PECO 2021
Submission of Supplemental Projects for Inclusion in the Local Plan

M-3 Process PECO Transmission Zone
Waneeta 230kV circuit breaker

Need Number: PE-2020-007

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Previously Presented:
Need – TEAC – 11/4/20
Solution – TEAC – 12/1/20

Project Driver:

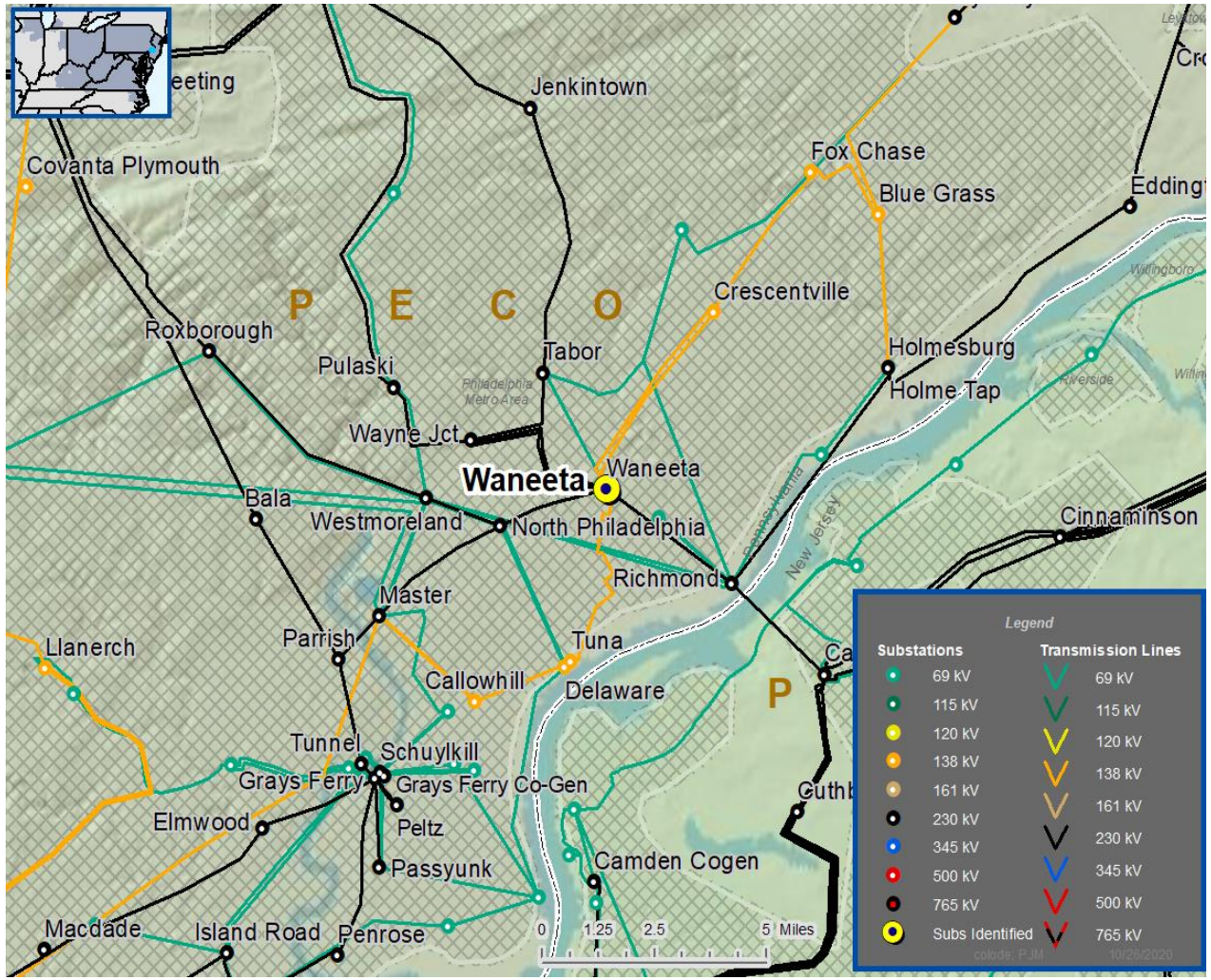
Equipment Material Condition, Performance, and Risk

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:

Waneeta 230kV circuit breaker #285 installed in 1968 is in deteriorating condition due to SF6 gas leaks, replacement part availability, and elevated maintenance cost.



M-3 Process PECO Transmission Zone
Waneeta 230kV circuit breaker

Need Number: PE-2020-007

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Selected Solution:

Replace Waneeta 230kV circuit breaker #285

The **estimated cost** of the project is $0.8M

Existing rating 2500 A, 42kA

New rating 3000 A, 63kA

Alternatives Considered:

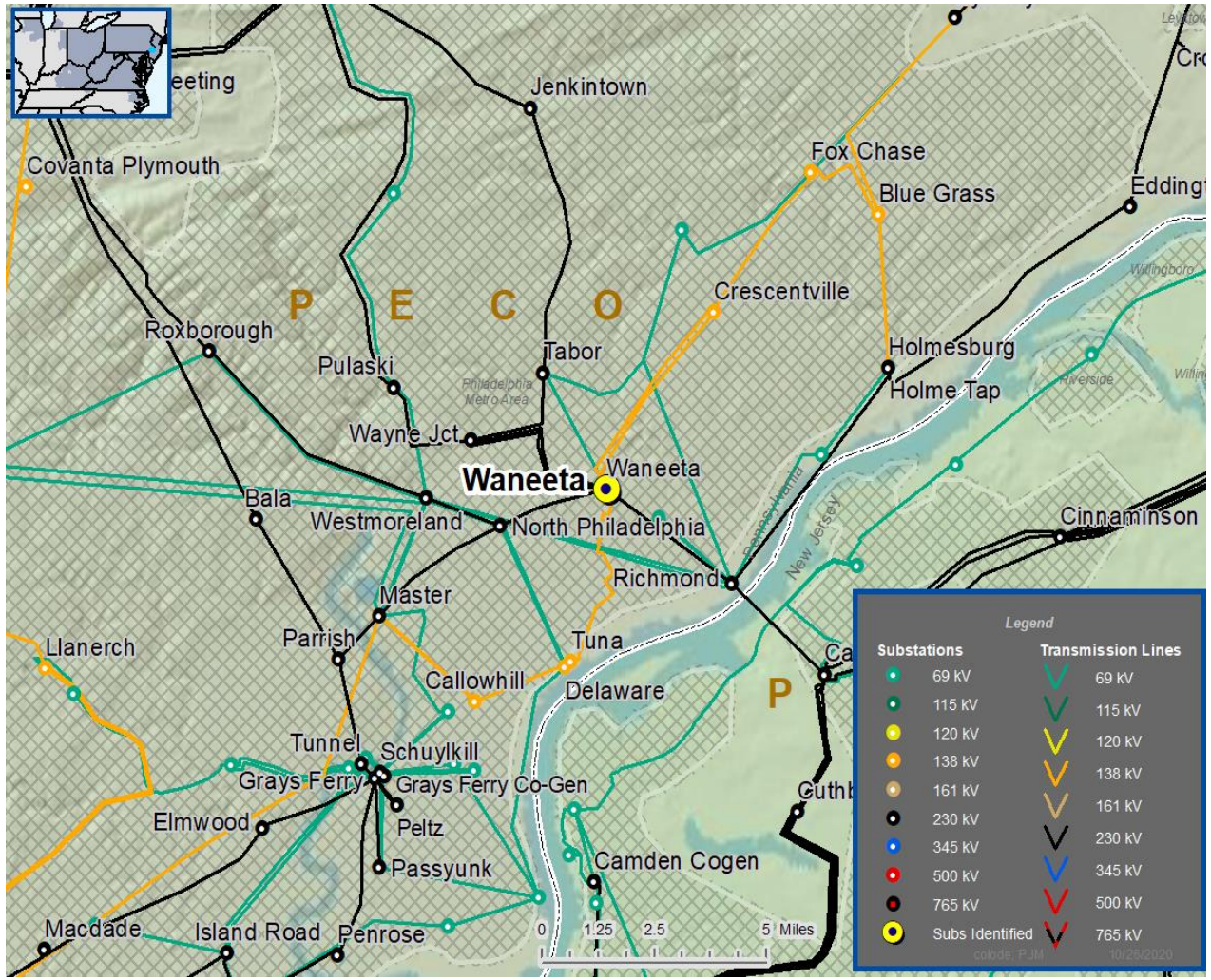
None

Projected In-Service: 5/8/2022

Supplemental Project ID: s2417

Project Status: Engineering

Model: 2025 RTEP



M-3 Process PECO Transmission Zone
Tabor 230kV circuit breaker

Need Number: PE-2020-008

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Previously Presented:
Need – TEAC – 11/4/20
Solution – TEAC – 12/1/20

Project Driver:

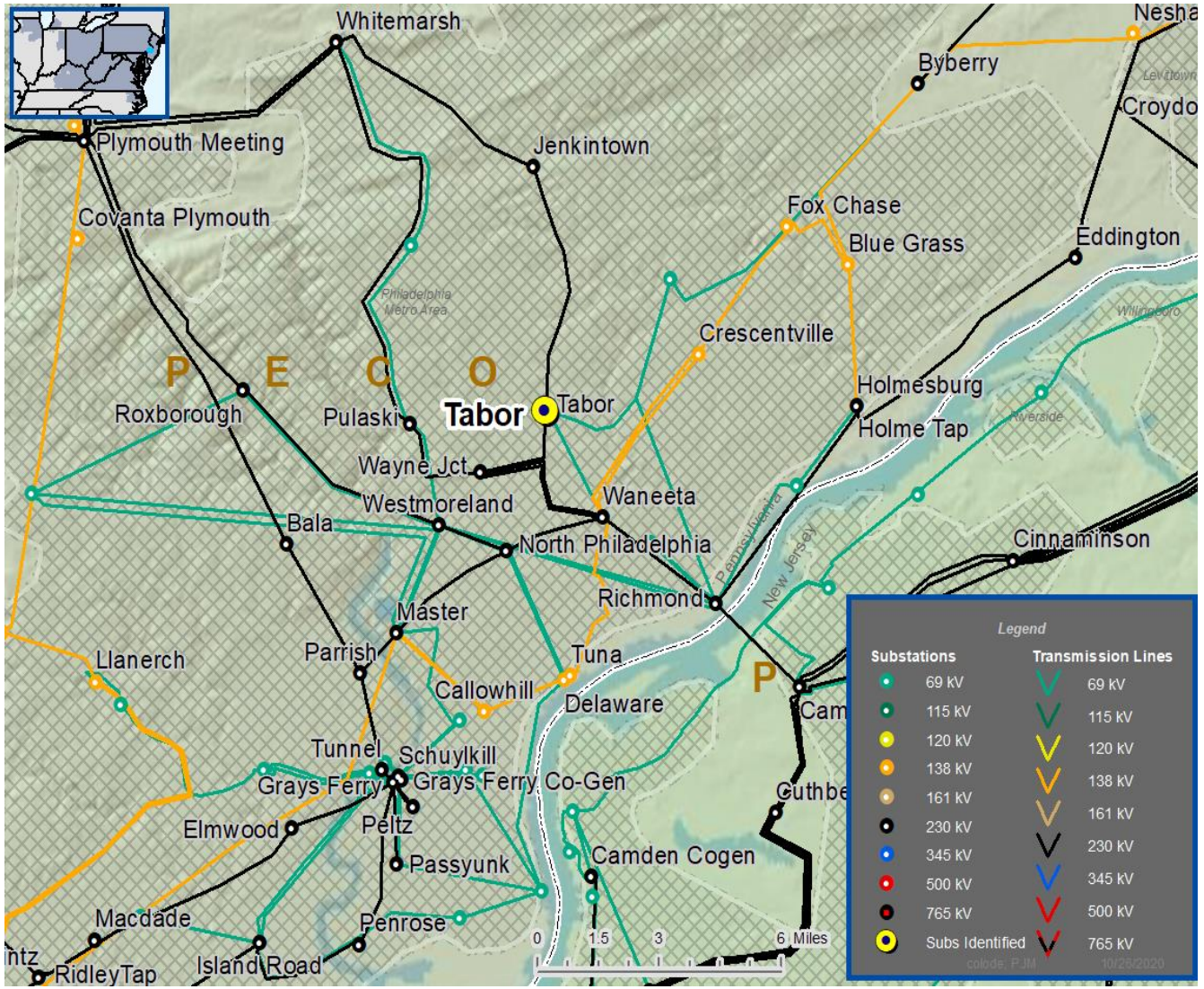
Equipment Material Condition, Performance, and Risk

