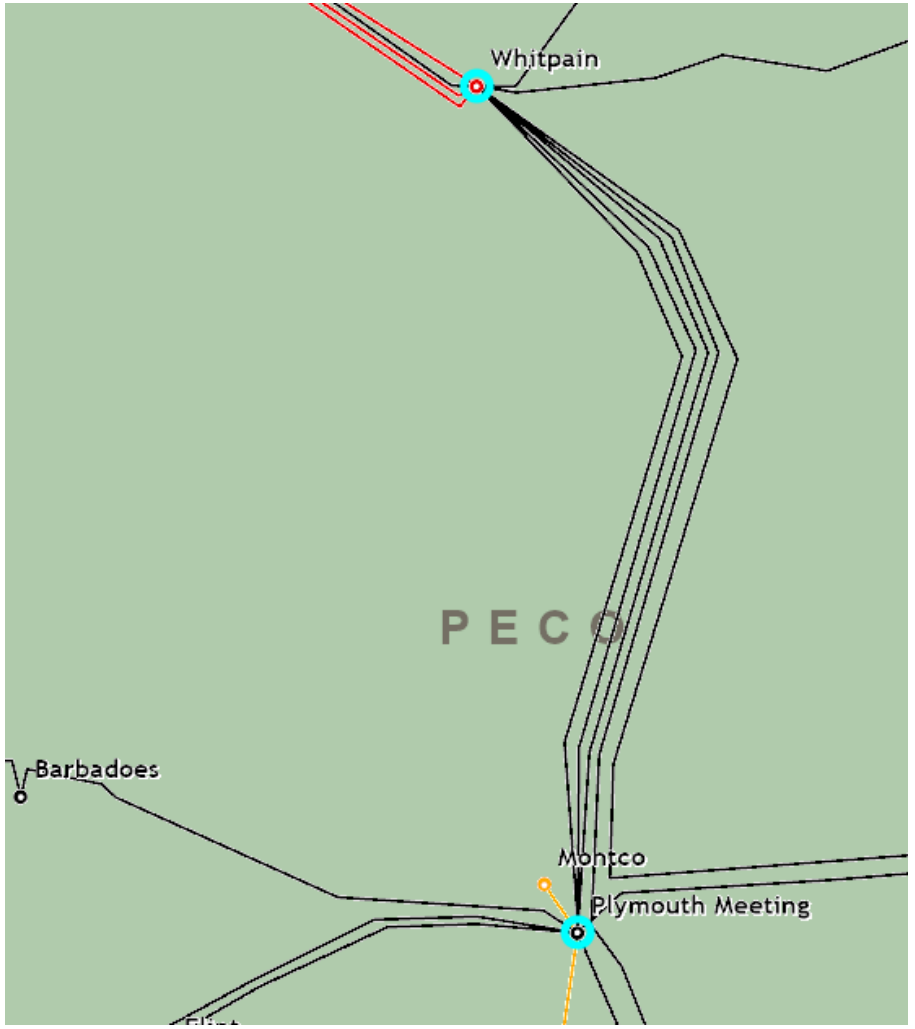
Project Driver: Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

- Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions

Problem Statement:

- The 230 kV line 220-14 Plymouth Meeting – Whitpain is a 5.12 mile line with 795 kcmil 30/19 ACSR conductor that was constructed in 1930. This line is 95 years old and nearing end of useful life.
- The static conductor is estimated to be around 65 years old and is nearing end of useful life.
- Tower bolts and paint coatings on all structures are 95 years old and need to be replaced.



