



TEAC Committee
PECO
Supplemental Projects

April 7, 2026

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-2026-007

Process Stage: Need Meeting 4/7/2026

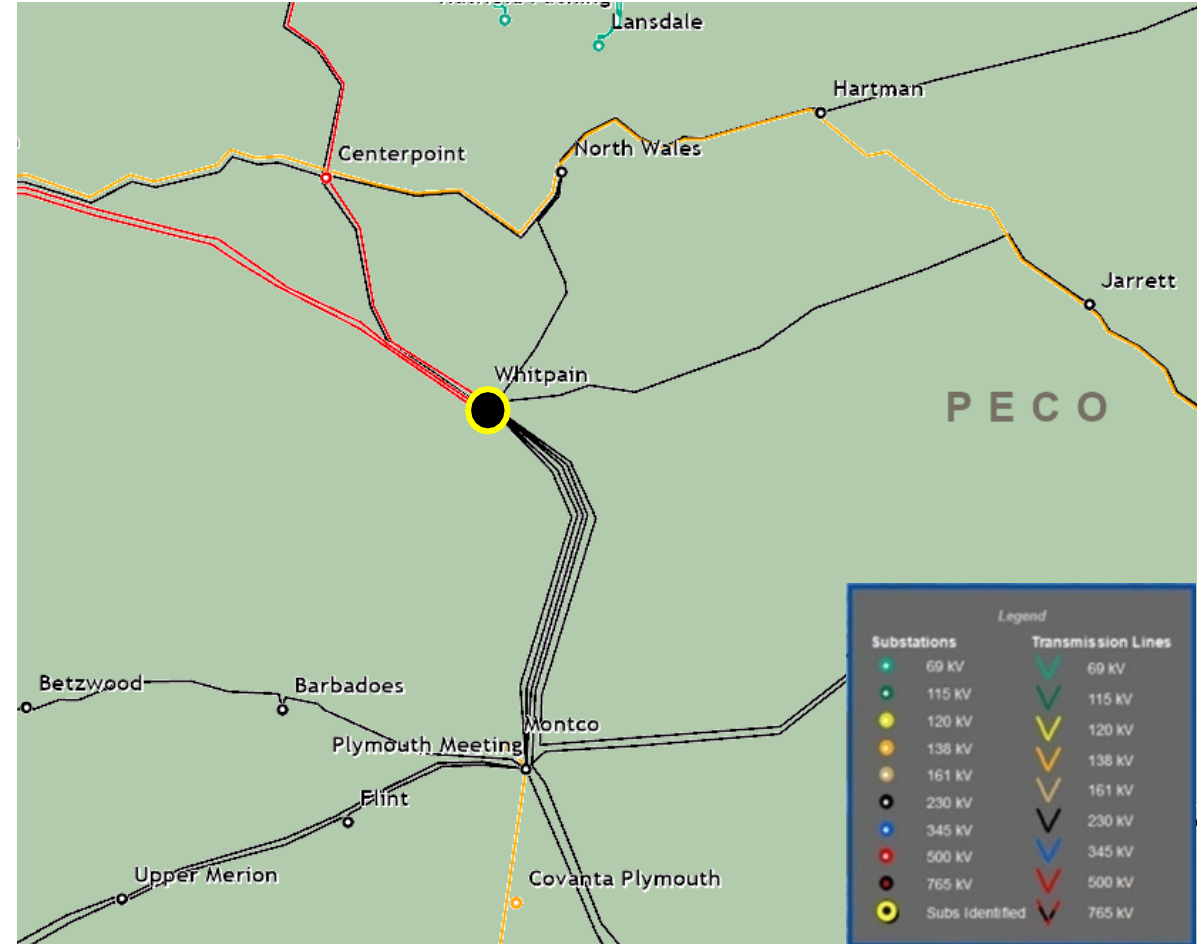
Project Driver: Equipment Material Condition, Performance, and Risk, Customer Service

Specific Assumption Reference:

- Programmatic review and/or replacement of breakers, relays, wood poles, etc.
- Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions.
- New customer interconnections or modification to an existing customer

Problem Statement:

- The Whitpain 230 kV 2-3 bus tie includes two circuit breakers, CB 235 and 325, which consist of components that are considered obsolete due to lack of available parts and are being phased out of the system.
- The breakers are approaching end of life.
- This facility has also been identified as a limitation in ensuring the ability to serve current and new customers.