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:

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



M-3 Process PECO Transmission Zone
Tabor 230kV circuit breaker

Need Number: PE-2020-008

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Selected Solution:

Replace Tabor 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:

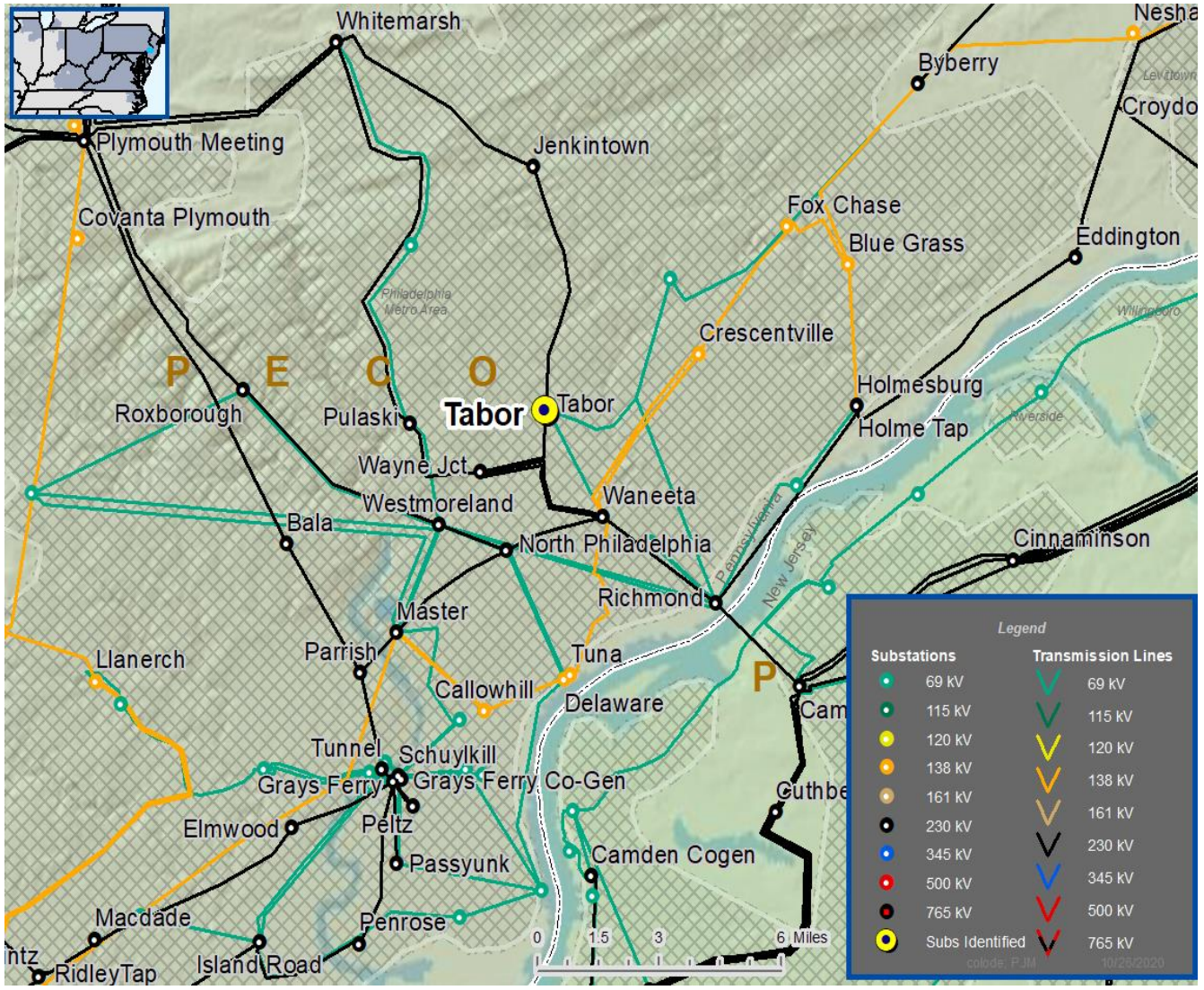
None

Projected In-Service: 5/8/2022

Supplemental Project ID: s2418

Project Status: Engineering

Model: 2025 RTEP



M-3 Process PECO Transmission Zone

Grays Ferry 230kV circuit breaker

Need Number: PE-2020-009

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Previously Presented:
Need – TEAC – 12/1/20
Solution – TEAC – 1/6/21

Project Driver:

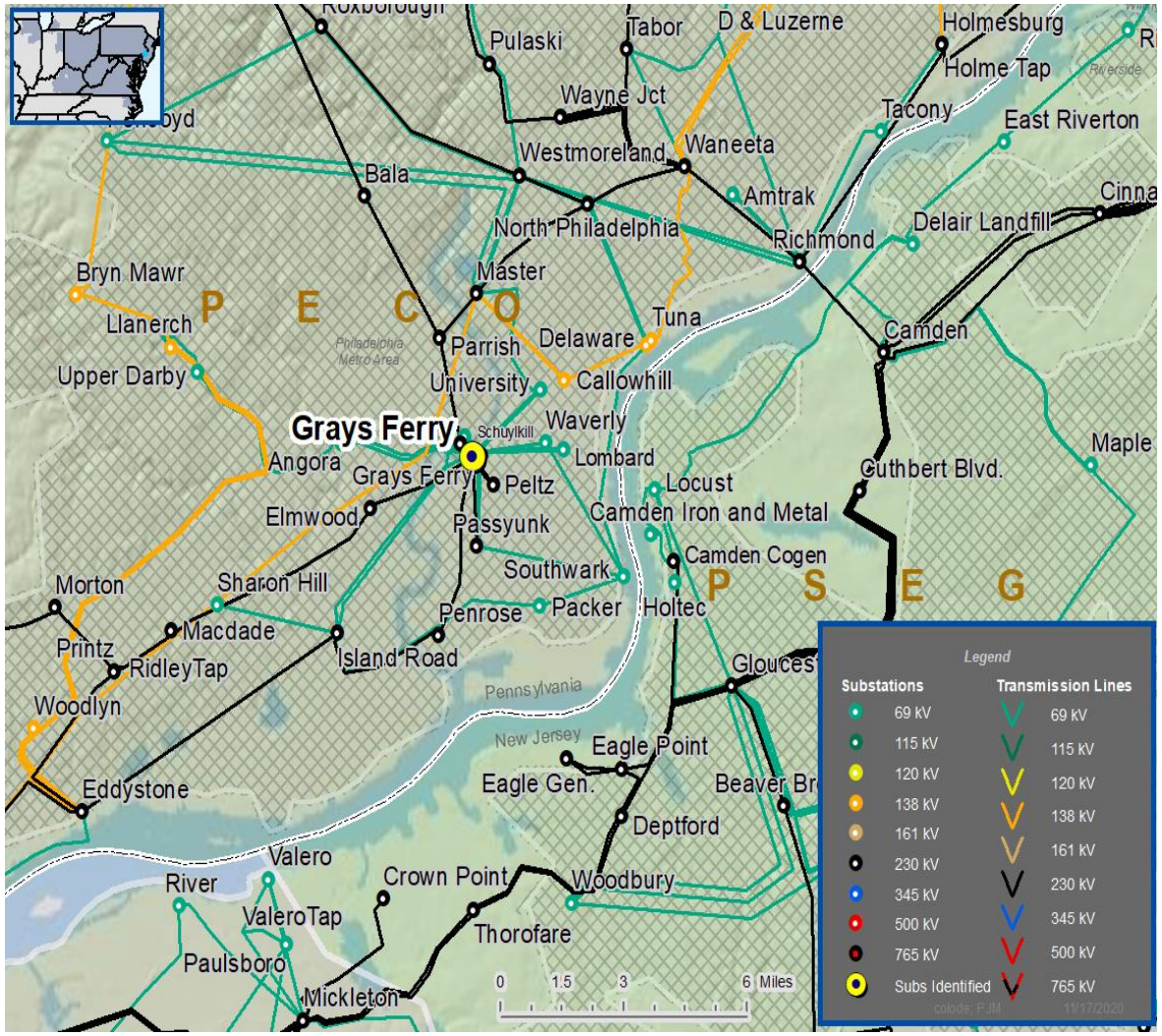
Equipment Material Condition, Performance, and Risk

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:

Grays Ferry 230kV circuit breaker #375 installed in 1970 is in deteriorating condition due to SF6 gas leaks, replacement part availability, and elevated maintenance cost.



M-3 Process PECO Transmission Zone

Grays Ferry 230kV circuit breaker

Need Number: PE-2020-009

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Selected Solution:

Replace the Grays Ferry 230kV circuit breaker #375

The **estimated cost** of the project is $0.9M

Existing rating 2500 A, 42kA

New rating 3000 A, 63kA

Alternatives Considered:

