Transmission Expansion Advisory Committee – PECO Supplemental Projects

March 9, 2021

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-2021-001

Process Stage: Solution Meeting 3/9/2021

Previously Presented: Need Meeting 2/9/2021

Supplemental Project Driver:

Project Driver:

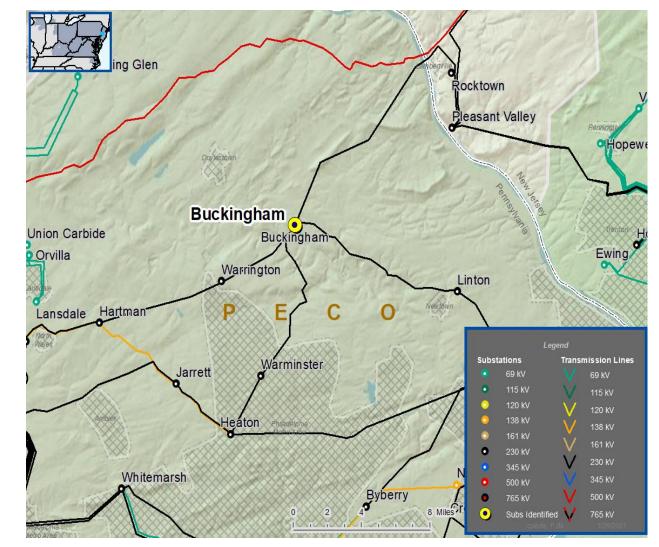
Equipment Material Condition, Performance, and Risk

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:

Buckingham 230kV circuit breaker #220 installed in 1969 is in deteriorating condition due to SF6 gas leaks, replacement part availability, and elevated maintenance cost.



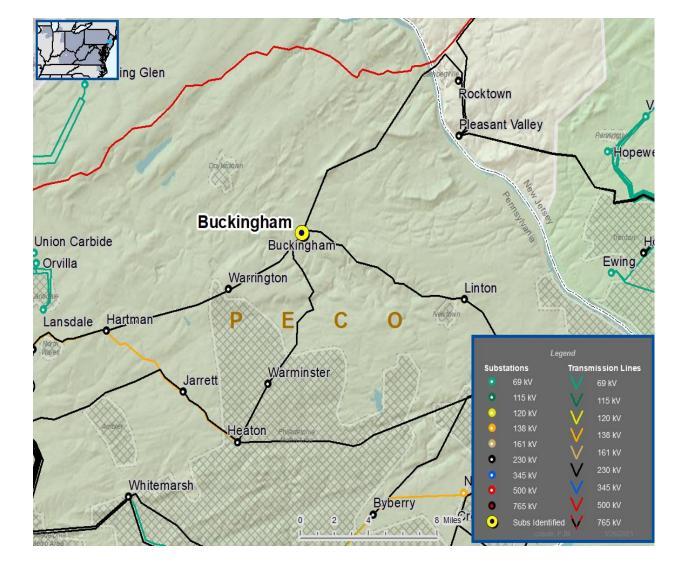


Need Number: PE-2021-001 Process Stage: Solution Meeting 3/9/2021

Proposed Solution:

Replace Buckingham 230kV circuit breaker #220. The estimated cost of the project is \$0.8M Existing rating 2500 A, 42kA New rating 3000 A, 63kA **Alternatives Considered:** None

Projected In-Service: 12/1//2021 Project Status: Engineering Model: 2025 RTEP





Need Number: PE-2021-002

Process Stage: Solution Meeting 3/9/2021

Previously Presented: Need Meeting 2/9/2021

Supplemental Project Driver:

Project Driver:

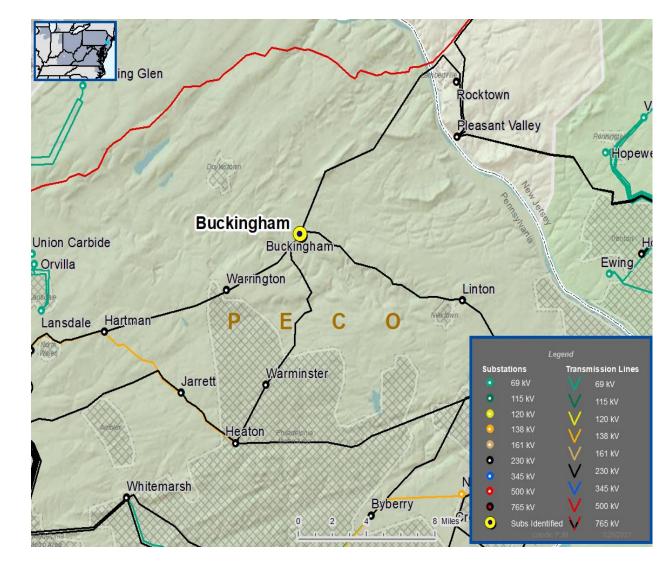
Equipment Material Condition, Performance, and Risk