Need Number: PE-2026-008

Process Stage: Need Meeting 4/7/2026

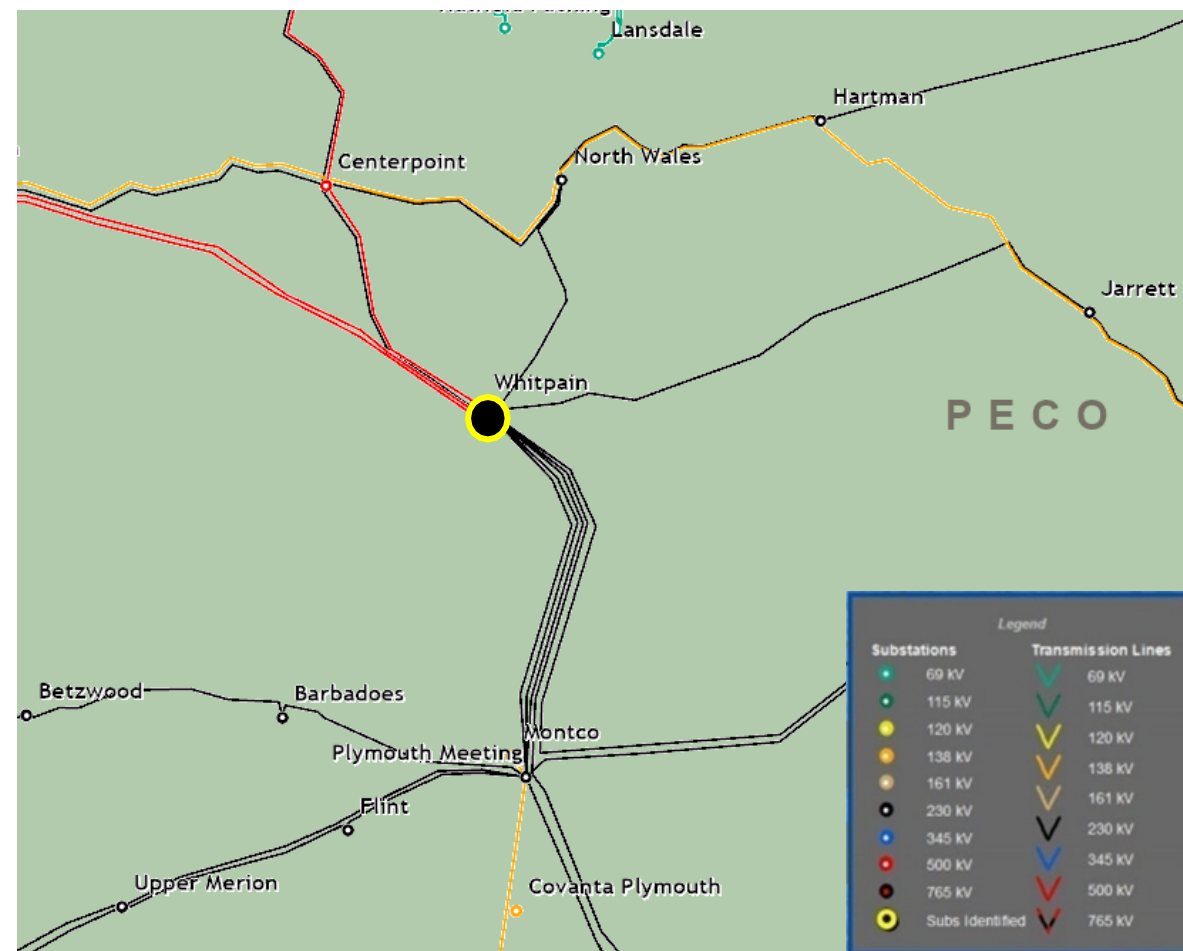
Project Driver: Equipment Material Condition, Performance, and Risk, Customer Service

Specific Assumption Reference:

- Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions.
- New customer interconnections or modification to an existing customer

Problem Statement:

- The Whitpain 500/230 kV T3 transformer was installed in 1971, is in a deteriorating condition, and is beyond its expected useful life.
- This facility has also been identified as a limitation in ensuring the ability to serve current and new customers.