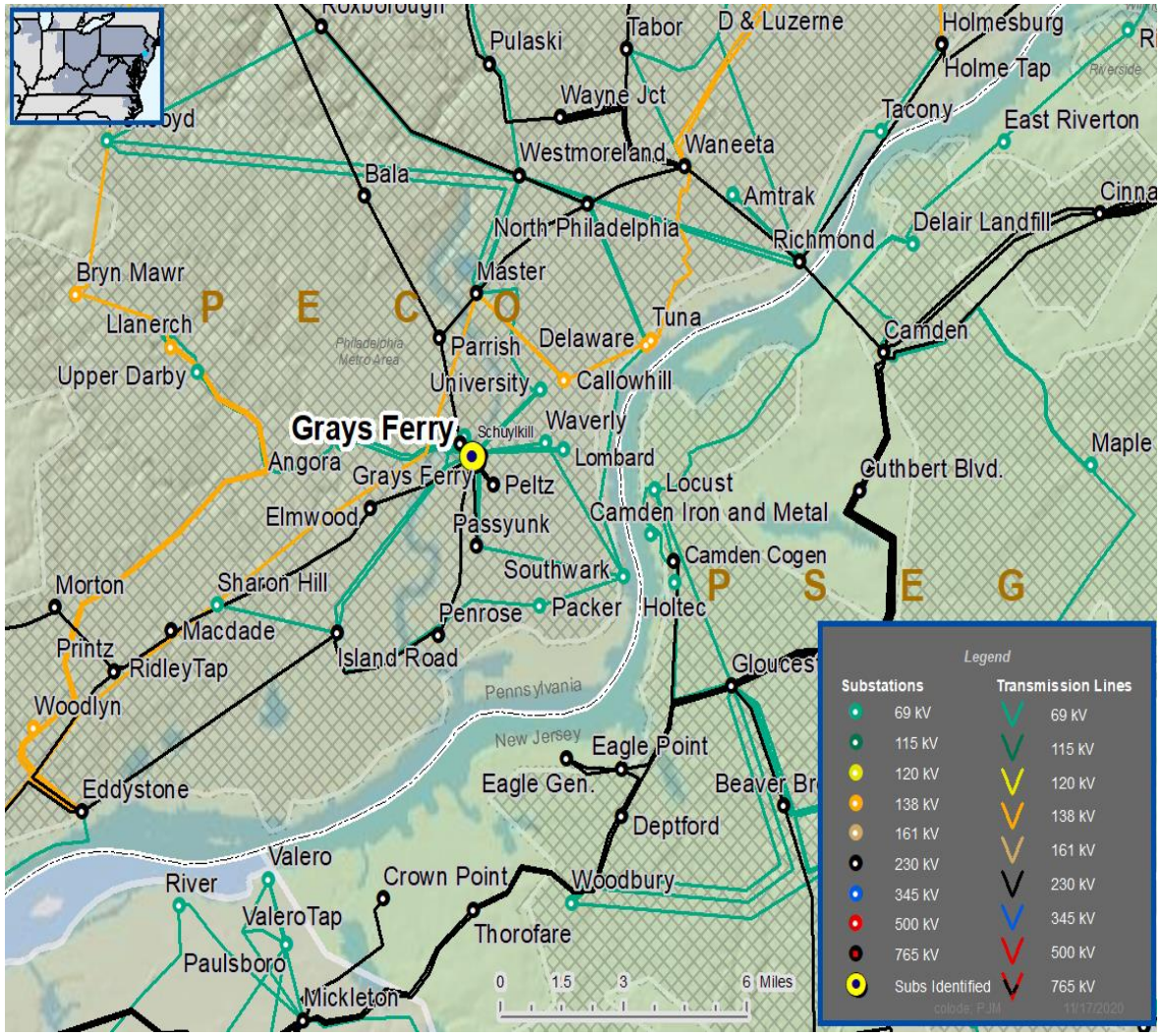
None

Projected In-Service: 3/22/2022

Supplemental Project ID: s2486

Project Status: Engineering

Model: 2025 RTEP



M-3 Process PECO Transmission Zone

Whitpain 500kV circuit breaker #575

Need Number: PE-2020-010

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Previously Presented:
Need – TEAC – 12/1/20
Solution – TEAC – 1/6/21

Project Driver:

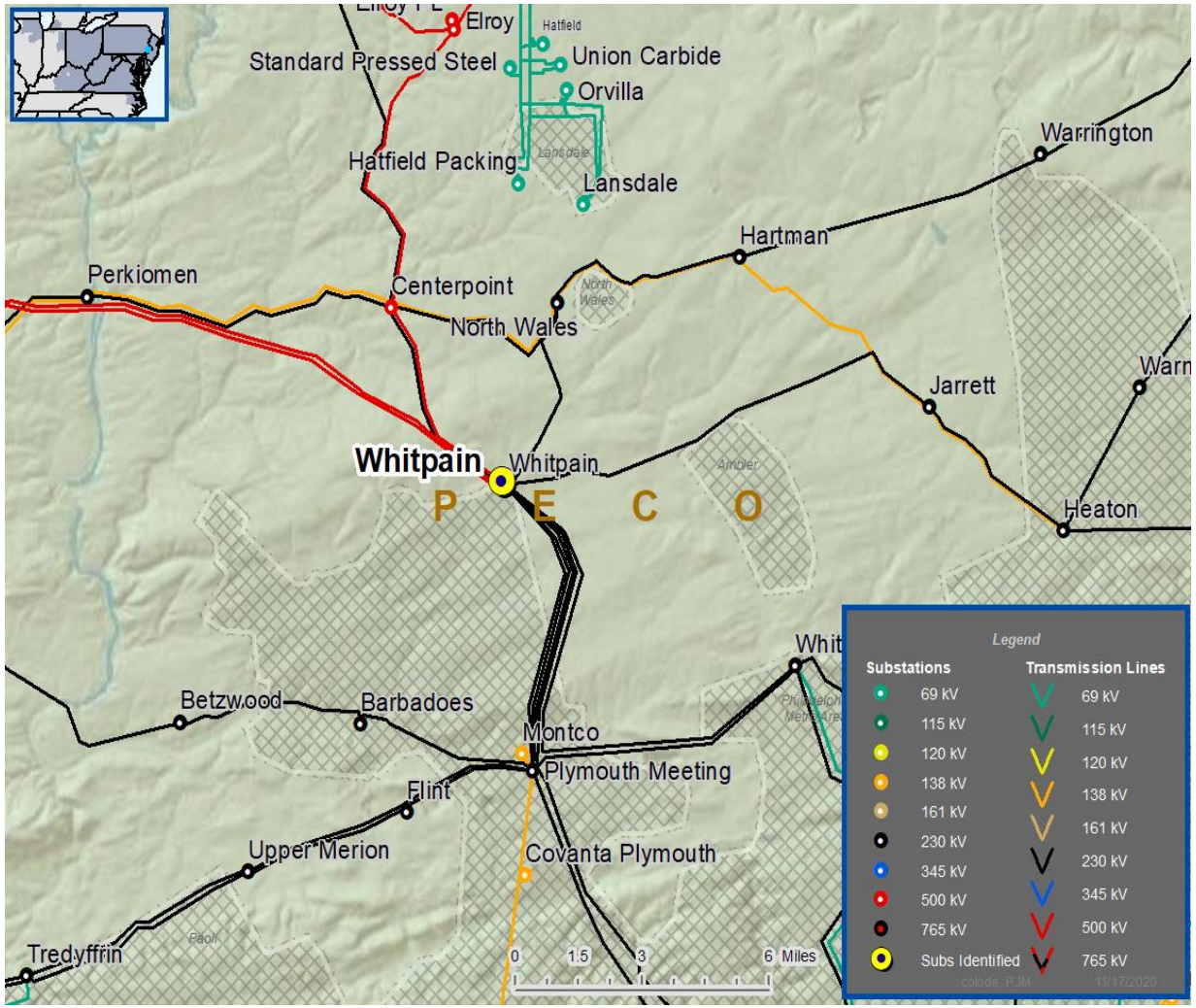
Equipment Material Condition, Performance, and Risk

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:

Whitpain 500kV circuit breaker #575 installed in 1968 is in deteriorating condition due to SF6 gas leaks, replacement part availability, and elevated maintenance cost.



M-3 Process PECO Transmission Zone

Whitpain 500kV circuit breaker #575

Need Number: PE-2020-010

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Selected Solution:

Replace the Whitpain 500kV circuit breaker #575

The **estimated cost** of the project is $1.3M

Existing rating 3000 A, 40kA

New rating 4000 A, 63kA

Alternatives Considered:

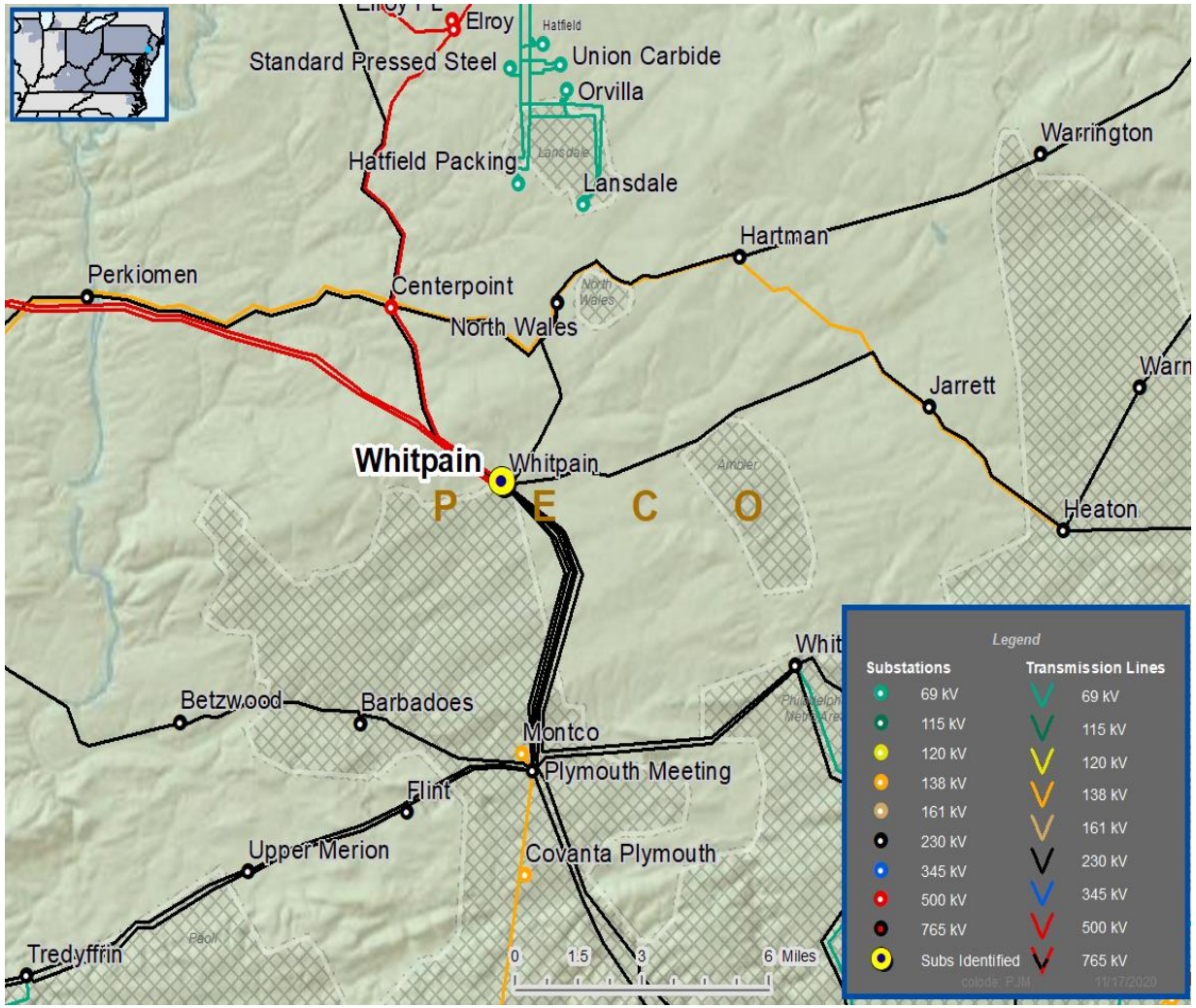
None

Projected In-Service: 4/29/2021

Supplemental Project ID: s2487

Project Status: Completed

Model: 2025 RTEP



M-3 Process PECO Transmission Zone

Whitpain 500kV circuit breaker #385

Need Number: PE-2020-011

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Previously Presented:
Need – TEAC – 12/1/20
Solution – TEAC – 1/6/21

Project Driver:

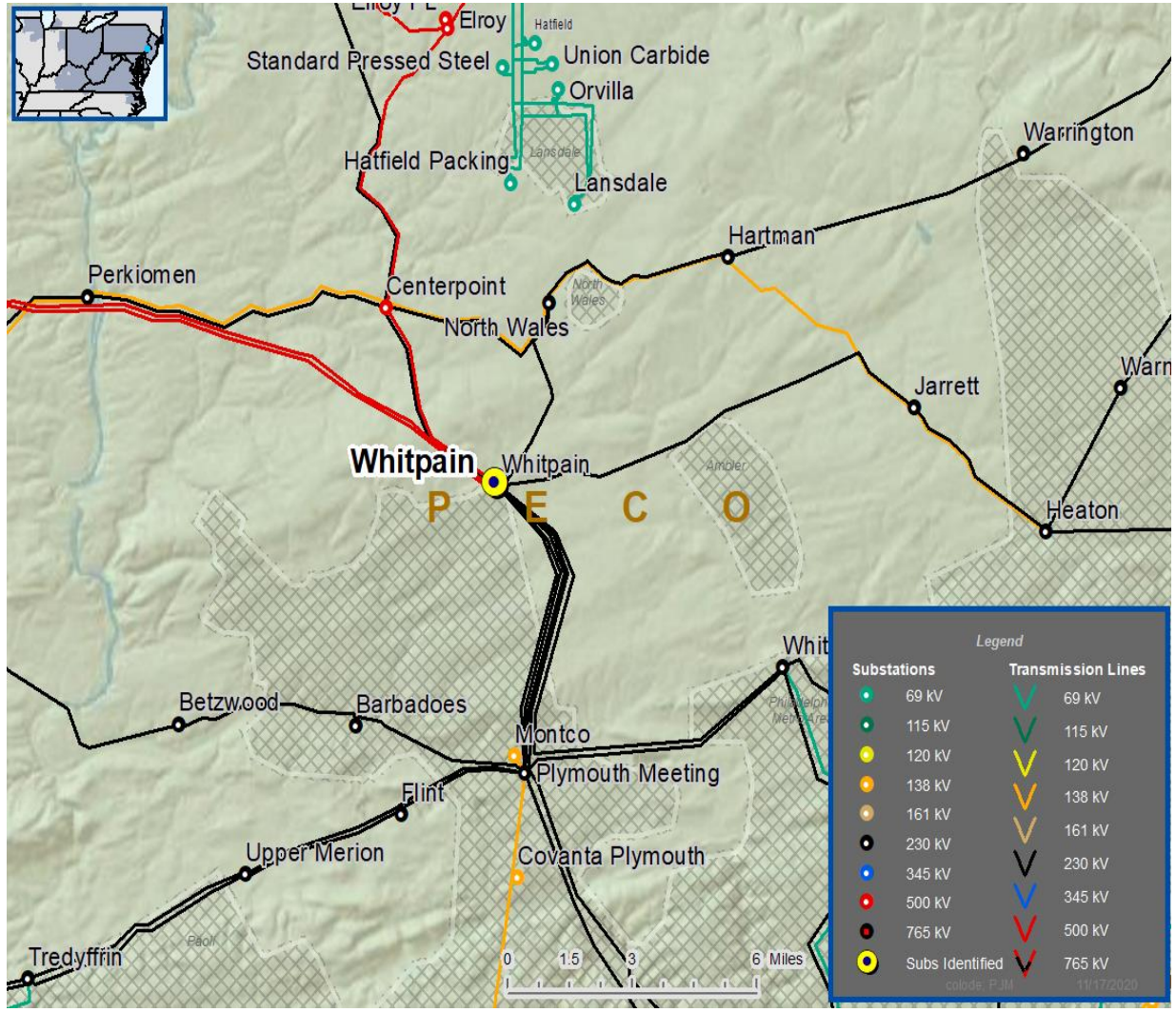
Equipment Material Condition, Performance, and Risk

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:

Whitpain 500kV circuit breaker #385 installed in 1968 is in deteriorating condition due to SF6 gas leaks, replacement part availability, and elevated maintenance cost.



M-3 Process PECO Transmission Zone

Whitpain 500kV circuit breaker #385

Need Number: PE-2020-011

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Selected Solution:

Replace the Whitpain 500kV circuit breaker #385

The **estimated cost** of the project is $1.3M

Existing rating 3000 A, 40kA

New rating 4000 A, 63kA

Alternatives Considered:

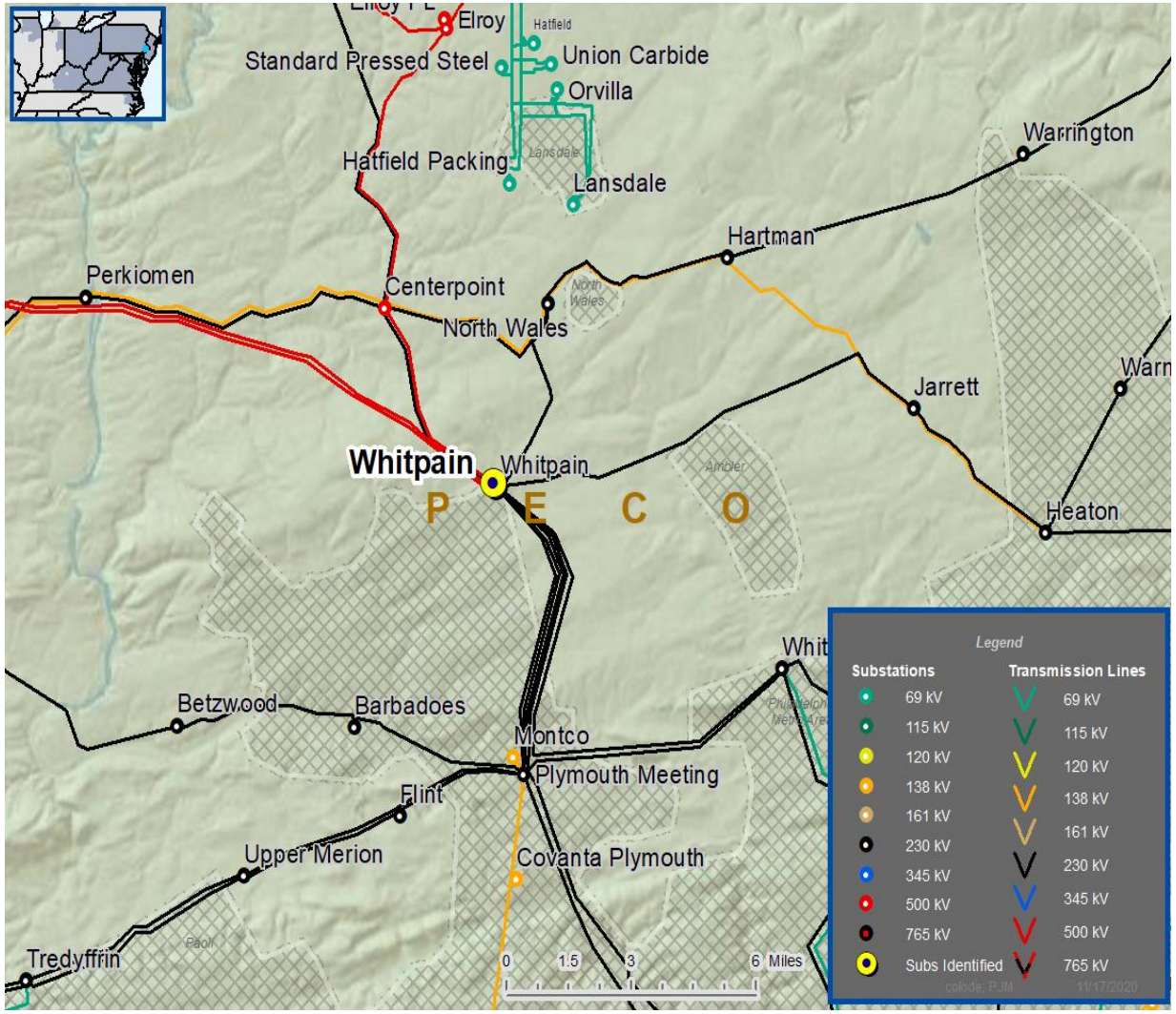
None

Projected In-Service: 6/28/2021

Supplemental Project ID: s2508

Project Status: Completed

Model: 2025 RTEP



M-3 Process PECO Transmission Zone
Eddystone substation

Need Number: PE-2020-012

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Previously Presented:
Need – TEAC – 12/1/20
Solution – TEAC – 3/9/21

Project Driver:

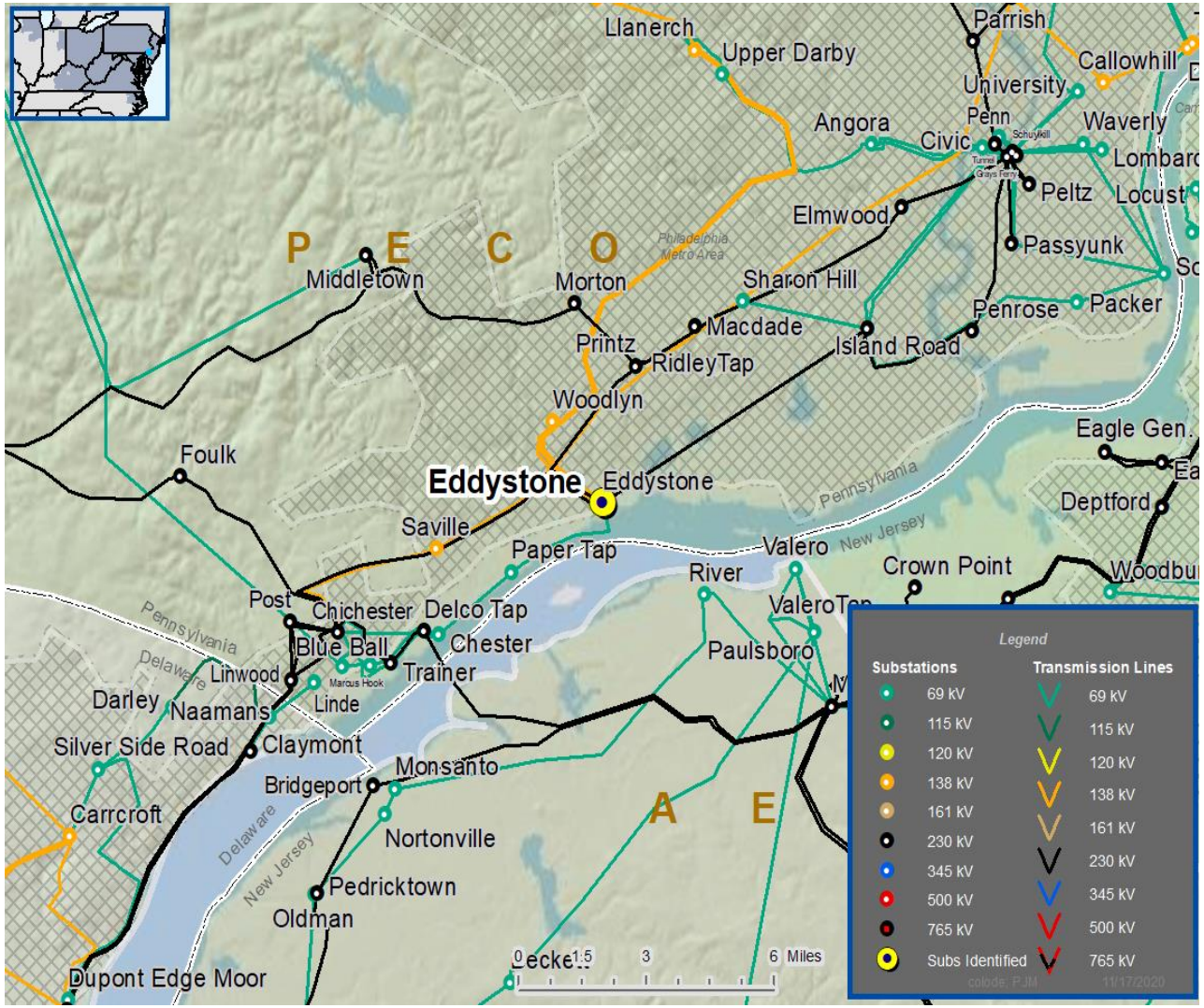
Operational Flexibility and Efficiency

Specific Assumption Reference:

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



M-3 Process PECO Transmission Zone
Eddystone substation

Need Number: PE-2020-012

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Selected Solution:

Facility	Change	Summer Normal		Summer Emergency	
		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

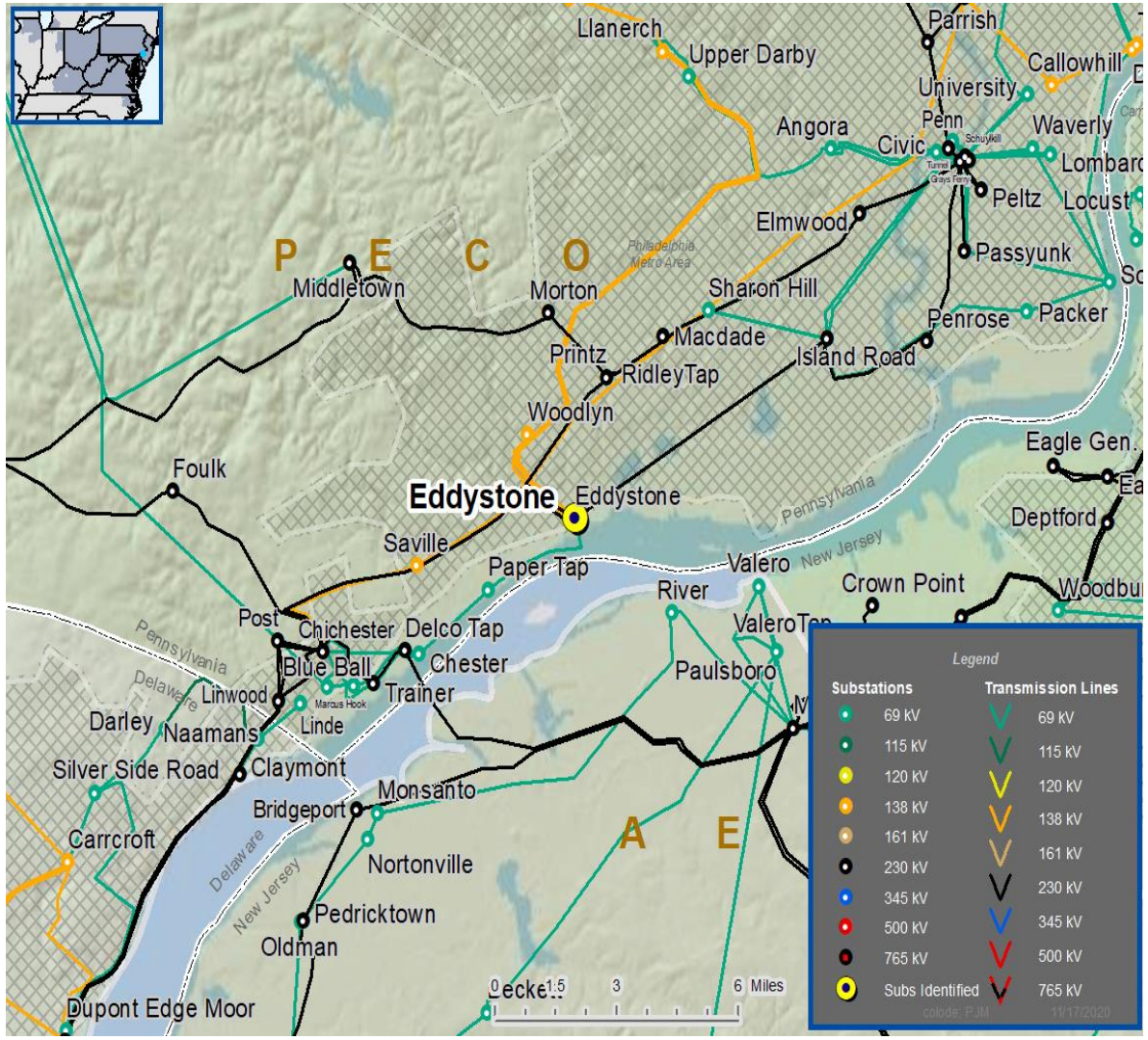
Alternatives Considered: None

Projected In-Service: 12/1/2021

Supplemental Project ID: s2562; s2562.1; s2562.2; s2562.3; s2562.4

Project Status: Engineering

Model: 2025 RTEP



M-3 Process PECO Transmission Zone
Buckingham 230kV circuit breaker #220

Need Number: PE-2021-001

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Previously Presented:
Need – TEAC – 2/9/21
Solution – TEAC – 3/9/21

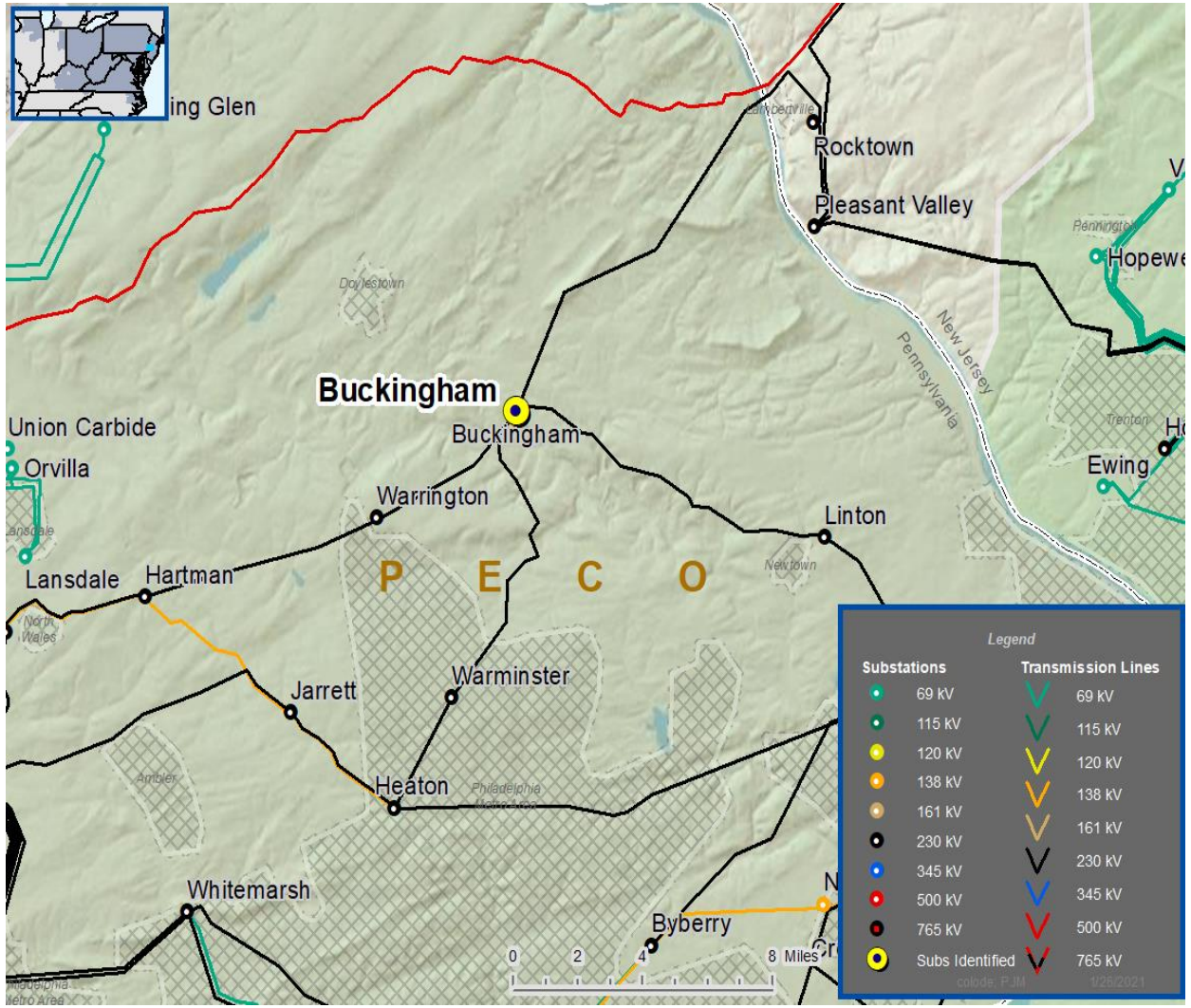
Project Driver:
Equipment Material Condition, Performance, and Risk

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.



M-3 Process PECO Transmission Zone
Buckingham 230kV circuit breaker #220

Need Number: PE-2021-001

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Selected 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:

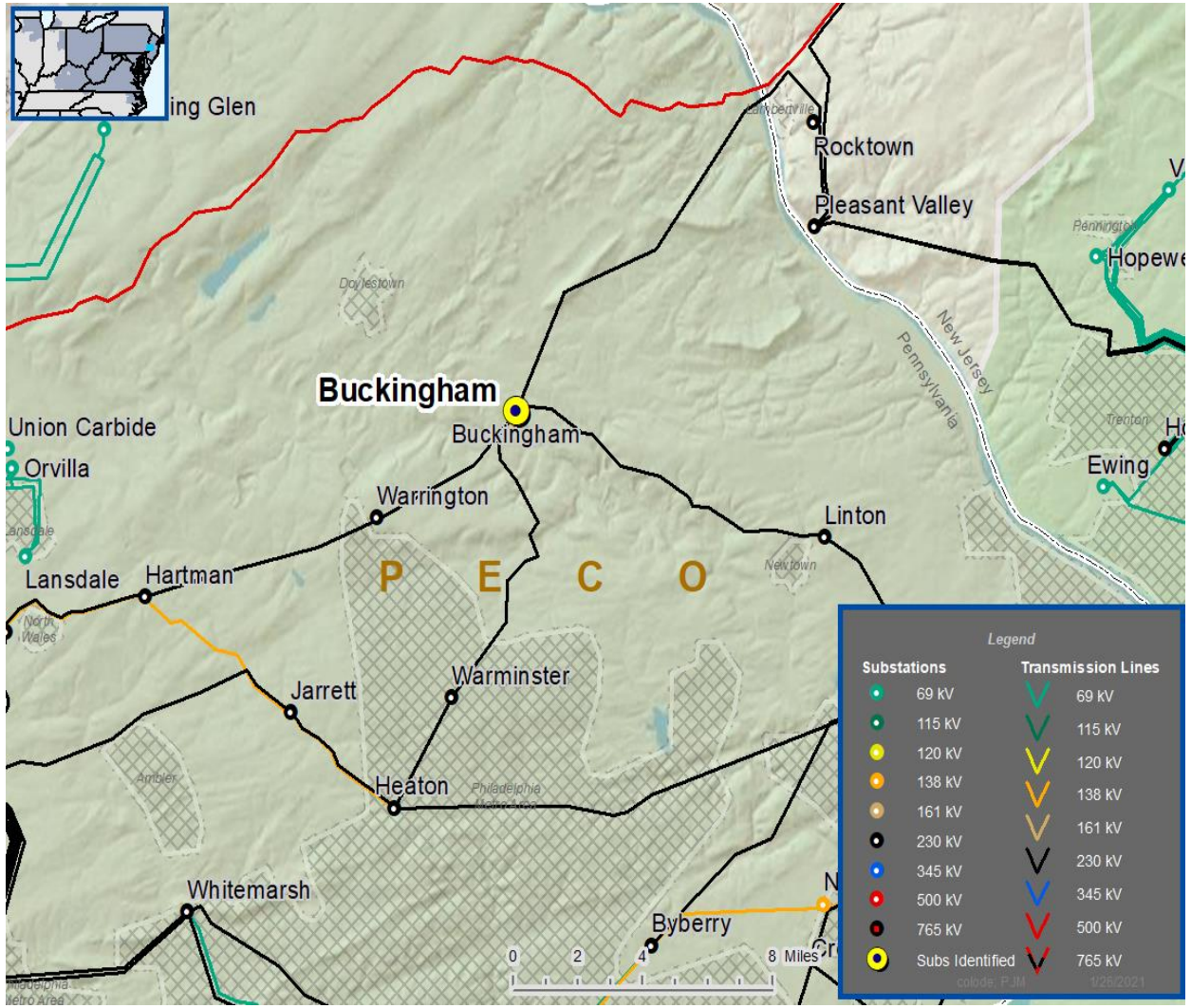
None

Projected In-Service: 10/7/2021

Supplemental Project ID: s2558

Project Status: Engineering

Model: 2025 RTEP



M-3 Process PECO Transmission Zone
Buckingham 230kV circuit breaker #230

Need Number: PE-2021-002

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Previously Presented:
Need – TEAC – 2/9/21
Solution – TEAC – 3/9/21