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:

Buckingham 230kV circuit breaker #230 installed in 1969 is in deteriorating condition due to SF6 gas leaks, replacement part availability, and elevated maintenance cost.





Need Number: PE-2021-002

Process Stage: Solution Meeting 3/9/2021

Proposed Solution:

Replace Buckingham 230kV circuit breaker #230.

The estimated cost of the project is \$0.8M

Existing rating 2500 A, 42kA

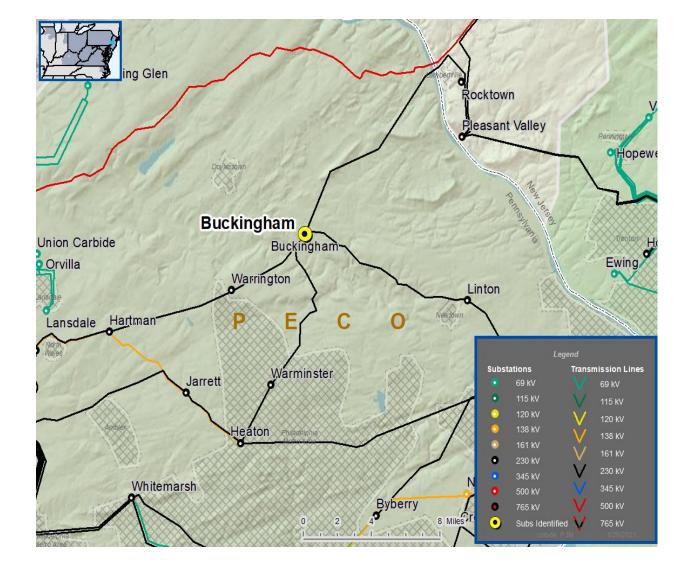
New rating 3000 A, 63kA

Alternatives Considered:

None

Projected In-Service: 12/1//2021

Project Status: Engineering **Model:** 2025 RTEP





Need Number: PE-2021-003

Process Stage: Solution Meeting 3/9/2021

Previously Presented: Need Meeting 2/9/2021

Supplemental Project Driver:

Project Driver:

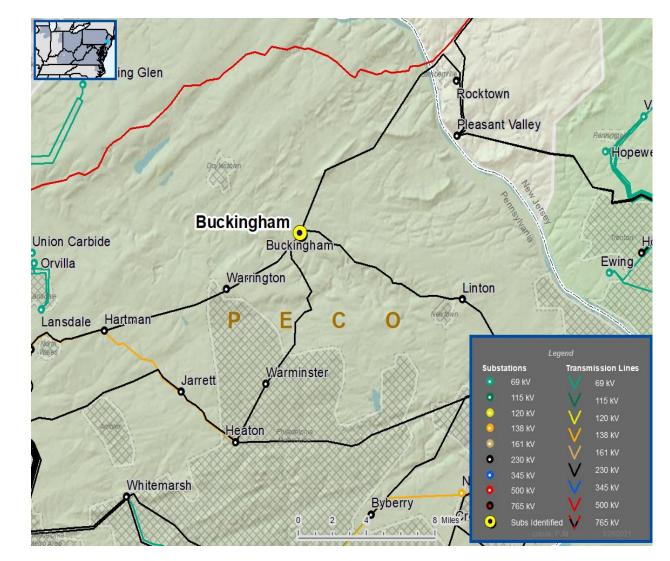
Equipment Material Condition, Performance, and Risk

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:

Buckingham 230kV circuit breaker #240 installed in 1969 is in deteriorating condition due to SF6 gas leaks, replacement part availability, and elevated maintenance cost.





Need Number: PE-2021-003

Process Stage: Solution Meeting 3/9/2021

Proposed Solution:

Replace Buckingham 230kV circuit breaker #240.

