

# Transmission Expansion Advisory Committee – PECO Supplemental Projects

November 2, 2021

# 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-2021-006**

**Process Stage: Needs – TEAC – November 2, 2021**

**Project Driver:**

Equipment Material Condition, Performance, and Risk

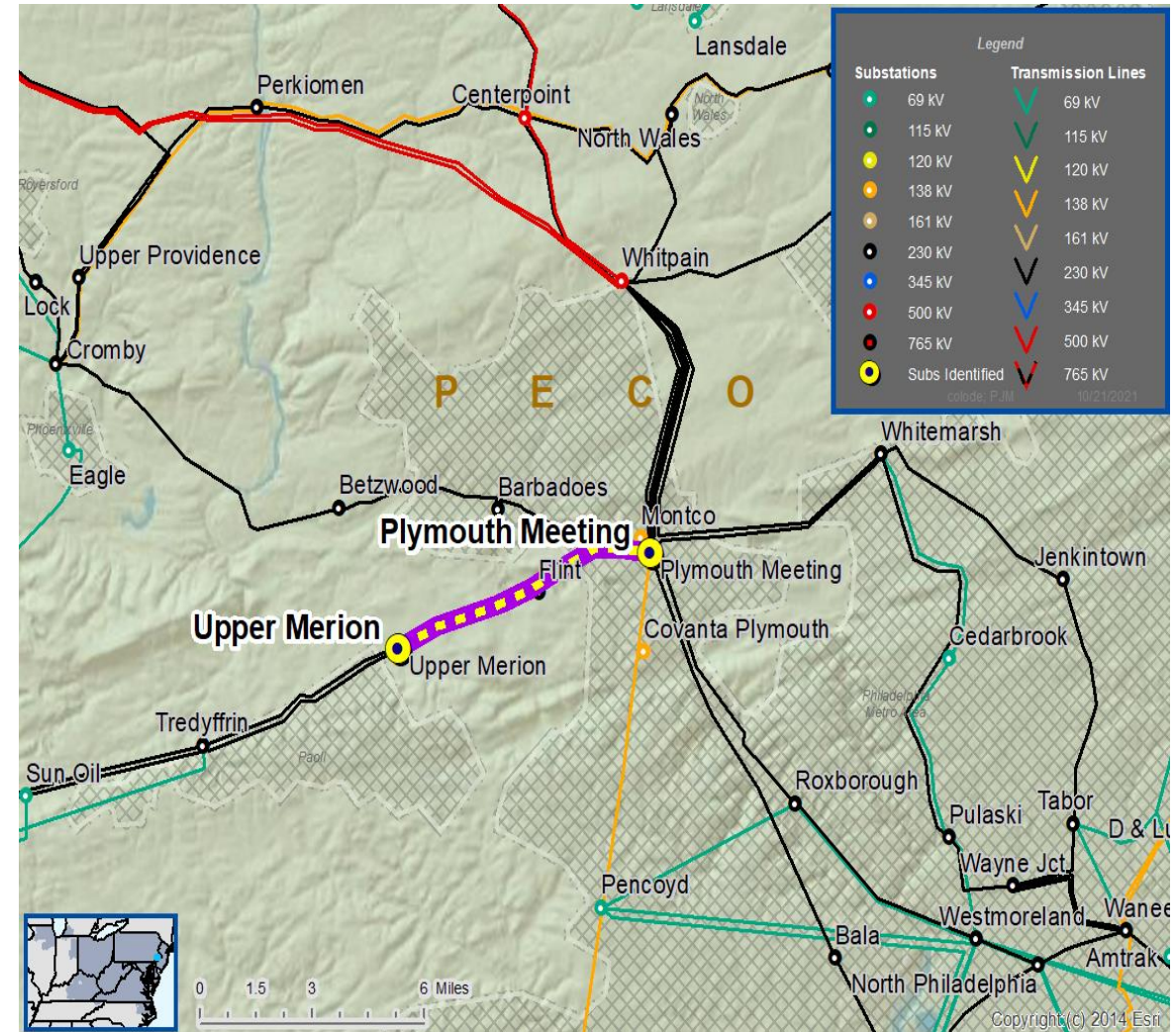
**Specific Assumption Reference:**

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

**Problem Statement:**

230kV line 220-69 (Plymouth Meeting – Upper Merion) has obsolete relays

- It is becoming difficult to service existing outdated relays. They are being phased out of the system.