Need Number: PE-2026-010

Process Stage: Need Meeting 4/7/2026

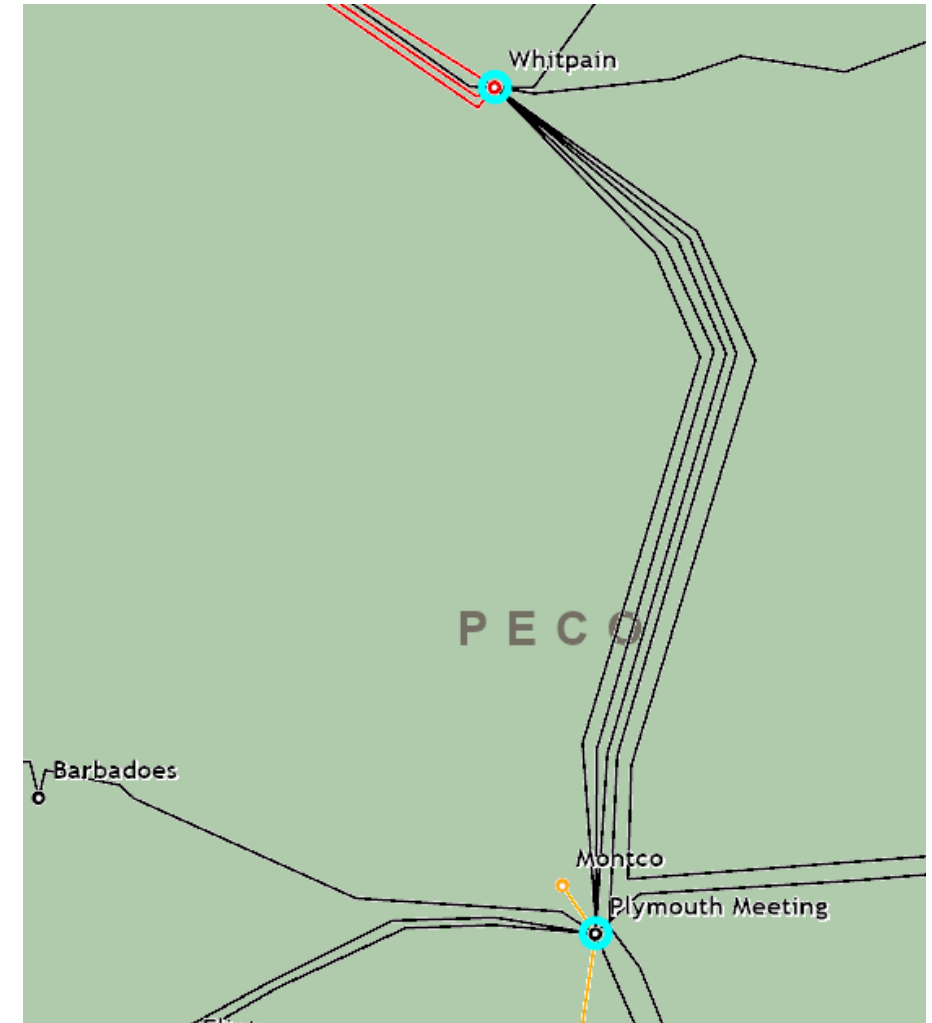
Project Driver: Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

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

Problem Statement:

- 220-15 Plymouth Meeting – Whitpain is a 5.09 mile 230 kV line that was constructed in 1968 using aluminum lattice structures. These structures are now obsolete with decreasing options for repair and replacement parts.



Need Number: PE-2026-006

Process Stage: Need Meeting 4/7/2026

Project Driver:

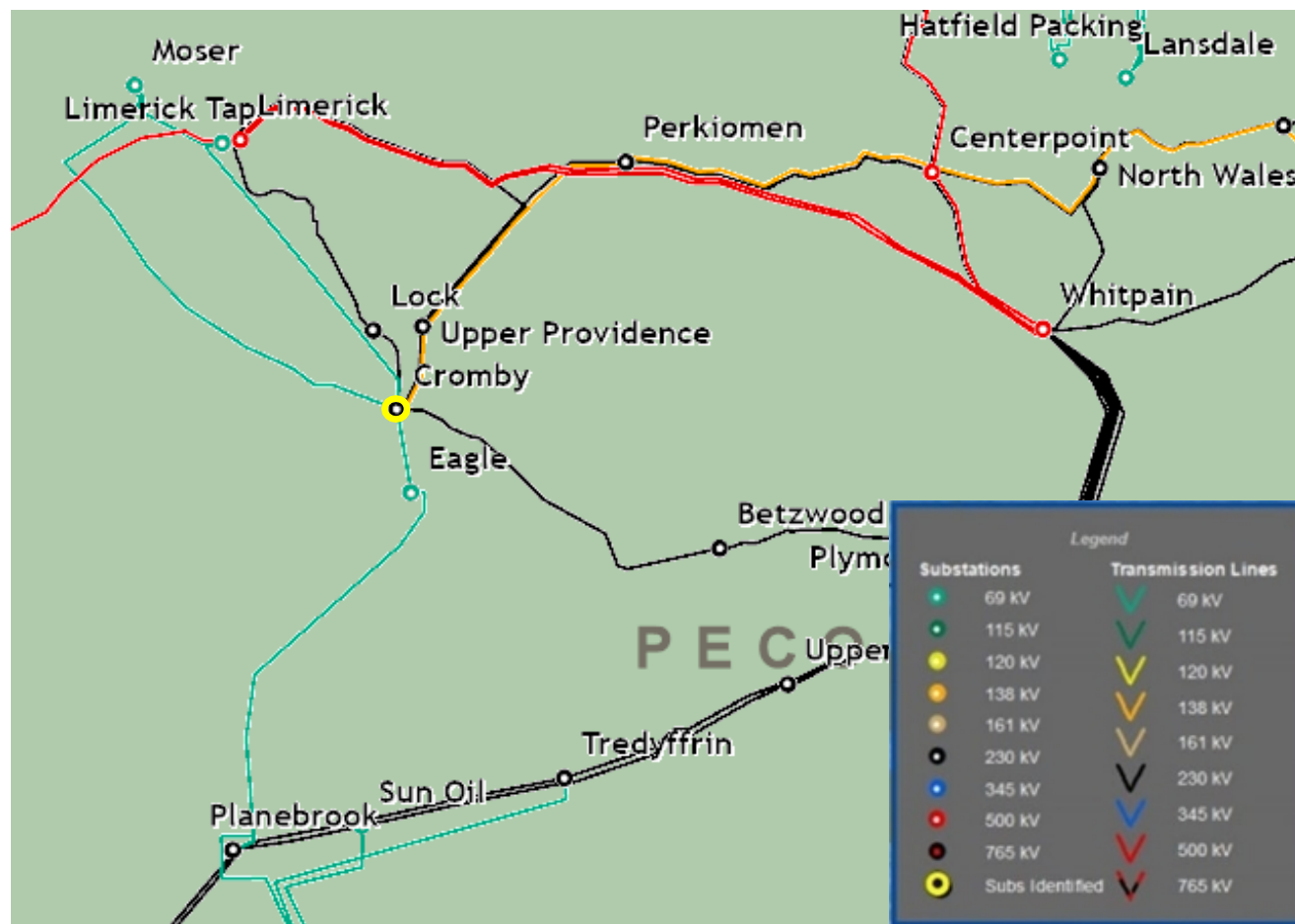
- Operational Flexibility and Efficiency
- Equipment Material Condition, Performance, and Risk
- Customer Service