The estimated cost of the project is \$0.8M

Existing rating 2500 A, 42kA

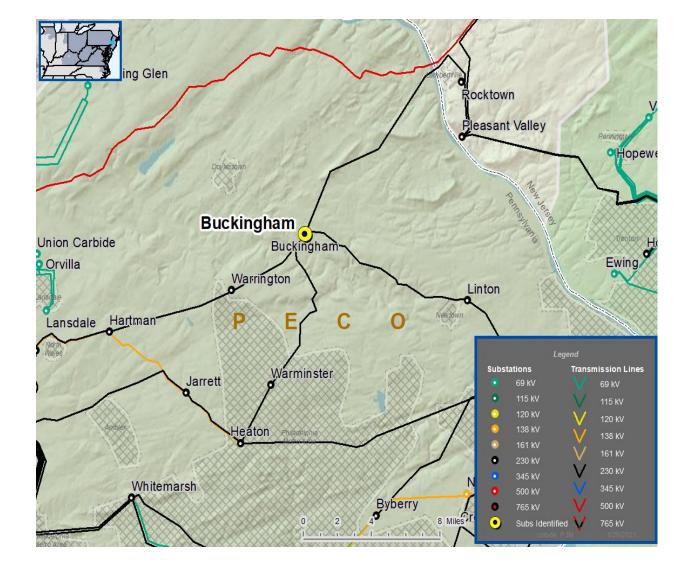
New rating 3000 A, 63kA

Alternatives Considered:

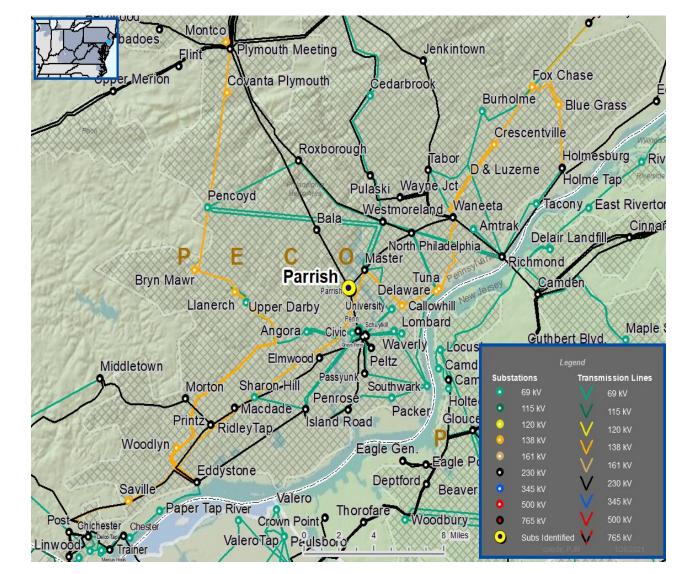
None

Projected In-Service: 12/1//2021

Project Status: Engineering **Model:** 2025 RTEP







Need Number: PE-2021-004

Process Stage: Solution Meeting 3/9/2021

Previously Presented: Need Meeting 2/9/2021

Supplemental Project Driver:

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:

Parrish 230kV circuit breaker #905 installed in 1968 is in deteriorating condition due to SF6 gas leaks, replacement part availability, and elevated maintenance cost.



Montco badoes Plymouth Meeting Jenkintown Fox Chase Covanta Plymouth Cedarbrool Burholme Blue Grass Crescentville Roxboroug Holmesburg Riv labor D & Luzerne Holme Tap Pulaski Wayne Jct Pencoyd Vestmoreland Waneeta Tacony East Riverto Bala mtra Delair Landfill Philadelphia E ∞ láster chmond Parrish Tuna Bryn Mawr Delaware Llanerch Upper Darby Iniversity Callowhill Lombard Maple Angora Civic **Cuthbert Blvd** Waverly Locus Elmwood Peltz Middletown Camd Passvi Substations Transmission Lines Morton Sharon-Hill Southwark 69 kV Penrosé Macdade Packer Printz RidleyTap Island Road Woodlyn Eagle Gen. 161 kV Eddystone Deptford Saville Beaver Valero Paper Tap River 500 kV Thorofare Crown Point? Woodbury Post 8 Miles (\circ) Valero Tap Paulsbo Subs Identified

Need Number: PE-2021-004

Process Stage: Solution Meeting 3/9/2021 Proposed Solution:

Replace Parrish 230kV circuit breaker #905.