Project Driver:

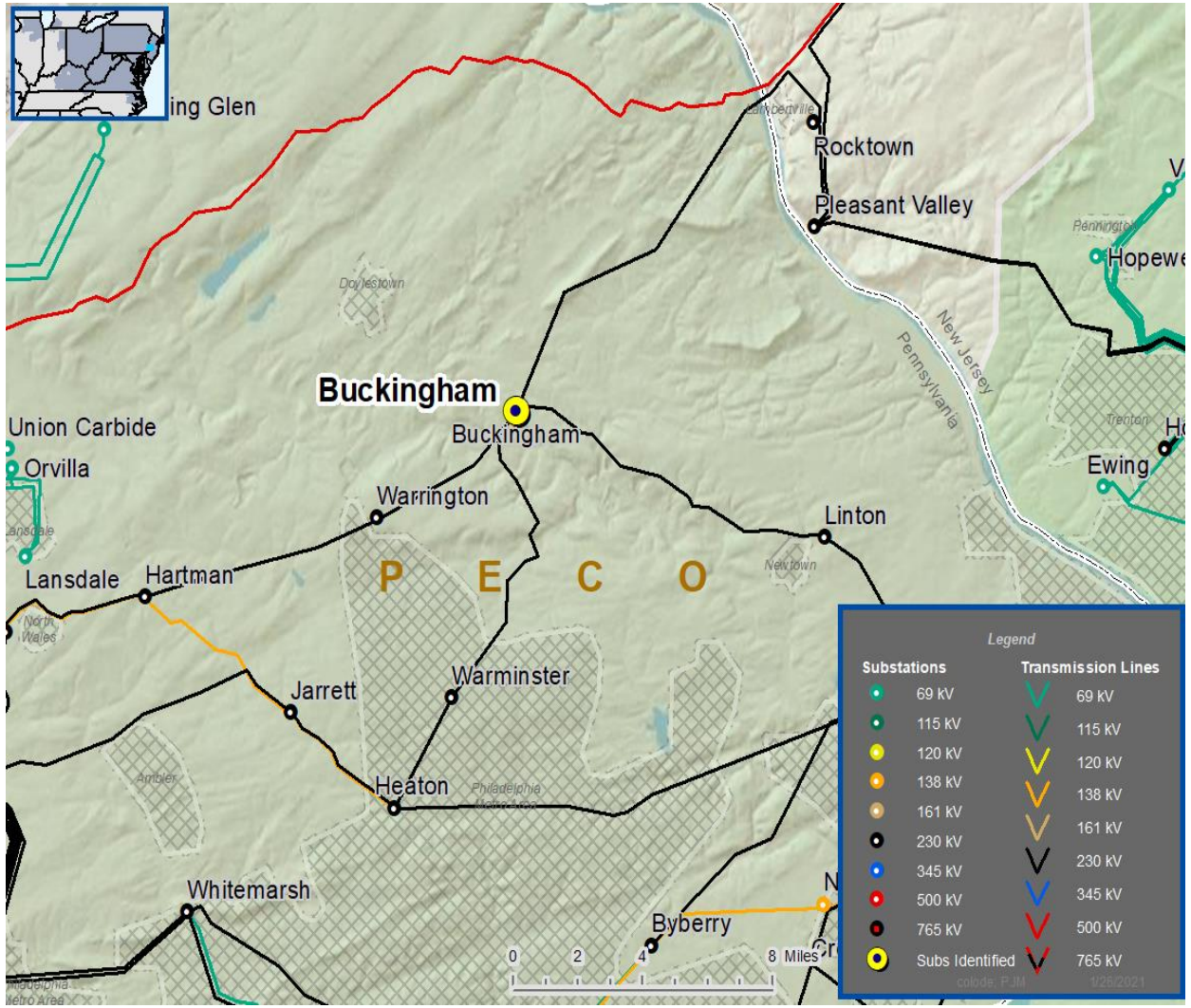
Equipment Material Condition, Performance, and Risk

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.



M-3 Process PECO Transmission Zone
Buckingham 230kV circuit breaker #230

Need Number: PE-2021-002

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Selected 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:

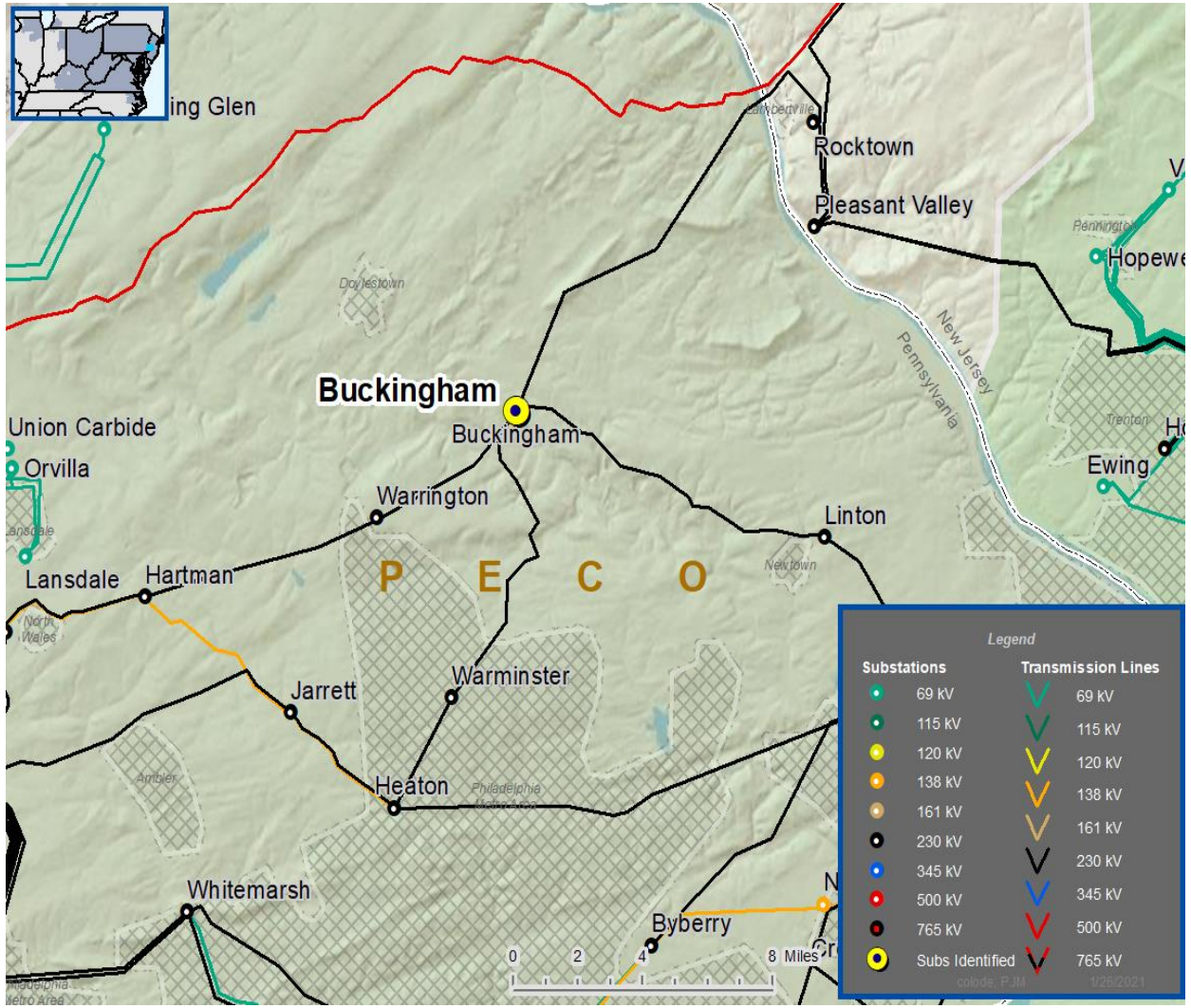
None

Projected In-Service: 10/7/2021

Supplemental Project ID: s2559

Project Status: Engineering

Model: 2025 RTEP



M-3 Process PECO Transmission Zone
Buckingham 230kV circuit breaker #240

Need Number: PE-2021-003

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Previously Presented:
Need – TEAC – 2/9/21
Solution – TEAC – 3/9/21

Project Driver:

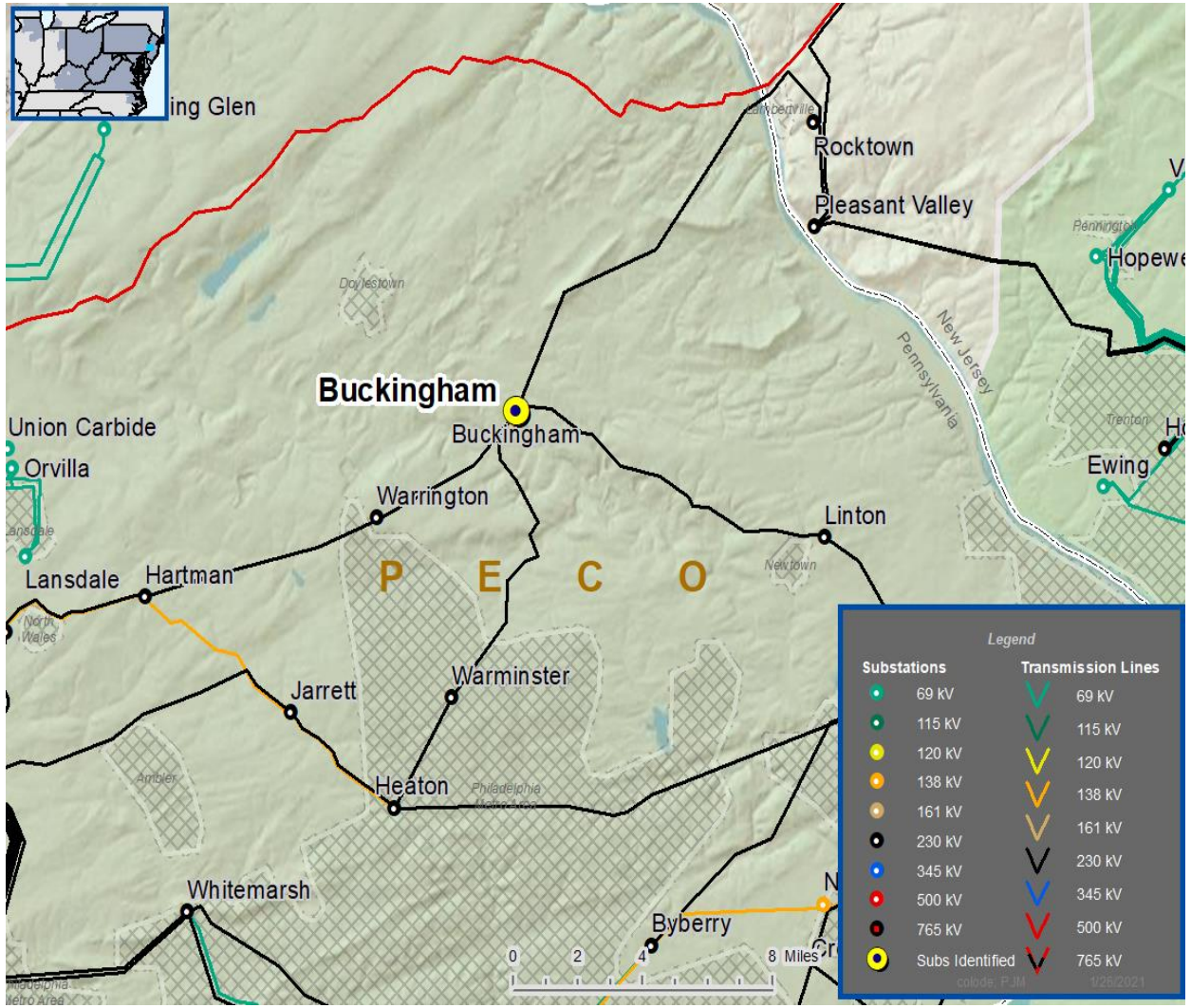
Equipment Material Condition, Performance, and Risk

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.



M-3 Process PECO Transmission Zone
Buckingham 230kV circuit breaker #240

Need Number: PE-2021-003

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Selected 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:

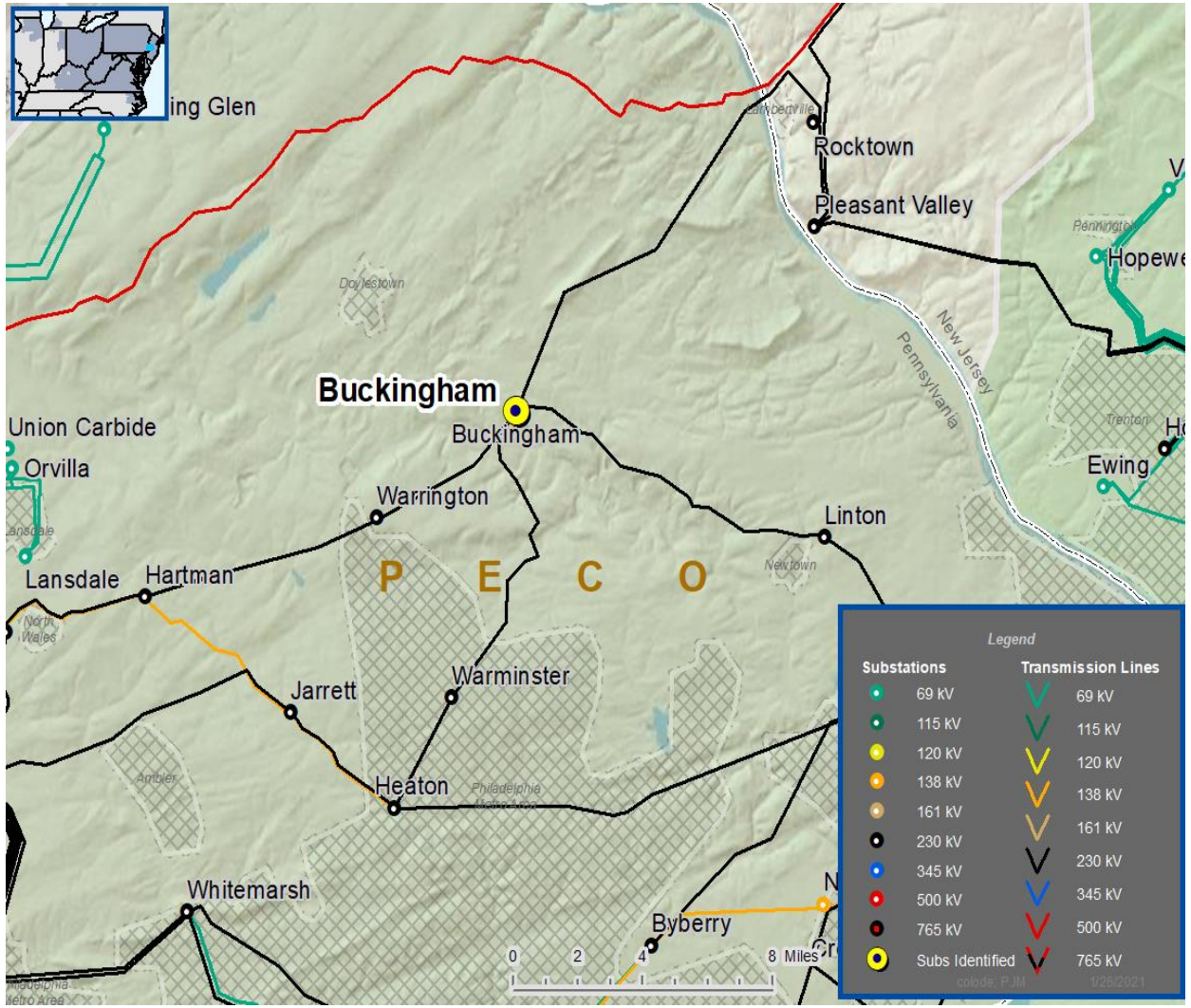
None

Projected In-Service: 10/7/2021

Supplemental Project ID: s2560

Project Status: Engineering

Model: 2025 RTEP



M-3 Process PECO Transmission Zone
Parrish 230kV circuit breaker #905

Need Number: PE-2021-004

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Previously Presented:
Need – TEAC – 2/9/21
Solution – TEAC – 3/9/21

Project Driver:

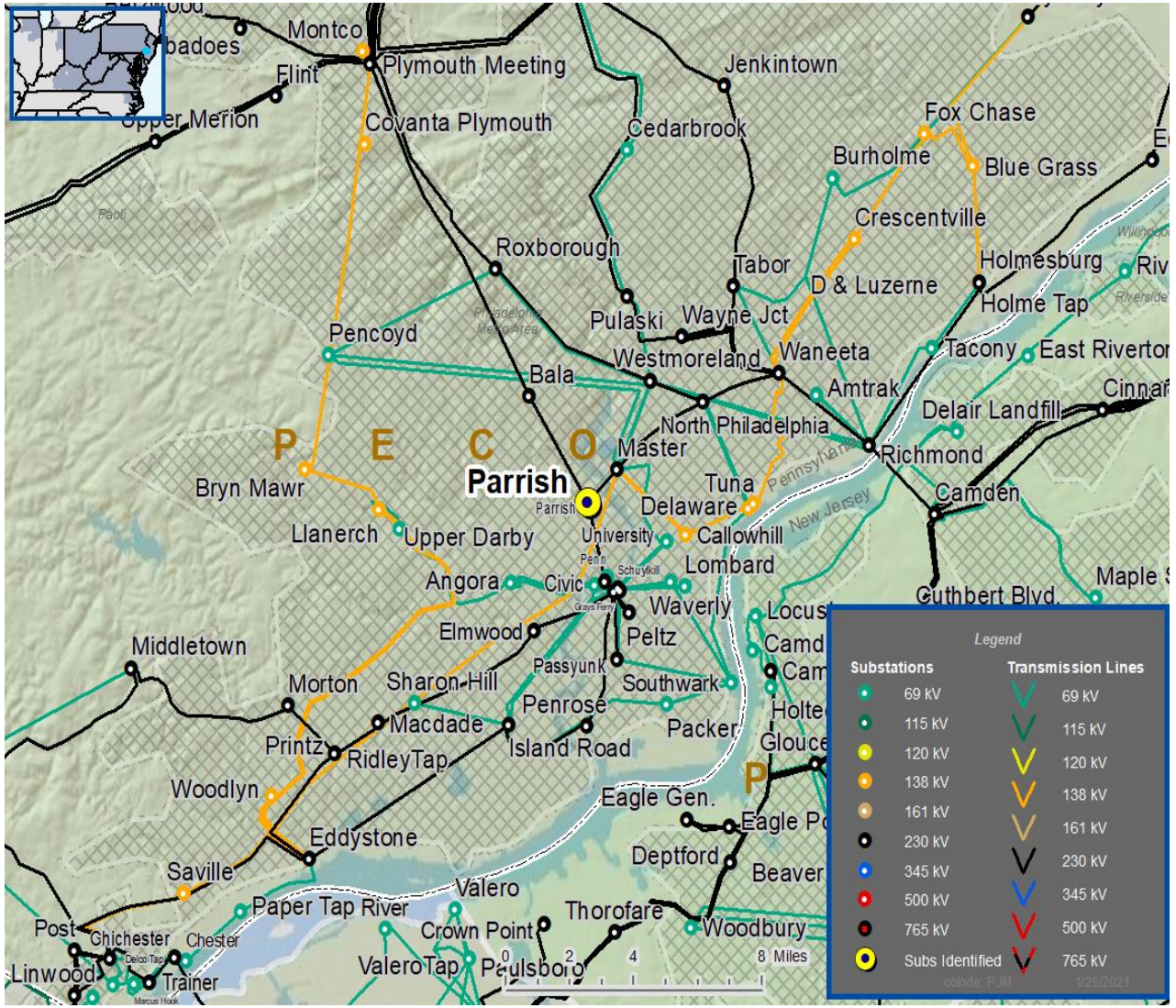
Equipment Material Condition, Performance, and Risk

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.