# 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 220-10 (Whitpain – Buxmont) Relay Replacement

**Need Number: PE-2020-001**

**Process Stage: Solution Meeting 11/02/2021**

**Previously presented: Need Meeting 3/10/2020**

**Project Driver:**

Equipment Material Condition, Performance, and Risk

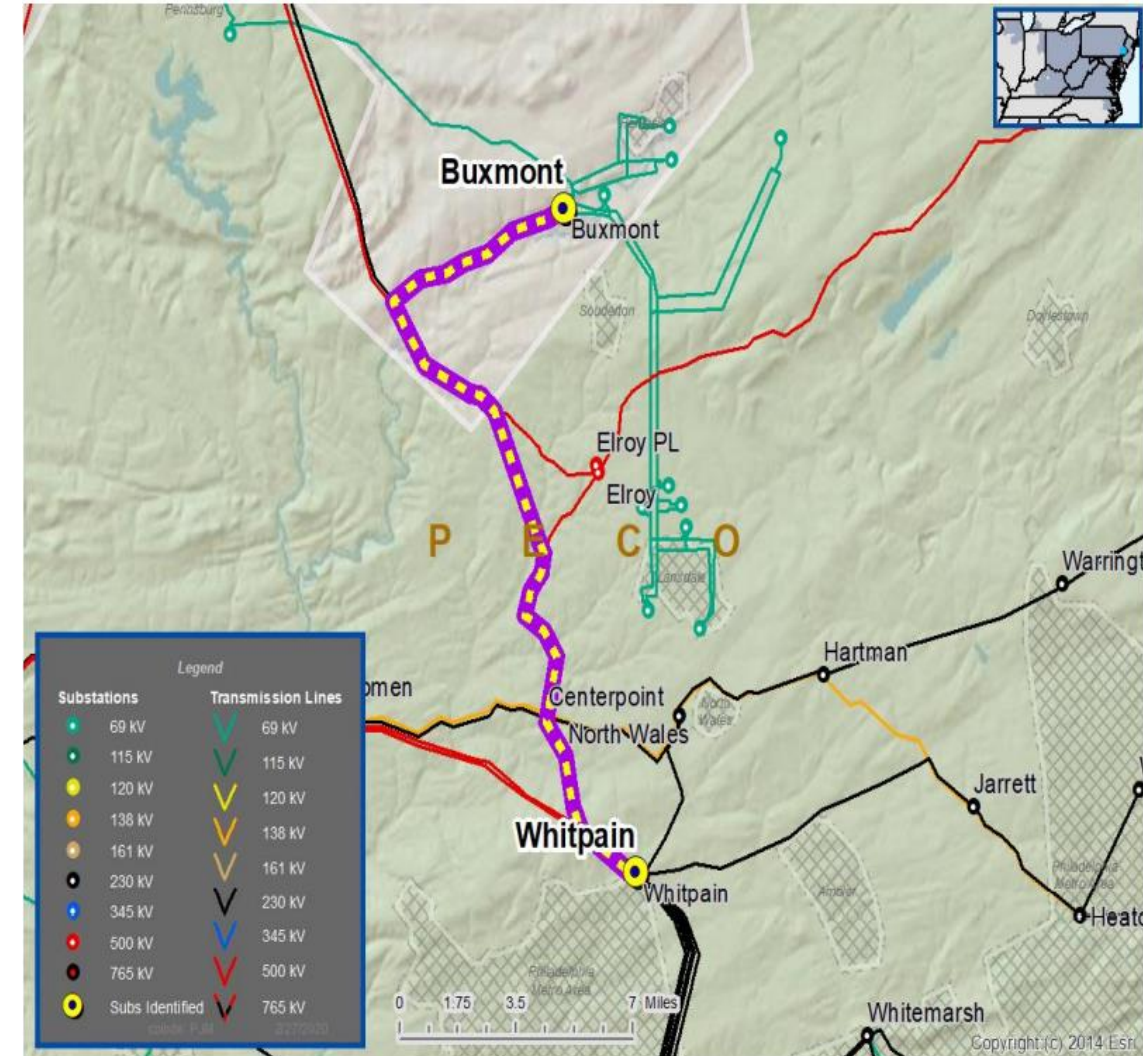
**Specific Assumption Reference:**

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

**Problem Statement:**

230kV tie line 220-10 (Whitpain[PECO] – Bucksmont[PPL]) has obsolete relays

- It is becoming difficult to service existing electromechanical relays. They are being phased out of the system.



# M-3 Process PECO Transmission Zone 220-10 (Whitpain – Buxmont) Relay Replacement

**Need Number: PE-2020-001**

**Process Stage:** Solution Meeting 11/02/2021

**Proposed Solution:**

Upgrade relays, communication, metering & replace station conductor on 220-10 (Whitpain – Buxmont) line

- Before solution ratings: 418/519 MVA (SN/SE) [PECO portion]  
500/597 MVA (WN/WE) [PECO portion]
- After solution ratings: 463/578 MVA (SN/SE) [PECO portion]  
521/639 MVA (WN/WE) [PECO portion]