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

M-3 Process
PECO Transmission Zone

Need Number: PE-2025-004

Process Stage: Solution Meeting 11/4/2025

Previously Presented: Need Meeting 10/8/2025

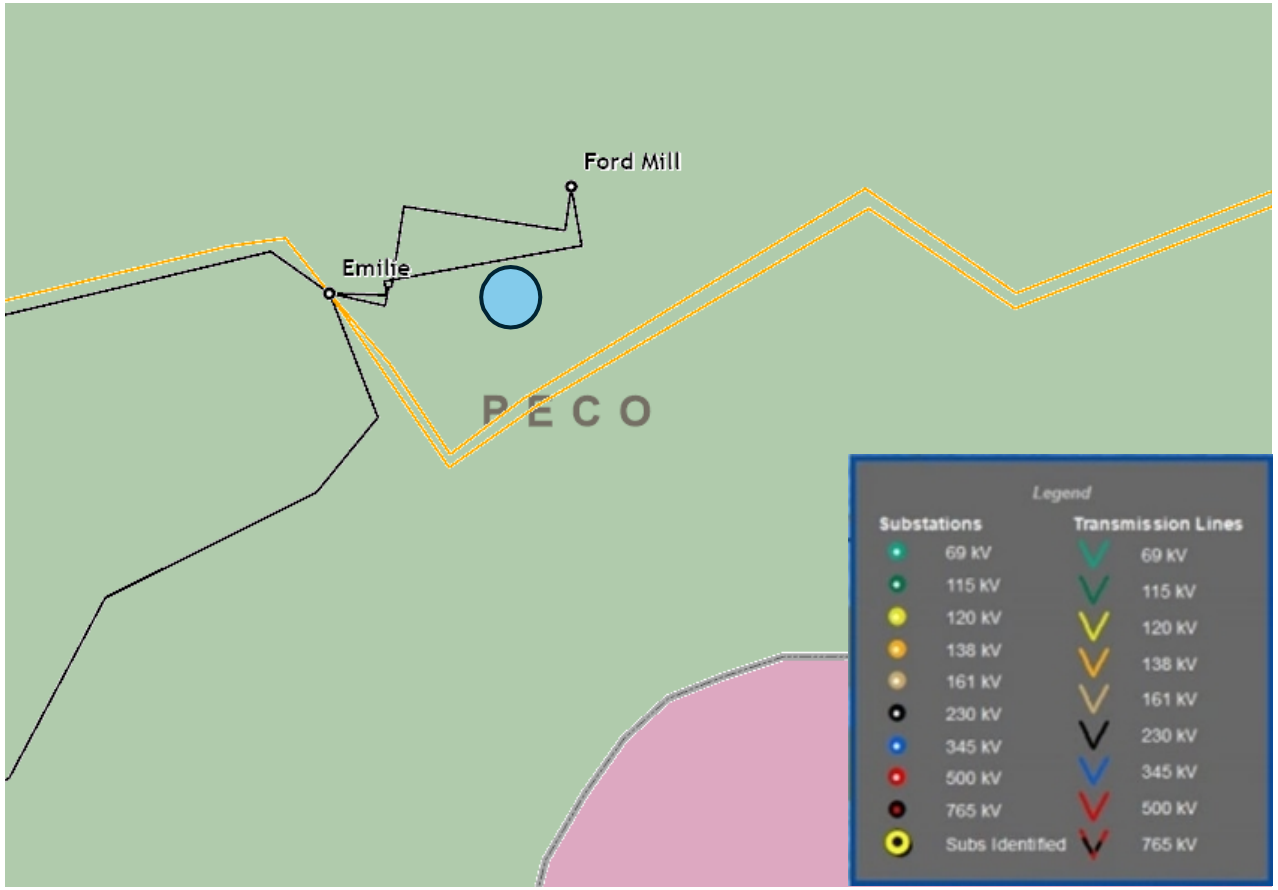
Project Driver: Customer Service

Specific Assumption Reference:

- New transmission customer interconnections or modification to an existing customer

Problem Statement:

- A new customer in the Fairless Hills, PA area has requested service for an initial loading of ~~250~~ 240 MW in 2027 and an ultimate load of 600 MW in 2028. Distribution infrastructure in the area cannot adequately accommodate this load request.



M-3 Process
PECO Transmission Zone

Need Number: PE-2025-004

Process Stage: Solution Meeting 11/4/2025

Solution:

Phase 1:

- Install 2 temporary radial 230kV lines to the customer location by tapping into the existing 230kV 220-90 and 220-91 Emilie – Ford Mill lines to serve the initial 240 MW of customer load. Temporary feeds will be re-used in phase 2.
- Upgrade relays at Emilie substation.
- Install 7.5 miles of new OPGW static wire along length of existing structures.

Phase 1 Estimated Transmission Cost: $3.9M

Phase 2:

- Build a new 230 kV 11-breaker BAAH substation, bisecting the existing Emilie – Ford Mill 230 kV lines, installing 2 new feeds to the customer site from the new substation to serve the ultimate 600 MW of customer load.
- Rebuild the 220-90 and 220-91 lines between Emilie and the new substation.
- Upgrade Emilie substation terminal devices, including breakers, bus conductor, and metering equipment