Specific Assumption Reference:

- Enhancing system functionality, flexibility, visibility, or operability
- Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
- New transmission customer interconnections or modification to an existing customer

Problem Statement:

- The Cromby substation consists of 230kV, 138kV and 69kV facilities that don't meet current Exelon substation design standards. This non-standard substation design limits operational flexibility and reliability.
- The original Cromby substation was built in the 1930s and is at EOL. The average transformer age is 67 years old. The 69kV and 138kV yards include disconnect switches from the 1950s that no longer have replacement parts.
- This facility has also been identified as a limitation in ensuring ability to serve current and new customers.



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

Need Number: PE-2026-005

Previously Presented: Need Meeting 3/10/2026

Process Stage: Solution Meeting 4/7/2026

Project Driver: Operational Flexibility and Efficiency

Specific Assumption Reference:

Enhancing system functionality, flexibility, visibility, or operability.

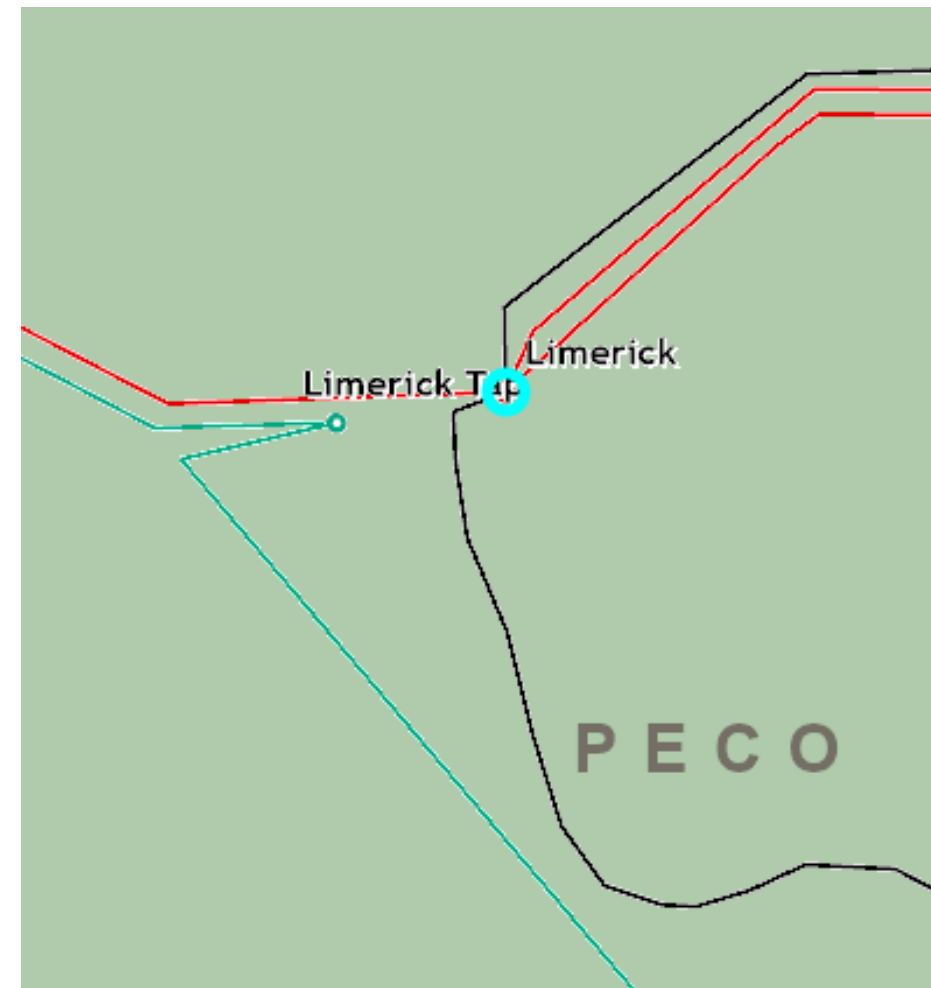
Provide Operations more options to deal with non-standard operating conditions.