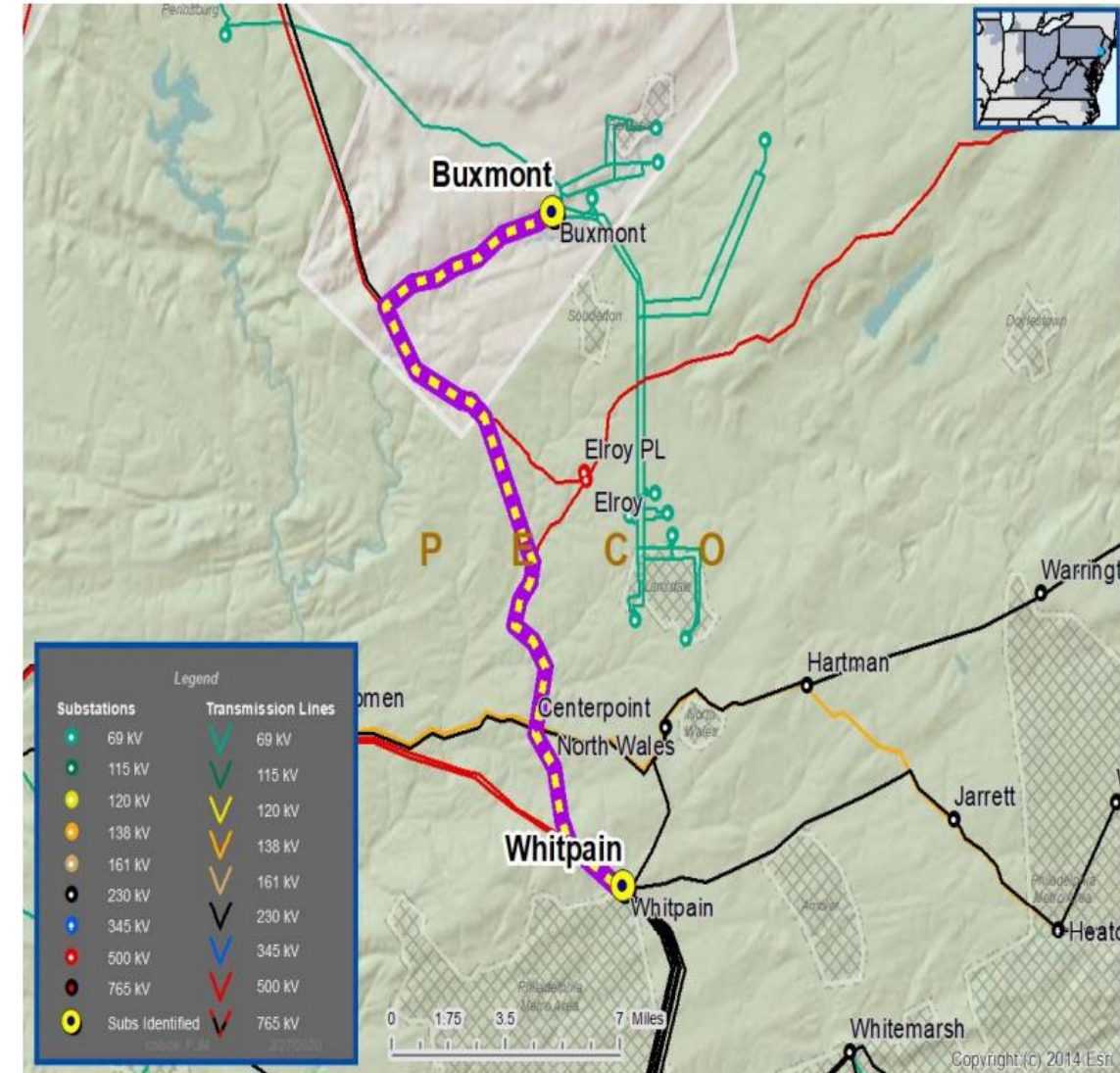
**Estimated cost:** \$.5M

**Alternatives Considered:** None

**Projected In-Service:** 11/2/21

**Project Status:** Under Construction

**Model:** 2026 RTEP



# M-3 Process PECO Transmission Zone 220-10 (Whitpain – Jarrett ) Relay Replacement

**Need Number: PE-2020-002**

**Process Stage: Solution Meeting 11/02/2021**

**Previously presented: Need Meeting 3/10/2020**

**Project Driver:**

Equipment Material Condition, Performance, and Risk

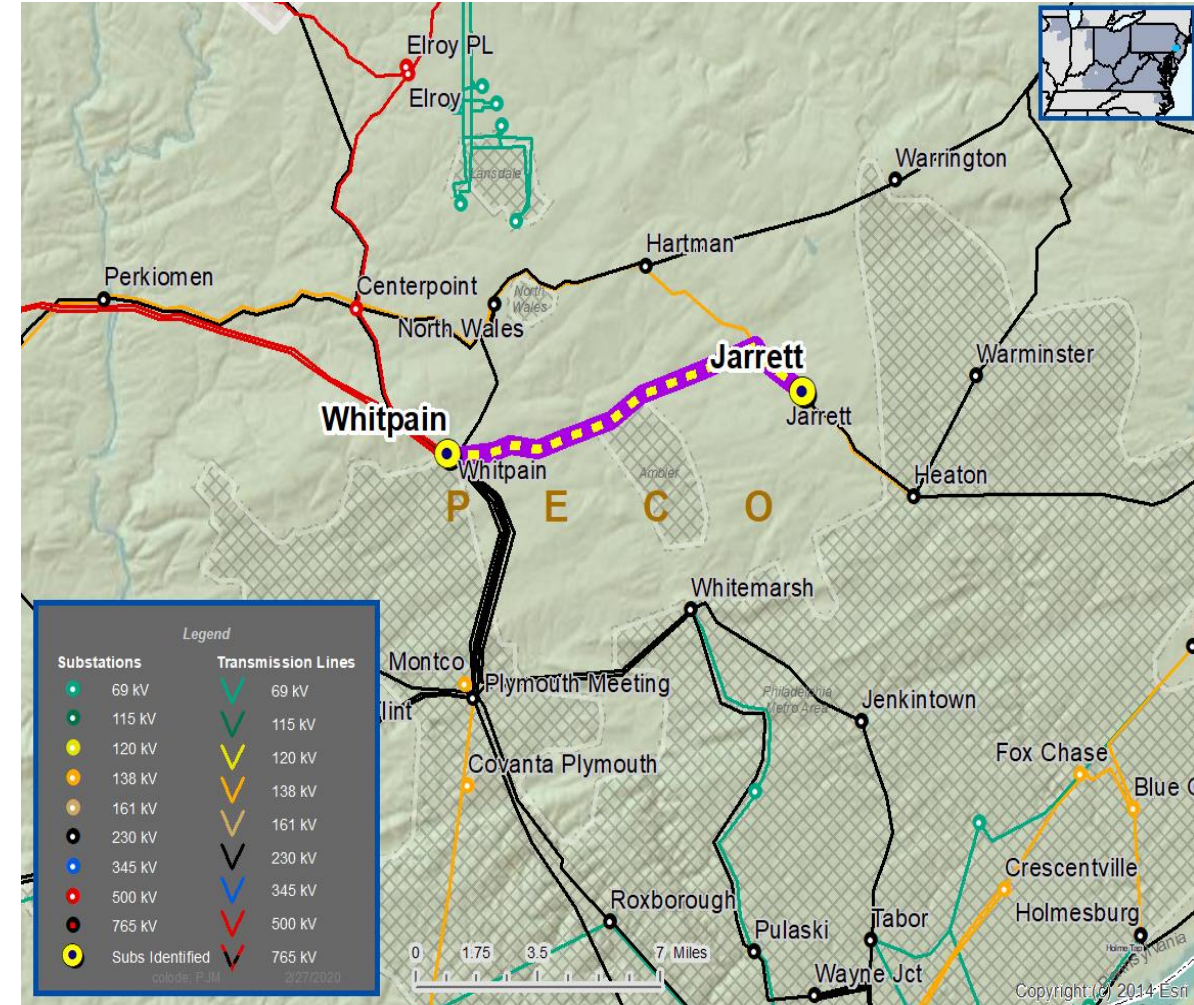
**Specific Assumption Reference:**

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

**Problem Statement:**

230kV line 220-52 (Whitpain – Jarrett) has obsolete relays

- It is becoming difficult to service existing electromechanical relays. They are being phased out of the system.



# M-3 Process PECO Transmission Zone 220-10 (Whitpain – Jarrett ) Relay Replacement

**Need Number: PE-2020-002**

**Process Stage: Solution Meeting 11/02/2021**

**Proposed Solution:**

Upgrade relays, communication, metering & replace station conductor on 220-52 (Whitpain – Jarrett) line

- Before solution ratings: 812/964 MVA (SN/SE)  
893/1003 MVA (WN/WE)
- After solution ratings: 812/964 MVA (SN/SE)  
893/1036 MVA (WN/WE)