Phase 2 Estimated Transmission Cost: $176.6M

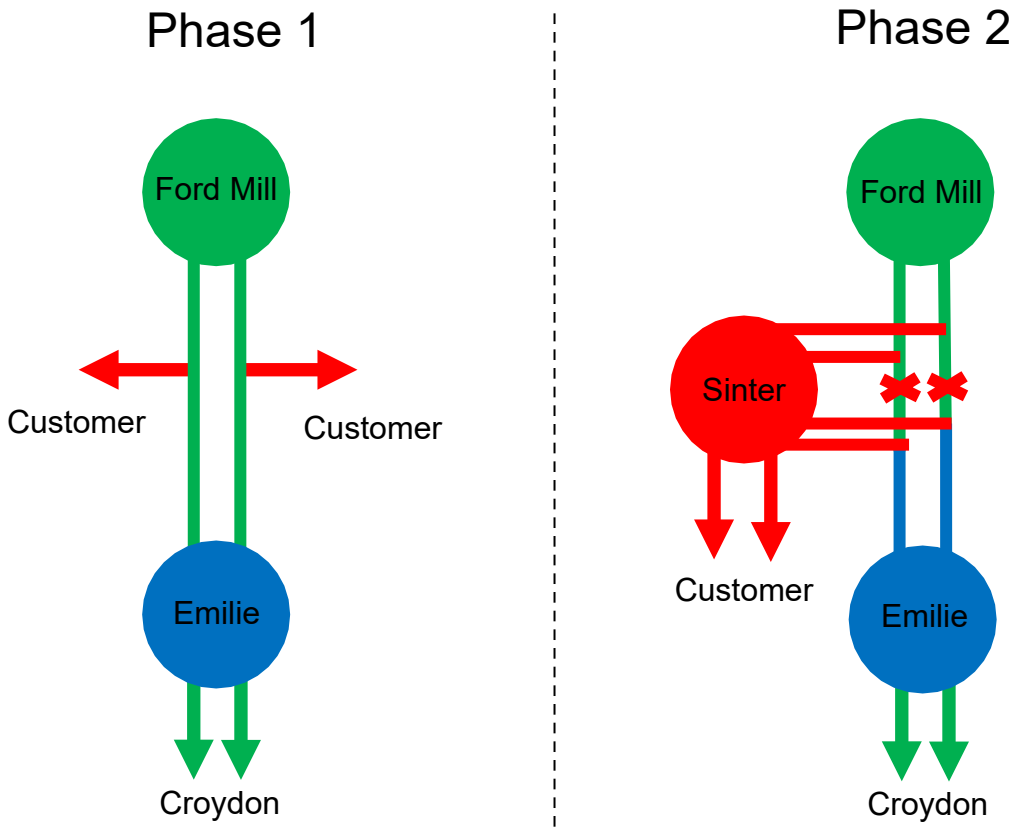
Alternatives Considered:

- No feasible alternatives considered.