The estimated cost of the project is \$0.8M

Existing rating 2500 A, 42kA

New rating 3000 A, 63kA

Alternatives Considered:

None

Projected In-Service: 12/1//2021

Project Status: Engineering **Model:** 2025 RTEP



M-3 Process PECO Transmission Zone Eddystone substation

Need Number: PE-2020-012

Process Stage: Solution Meeting 03/09/2020

Previously Presented: Need Meeting 12/1/2020

Supplemental Project Driver:

Project Driver:

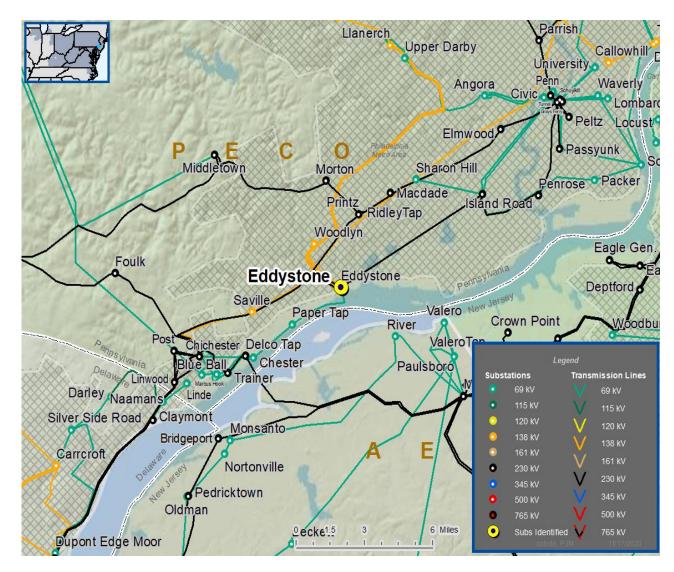
Operational Flexibility and Efficiency

Specific Assumption Reference:

- Provide Operations more options to deal with nonstandard operating conditions
- Follow internal Transmission & Substation recommended designs
- Increasing system capacity

Problem Statement:

PECO substation control house equipment for its Eddystone substation is located inside a legacy generation owned facility.





Need Number: PE-2020-012

Process Stage: Solution Meeting 03/09/2020

Proposed Solution:

		Summer Normal Summer Emergency			
Facility	Change	Current rating	New Rating	Current rating	New Rating
Eddystone - Island Road 230kV Line					
	Replace relays & remove wavetrap	2824	3126	3482	3482
Eddystone - Chichester 230kV Line					
	Relace CTt and relays	2089	3126	2412	3482
Eddystone - Printz 230kV Line					
	Replace meters and relays	2708	3126	3162	3482
Eddystone #8 230/138kV Transformer					
	Replace relays	1702	1702	2401	2488

The estimated cost of the project is \$1.6M

Alternatives Considered:

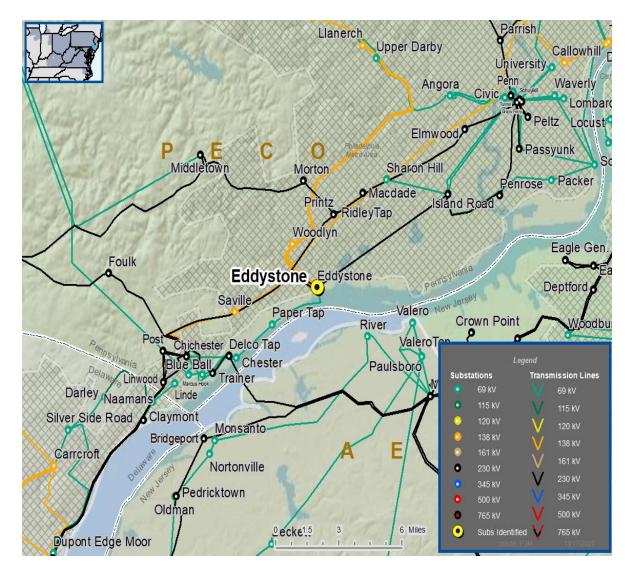
None

Projected In-Service: 12/1//2021

Project Status: Engineering

Model: 2025 RTEP

M-3 Process PECO Transmission Zone Eddystone substation



Questions?



Appendix

High level M-3 Meeting Schedule

Assumptions

Activity

Stakeholder comments

TOs and Stakeholders Post Needs Meeting slides

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

Timing

10 days before Needs Meeting

10 days after Needs Meeting

Needs

Solutions

Submission of Supplemental Projects & Local Plan

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

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

2/26/2021 - V1 – Original version posted to pjm.com