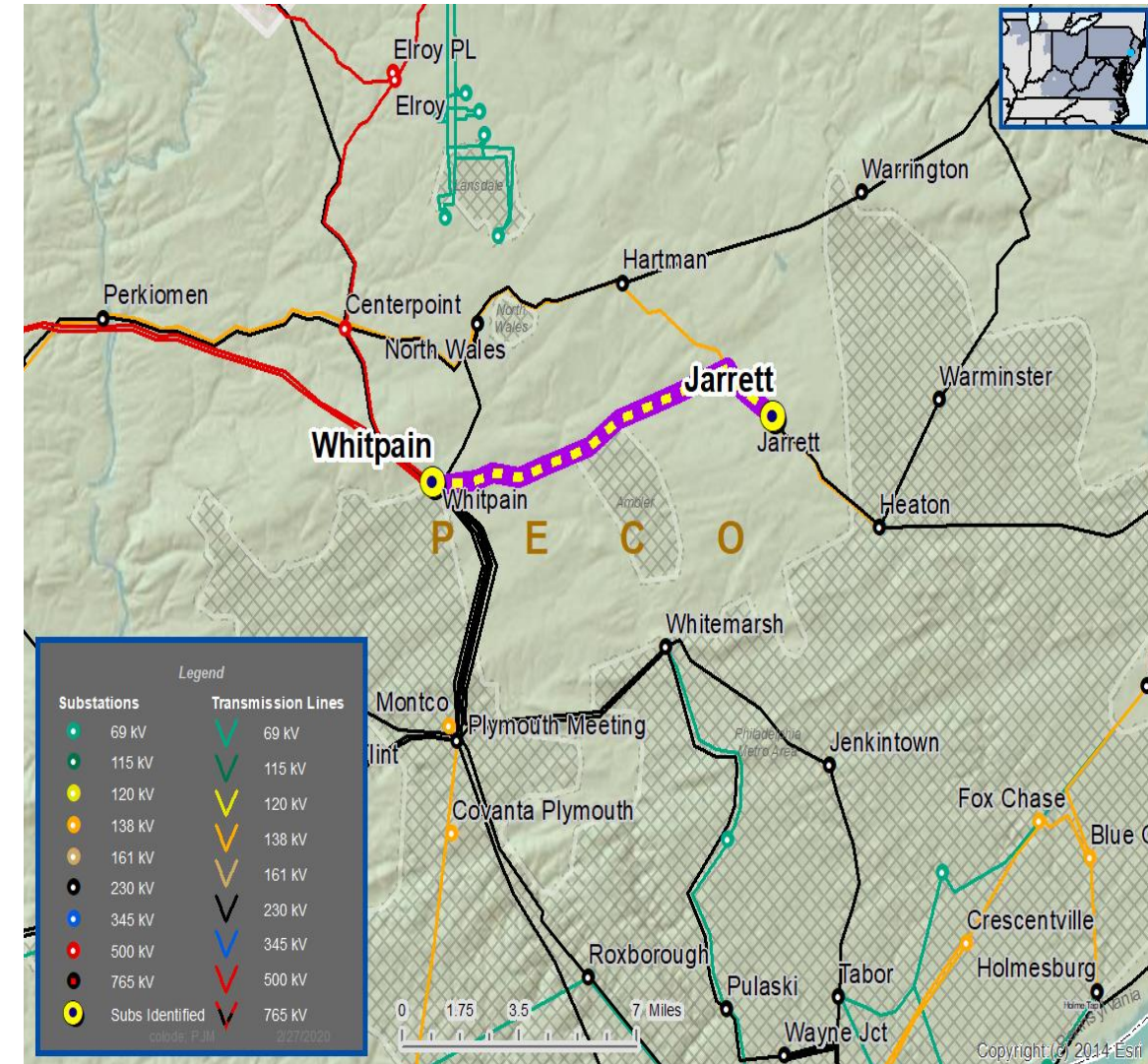
**Estimated cost: \$1.04M**

**Alternatives Considered: None**

**Projected In-Service: 12/22/21**

**Project Status: Engineering**

**Model: 2026 RTEP**





**Need Number: PE-2021-005**

**Process Stage: Solution Meeting 11/02/2021**

**Previously presented: Need Meeting 10/05/2021**

**Project Driver:**

Operational Flexibility and Efficiency

**Specific Assumption Reference:**

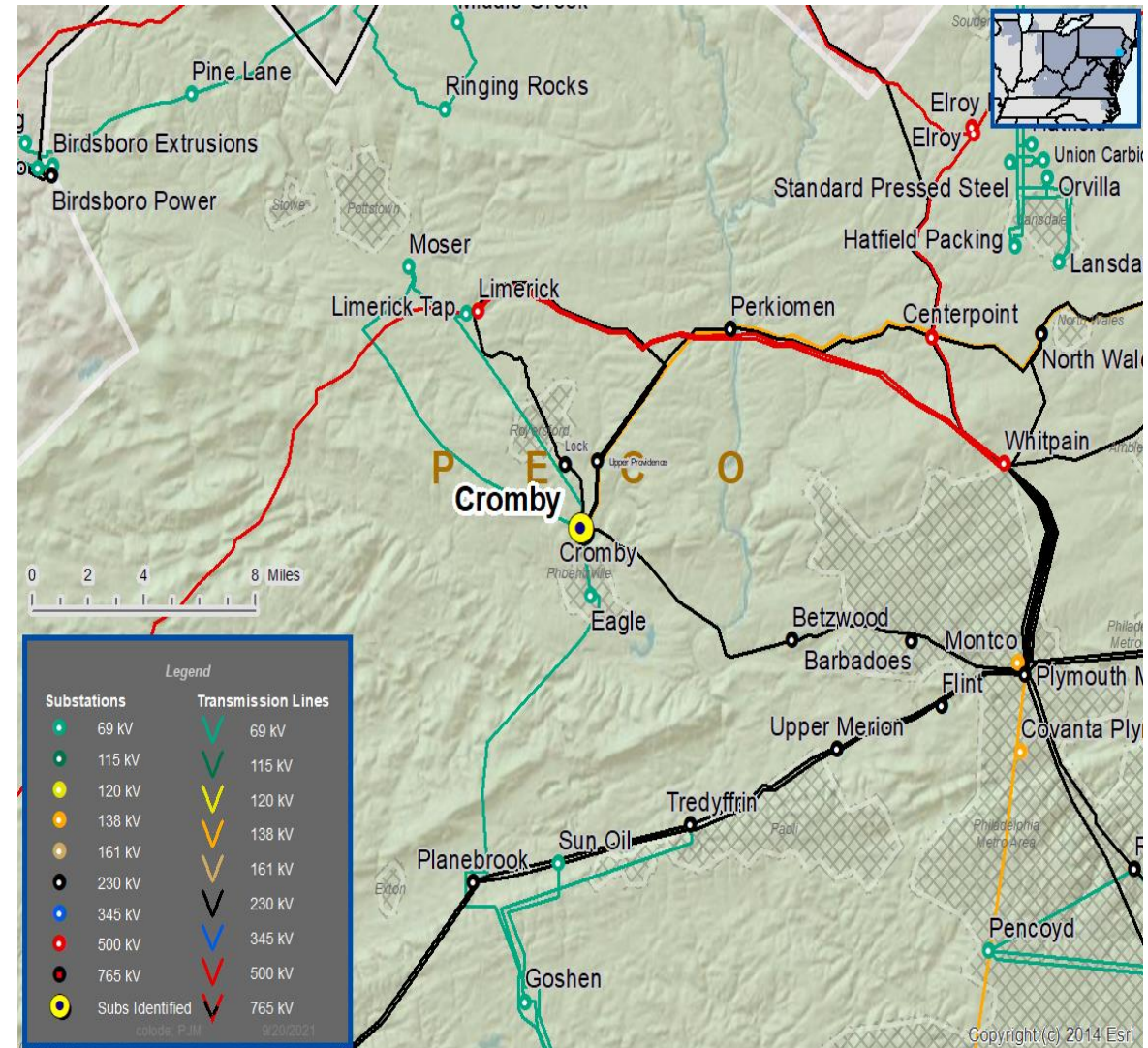
- Enhancing system functionality, flexibility, visibility, or operability
- Increasing system capacity

**Problem Statement:**

Cromby #5 230/69 kV transformer facility ratings were reduced on 3/13/21 as part of an internal review

- New SN/SE = 126 MVA / 156 MVA
- Previous SN/SE = 155 MVA / 194 MVA
- Difference SN/SE = -29 MVA (19%) / -38 MVA (20%)

PECO Operations is requesting that Cromby #5 230/69 kV facility be upgraded in an expedited fashion due to real time operations issues encountered during 2021 summer operations and in preparation for maintenance outages of facilities in the area.



**Need Number: PE-2021-005**

**Process Stage: Solution Meeting 11/02/2021**

**Proposed Solution :**

Replace a piece of station cable on the 69 kV side of the Cromby #5 230/69 kV transformer facility

- Before solution ratings: 126/156 MVA (SN/SE)  
155/179 MVA (WN/WE)
- After solution ratings: 155/194 MVA (SN/SE)  
200/234 MVA (WN/WE)