Remedy recurring operational problems.

Problem Statement:

Limerick substation has a single 500/230 kV transformer bank. This limits the operational flexibility when scheduling 500kV and 230kV outages, resulting in operational actions needed.

The current configuration has been determined to no longer support operational needs including but not limited to equipment maintenance outages.





PECO Transmission Zone M-3 Process New Limerick TR 7 500/230 kV Transformer

Need Number: PE-2026-005

Process Stage: Solutions Meeting 4/7/2026

Proposed Solution:

Install one new 500 kV circuit breaker and one new 230 kV circuit breaker at Limerick Substation.

Relocate two line exits to make room for the new transformer.

Install a new 500/230 kV transformer at Limerick Substation.

New Ratings (MVA)	SN/SE	WN/WE
New Limerick TR 7	1238/1518	1413/1749

Estimated Transmission Cost: \$93 M

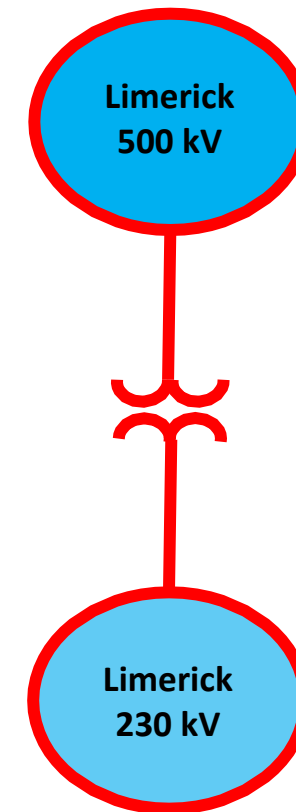
Alternatives Considered:

- No feasible alternatives

Projected In-Service: 06/01/32

Project Status: Engineering

Model: 2029 RTEP



Need Number: PE-2025-008

Process Stage: Solution Meeting 4/7/2026

Previously Presented: Need Meeting 11/4/2025

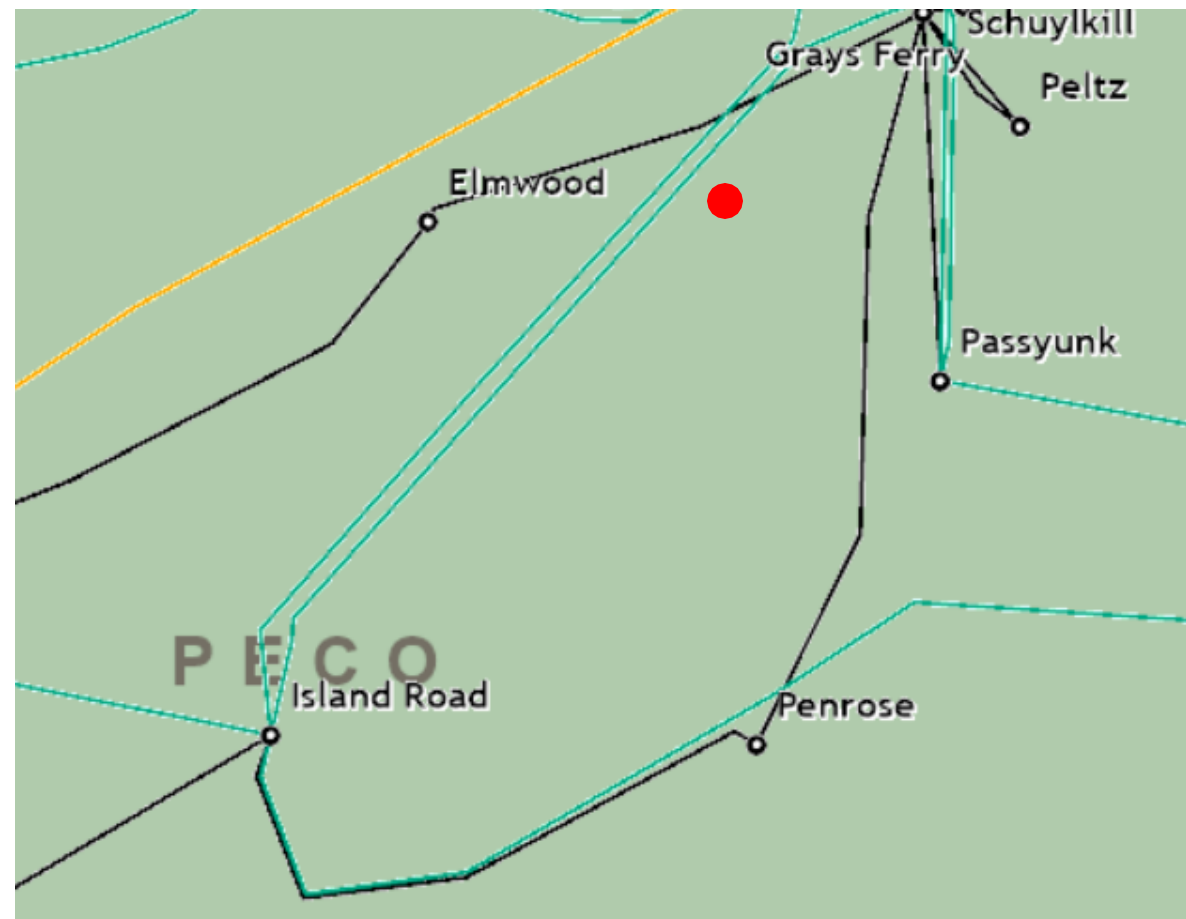
Project Driver: Customer Service

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~~ 140MW in ~~2027~~ 2029 and an ultimate load of 500 MW load in ~~2029~~ 2034. Infrastructure in the area cannot adequately accommodate this load request.



Need Number: PE-2025-008

Process Stage: Solution Meeting 4/7/2026

Solution:

Phase 1:

- Add a new 230kV circuit breaker at Elmwood substation.
- Install a temporary radial 230kV line to the customer location by tapping into the existing 230kV Elmwood-Grays Ferry line to serve the initial 140 MW of customer load. Install OPGW and upgrade relays at remote terminals. Temporary feed will be re-used in phase 2.

Phase 1 Estimated Transmission Cost: \$2.5 M

Phase 2:

- Construct a new 20 breaker 230kV BAAH substation, Bellwether, bisecting the existing Island Road-Navy Yard 230 kV line, installing 2 new feeds to the customer site from the new substation.

Phase 2 Estimated Transmission Cost: \$172M

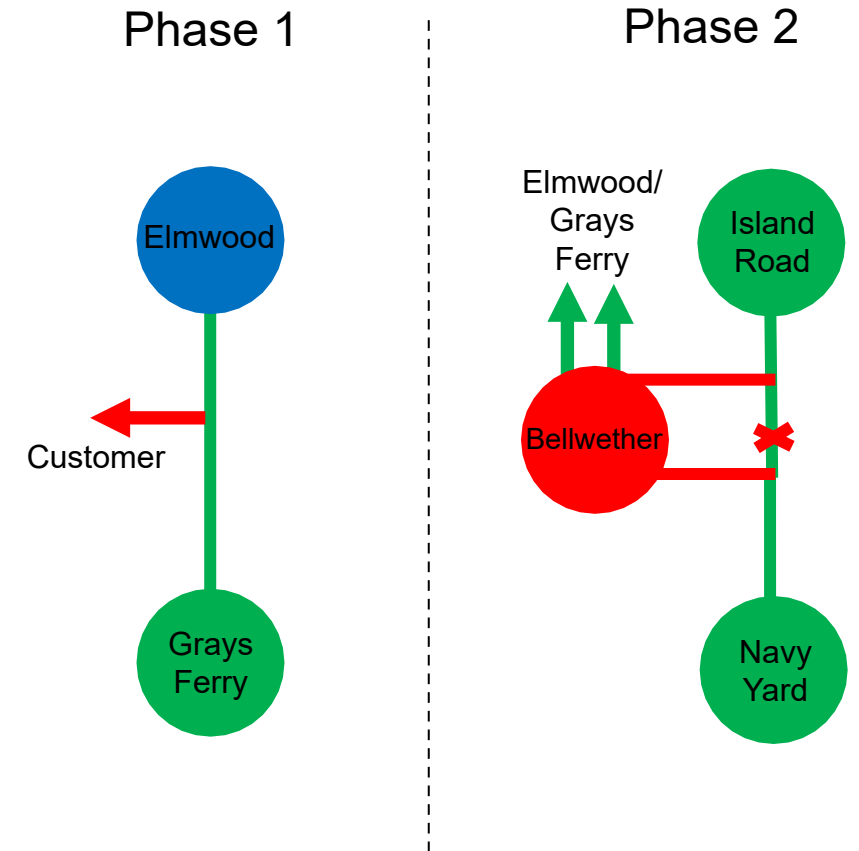
Alternatives Considered:




- No feasible alternatives

In-Service: Phase 1 – 12/31/2029, Phase 2 – 6/1/2031

Project Status: Engineering

Model: 2029 RTEP



Legend	
Existing 230 kV	
New 230 kV	
Upgraded 230 kV	

Need Number: PE-2025-008

Process Stage: Solutions Meeting 4/7/2026

Proposed Solution: System Reinforcement Work

System reinforcements required to meet applicable transmission planning criteria:

Construct a new 10 Mile long (5.1 Miles Overhead/4.9 Miles Underground) 230kV transmission line from Navy Yard -Richmond and replace breakers, disconnects, station cable and bus work at Richmond.