In-Service: Phase 1 – 1/2027, Phase 2 – 6/2030

Project Status: Engineering

Model: Phase 1 – 2027 RTEP, Phase 2 – 2030 RTEP



Legend	
Existing 230 kV	
New 230 kV	
Upgraded 230 kV	

M-3 Process
PECO Transmission Zone

Need Number: PE-2025-005

Process Stage: Solution Meeting 11/4/2025

Previously Presented: Need Meeting 10/8/2025

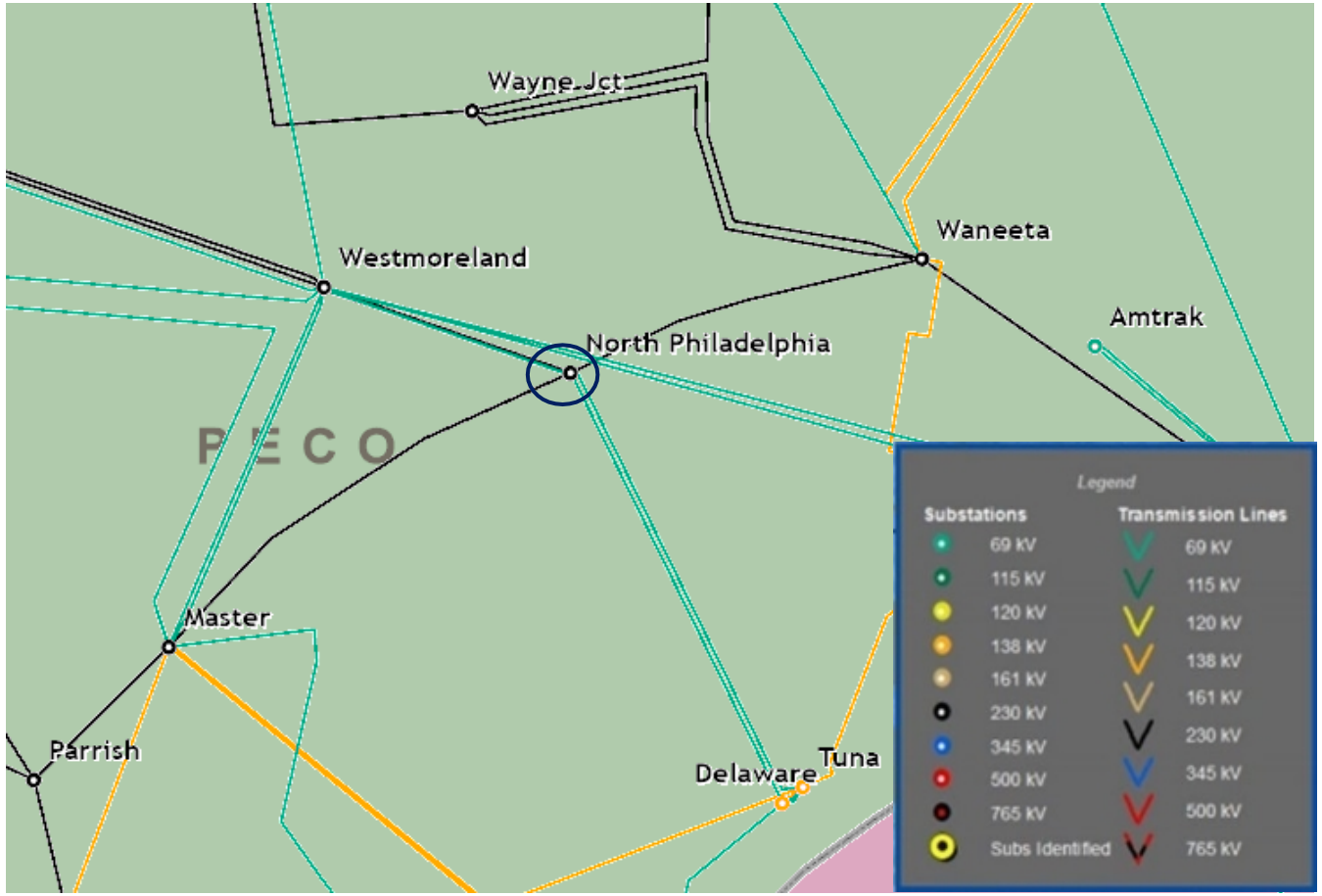
Project Driver: Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:

- Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
- Programmatic review and/or replacement of breakers, relays, wood poles, cables, etc.

Problem Statement:

- North Philadelphia 230kV circuit breaker CB875 is an oil filled breaker installed in 1977 and is in deteriorating condition, has lack of replacement parts, and elevated maintenance cost.



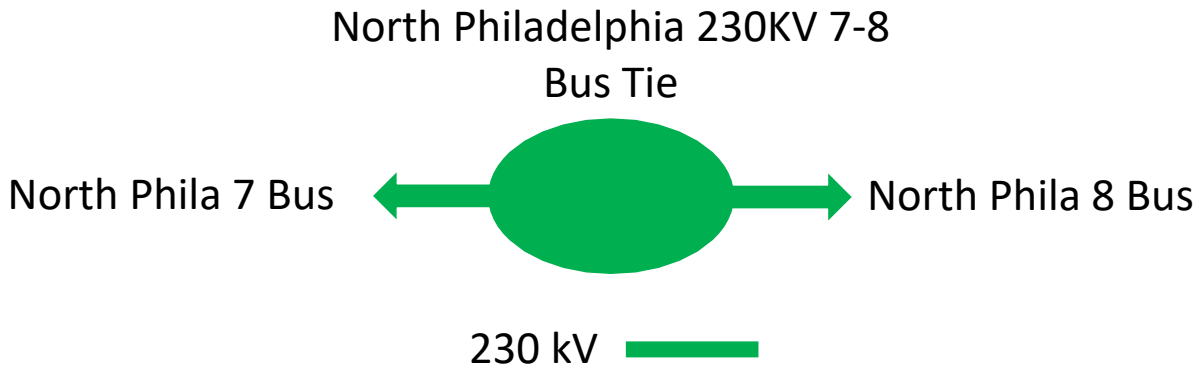
Need Number: PE-2025-005

Process Stage: Solution Meeting 11/4/2025

Solution:

Replacement of CB875 with SF6 circuit breaker, replacement of disconnect switches and associated CTs. The breaker short circuit ratings have been increased from 50 kA to 63 kA.

	Existing Short Circuit Rating	New Short Circuit Rating
N. Phila. CB 875	50 kA	63 kA



Estimated Transmission Cost: $0.6M

Alternatives Considered:

1. No feasible alternatives considered

In-Service: 5/23/2026

Project Status: Engineering

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

10/24/2025 – V1 – Original version posted to pjm.com