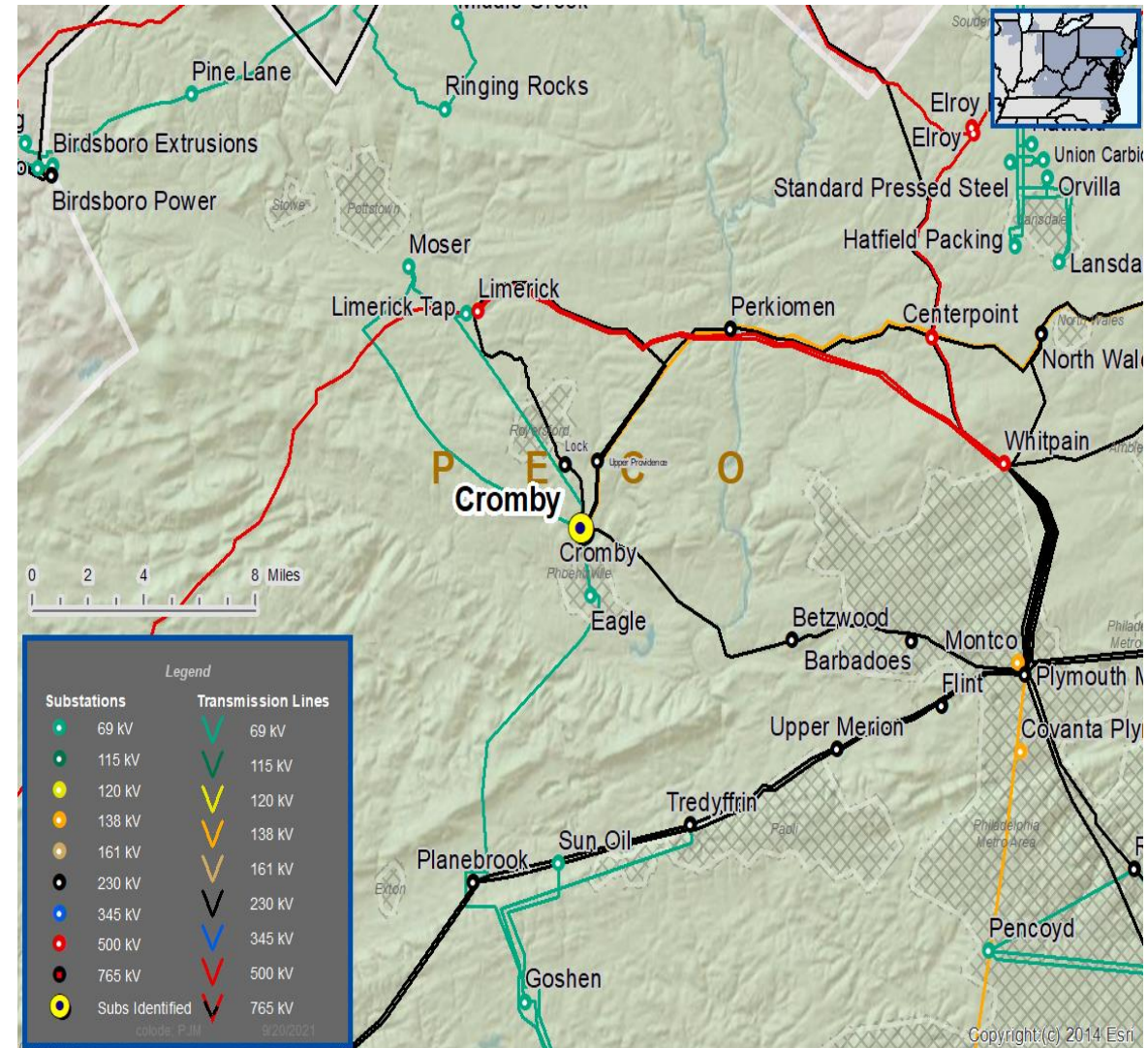
**Estimated cost: \$0.1M**

**Alternatives Considered: None**

**Projected In-Service: 10/17/21**

**Project Status: Completed**

**Model: 2026 RTEP**



# Questions?



# 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

10/22/2021 - V1 – Original version posted to pjm.com

10/27/2021 – V2 – Updated a Need # on slides 7, 8, 9 and 10

11/4/2021 – V3 – Corrected the solution year on slides 5, 6, 7, 8, 9 and 10

12/15/2021 – V4 – Corrected the Need # on slides 9 and 10