New Ratings (MVA)	SN/SE	WN/WE
Navy Yard-Richmond 230kV Line	1299/1767	1348/1843

Total Estimated Transmission Cost: \$181.3M

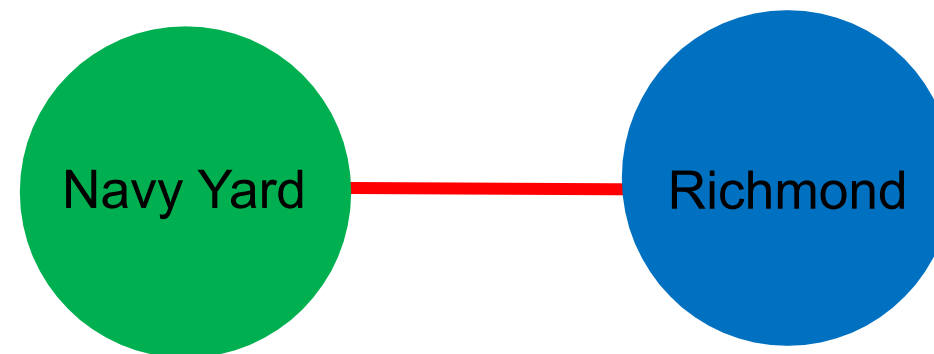
Alternatives Considered:




- Existing facility upgrades ruled out due to challenges with constructability and anticipated need to provide a third 230kV source to Navy Yard.

Projected In-Service: 09/01/2032

Project Status: Engineering

Model: 2029 RTEP



Legend	
Existing 230 kV	
New 230 kV	
Upgraded 230 kV	



Need Number: PE-2025-008

Process Stage: Solutions Meeting 4/7/2026

Proposed Solution (Continued):

System reinforcements required to meet applicable transmission planning criteria:

Upgrade 230 kV disconnect switches and relays around the Plymouth Meeting Tie breakers #235 and #325.

Existing Ratings (MVA)	SN/SE	WN/WE
Plymouth Meeting Bkr 235 & 325	647/756	772/772
New Ratings (MVA)	SN/SE	WN/WE
Plymouth Meeting Bkr 235 & 325	905/1097	1101/1253

Total Estimated Transmission Cost: \$1.7M

Alternatives Considered:

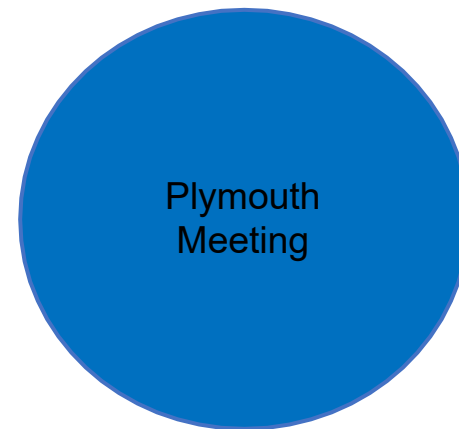
- No feasible alternatives

Projected In-Service: 12/1/2028

Project Status: Conceptual

Model: 2029 RTEP

PECO Transmission Zone M-3 Process Plymouth Meeting Tie Breakers #235 & #325



Legend	
Existing 230 kV	
New 230 kV	
Upgraded 230 kV	

Need Number: PE-2025-008

Process Stage: Solutions Meeting 4/7/2026

Proposed Solution (Continued):

System reinforcements required to meet applicable transmission planning criteria:

Upgrade 230 kV metering and station cable on Whitpain T1 500/230 kV transformer.

Existing ratings (MVA)	SN/SE	WN/WE
Whitpain TR 1	837/1038	996/1159
New Ratings (MVA)	SN/SE	WN/WE
Whitpain TR 1	983/1222	1119/1273

Total Estimated Transmission Cost: \$1.1M

Alternatives Considered:

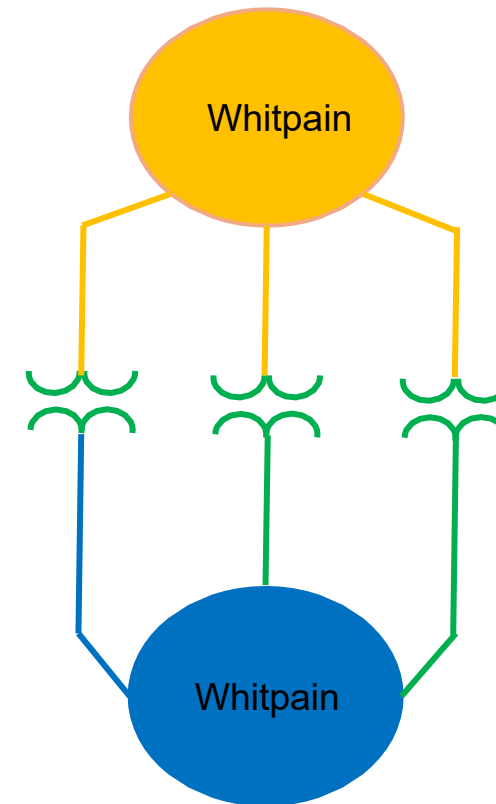
- No feasible alternatives




Projected In-Service: 06/01/2030

Project Status: Conceptual

Model: 2029 RTEP

PECO Transmission Zone M-3 Process Whitpain T1 500/230 kV Transformer



Legend	
Existing 500 kV	
Existing 230 kV	
Upgraded 230 kV	

Need Number: PE-2025-008

Process Stage: Solutions Meeting 4/7/2026

Proposed Solution (Continued):

System reinforcements required to meet applicable transmission planning criteria:

Rebuild the entire 2 miles of the 220-53 transmission line.

Replace Trainer 230 kV circuit breaker #785, relays, equipment CTs.

Replace Chichester 230 kV relays and bus conductor.

Existing ratings (MVA)	SN/SE	WN/WE
220-53 Line	721/772	756/772
New Ratings (MVA)	SN/SE	WN/WE
220-53 Line	996/1159	996/1159

Total Estimated Transmission Cost: \$18M

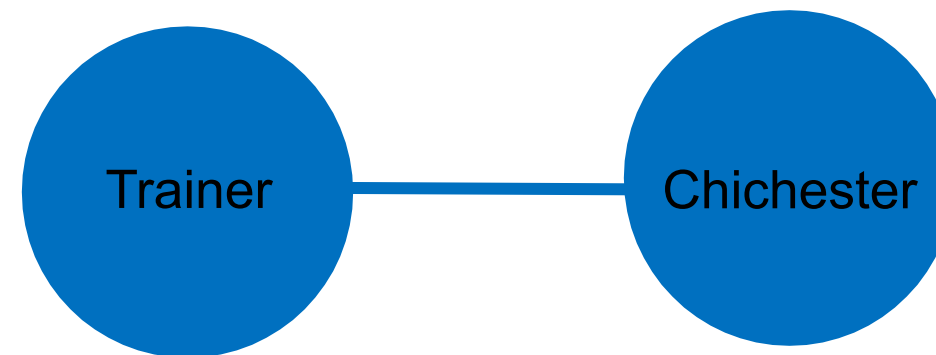
Alternatives Considered:




- No feasible alternatives

Projected In-Service: 06/01/2029

Project Status: Conceptual

Model: 2029 RTEP



Legend	
Existing 230 kV	
New 230 kV	
Upgraded 230 kV	

Need Number: PE-2025-008

Process Stage: Solutions Meeting 4/7/2026

Proposed Solution (Continued):

System reinforcements required to meet applicable transmission planning criteria:

Rebuild the entire 7.1 miles of the 23015 Claymont-Edgemoor 230kV line and the DPL sections of the 220-84 Claymont-Linwood 230kV line (1 mile) and 220-85 Edgemoor-Linwood 230kV line (8.1 miles). Replace breakers, disconnects, relays and bus sections at Claymont and Edgemoor substations.

Existing ratings (MVA)	SN/SE	WN/WE
23015 Line	653/799	748/891
220-84 Line	653/799	748/891
220-85 Line	653/808	752/910
New Ratings (MVA)	SN/SE	WN/WE
23015 Line	1009/1195	1195/1195
220-84 Line	1098/1195	1150/1195
220-85 Line	1044/1310	1362/1590

Total Estimated Transmission Cost: \$145.4M

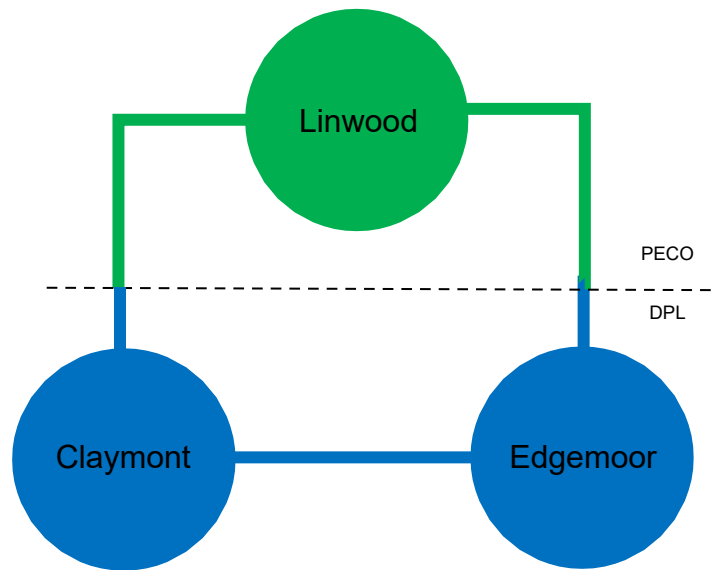
Alternatives Considered:




- No feasible alternatives

Projected In-Service: 06/01/2031

Project Status: Engineering

Model: 2029 RTEP



Legend	
Existing 230 kV	
New 230 kV	
Upgraded 230 kV	

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

3/27/2026 – V1 posted

4/2/2026 – V2 posted – includes cost breakdown for PE-2025-008