M-3 Process PECO Transmission Zone
Parrish 230kV circuit breaker #905

Need Number: PE-2021-004

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Selected 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:

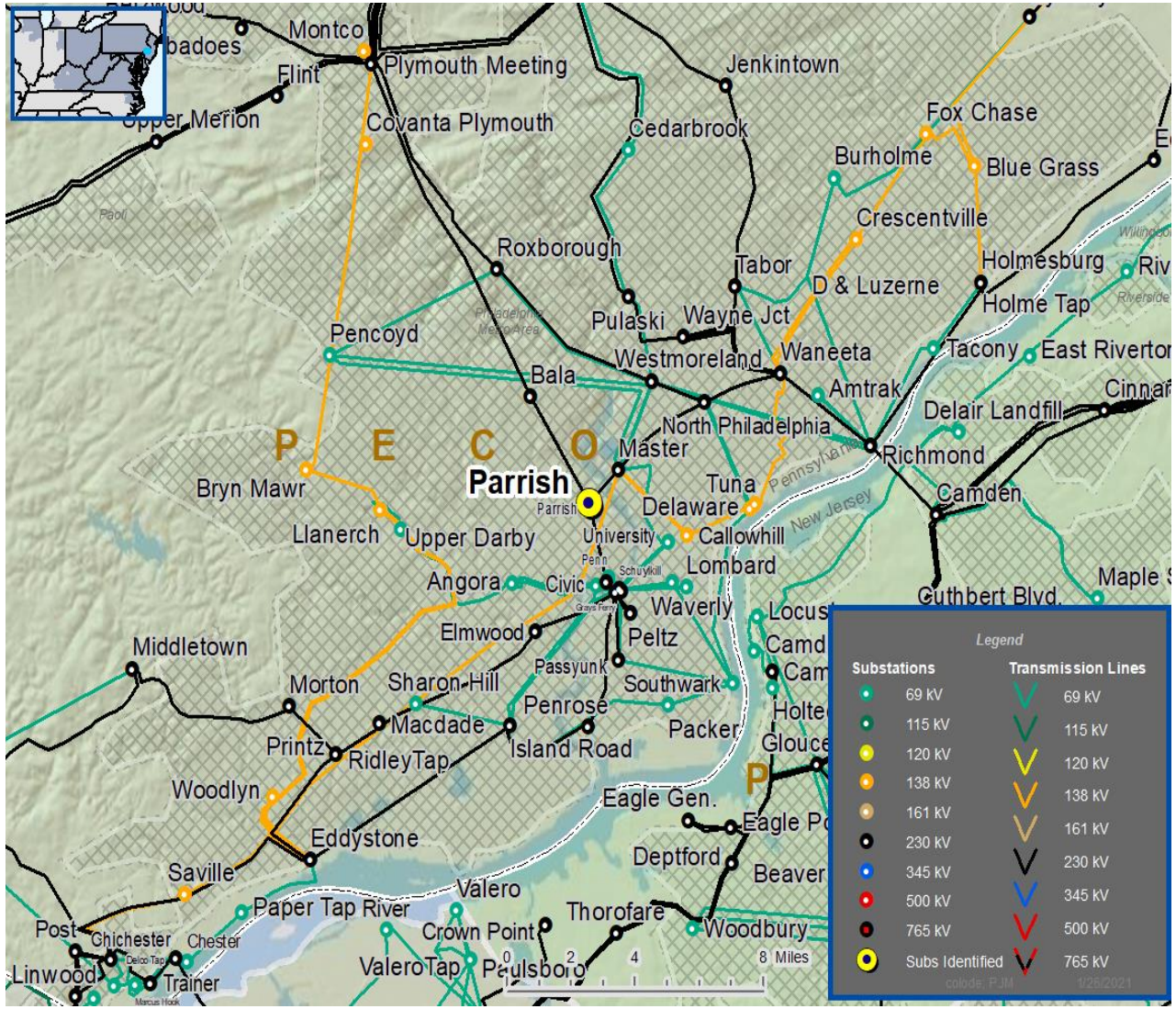
None

Projected In-Service: 11/19/2021

Supplemental Project ID: s2561

Project Status: Engineering

Model: 2025 RTEP



M-3 Process PECO Transmission Zone
Passyunk 69kV circuit breaker

Need Number: PE-2020-013

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Previously Presented:
Need – SRRTEP – 12/16/20
Solution – SRRTEP – 1/14/21

Project Driver:

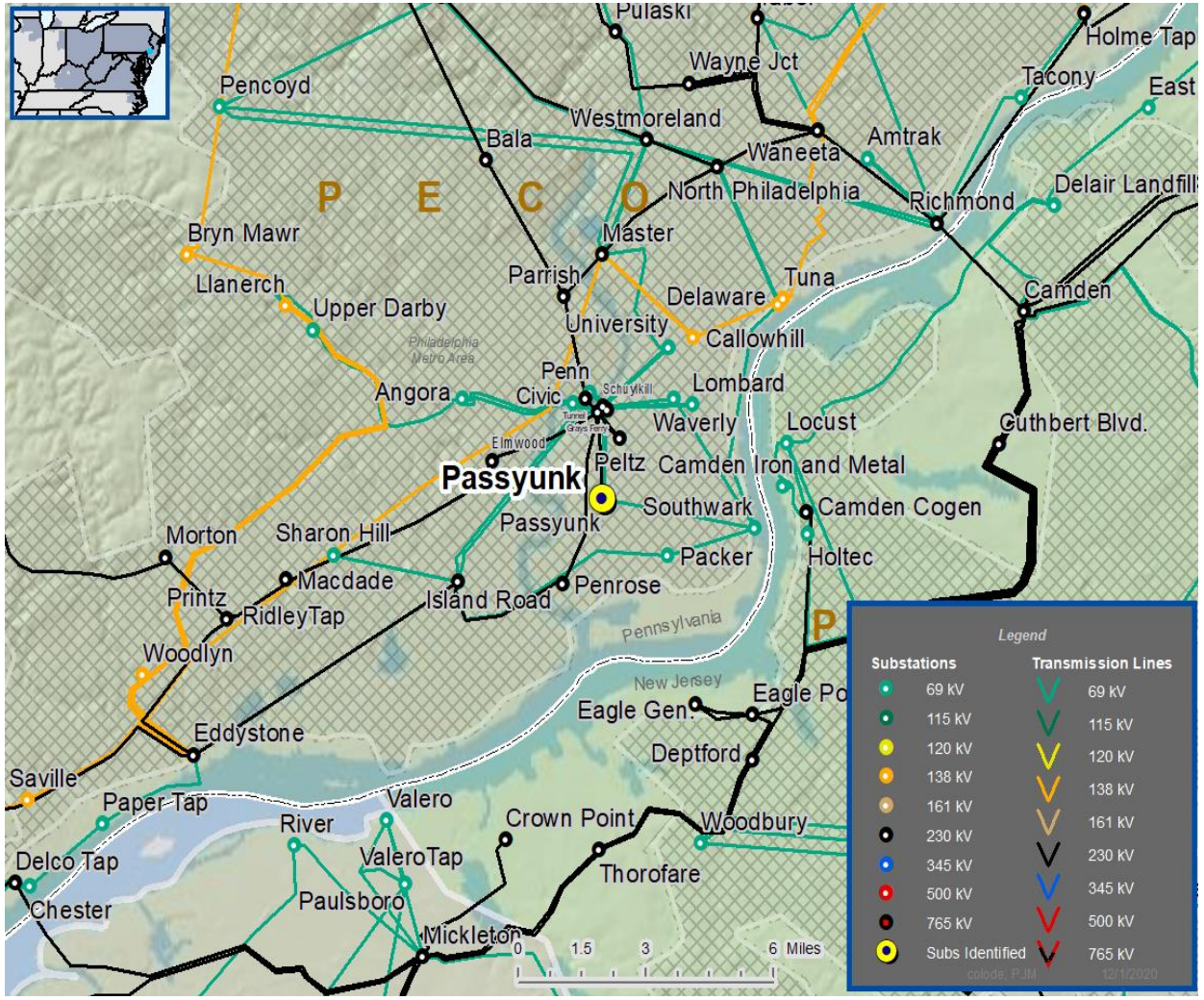
Equipment Material Condition, Performance, and Risk

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:

Passyunk 69kV circuit breaker #235 installed in 1968 is in deteriorating condition due to oil leaks, replacement part availability, and elevated maintenance cost.



M-3 Process PECO Transmission Zone
Passyunk 69kV circuit breaker

Need Number: PE-2020-013

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Selected Solution:

Replace the Passyunk 69kV circuit breaker #235

The **estimated cost** of the project is $0.6M

Existing rating 2000 A, 40kA

New rating 2000 A, 50kA

Alternatives Considered:

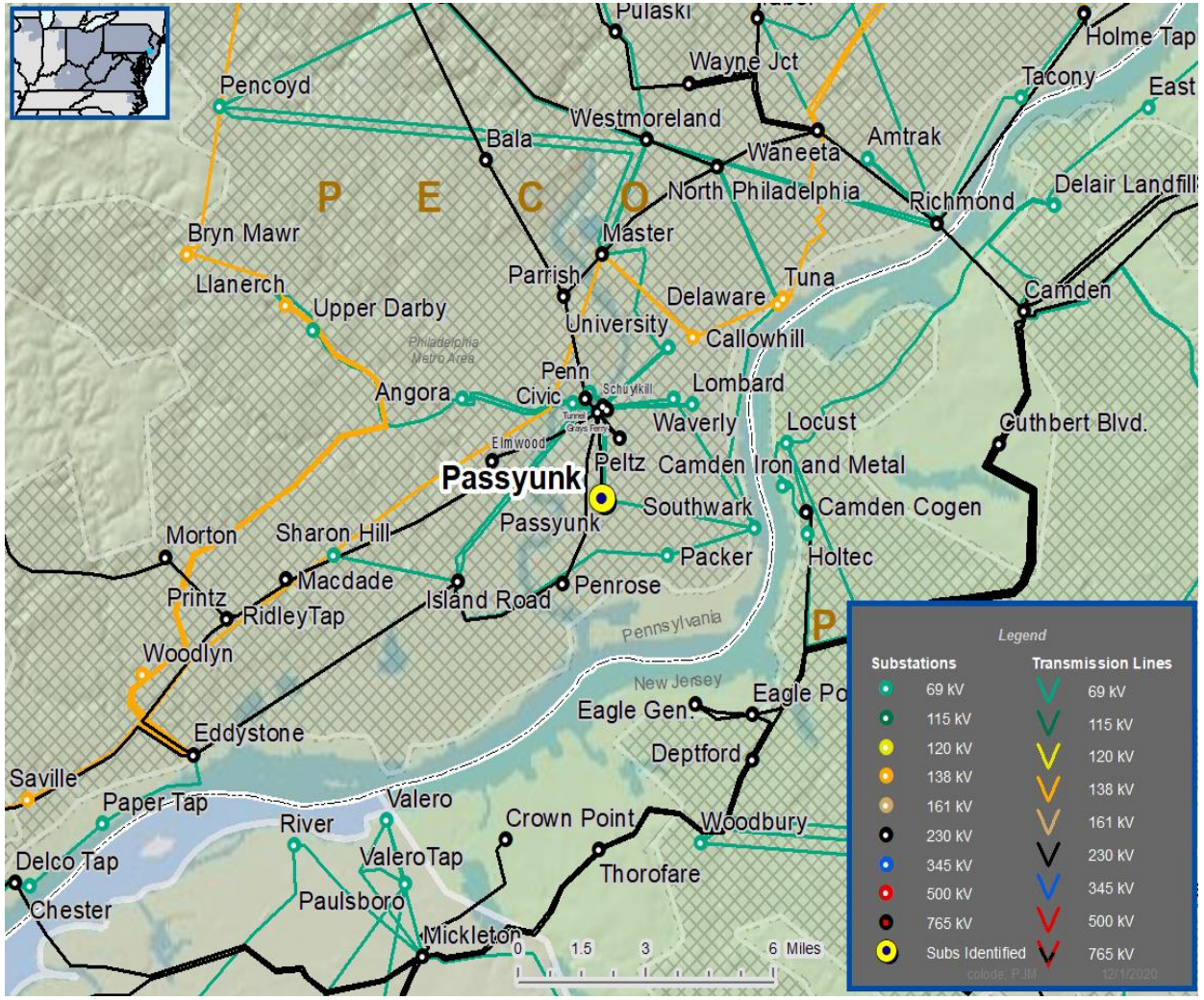
None

Projected In-Service: 2/22/2021

Supplemental Project ID: s2484

Project Status: Completed

Model: 2025 RTEP



M-3 Process PECO Transmission Zone
138kV circuit breaker #255

Need Number: PE-2020-014

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Previously Presented:
Need – SRRTEP – 12/16/20
Solution – SRRTEP – 1/14/21

Project Driver:

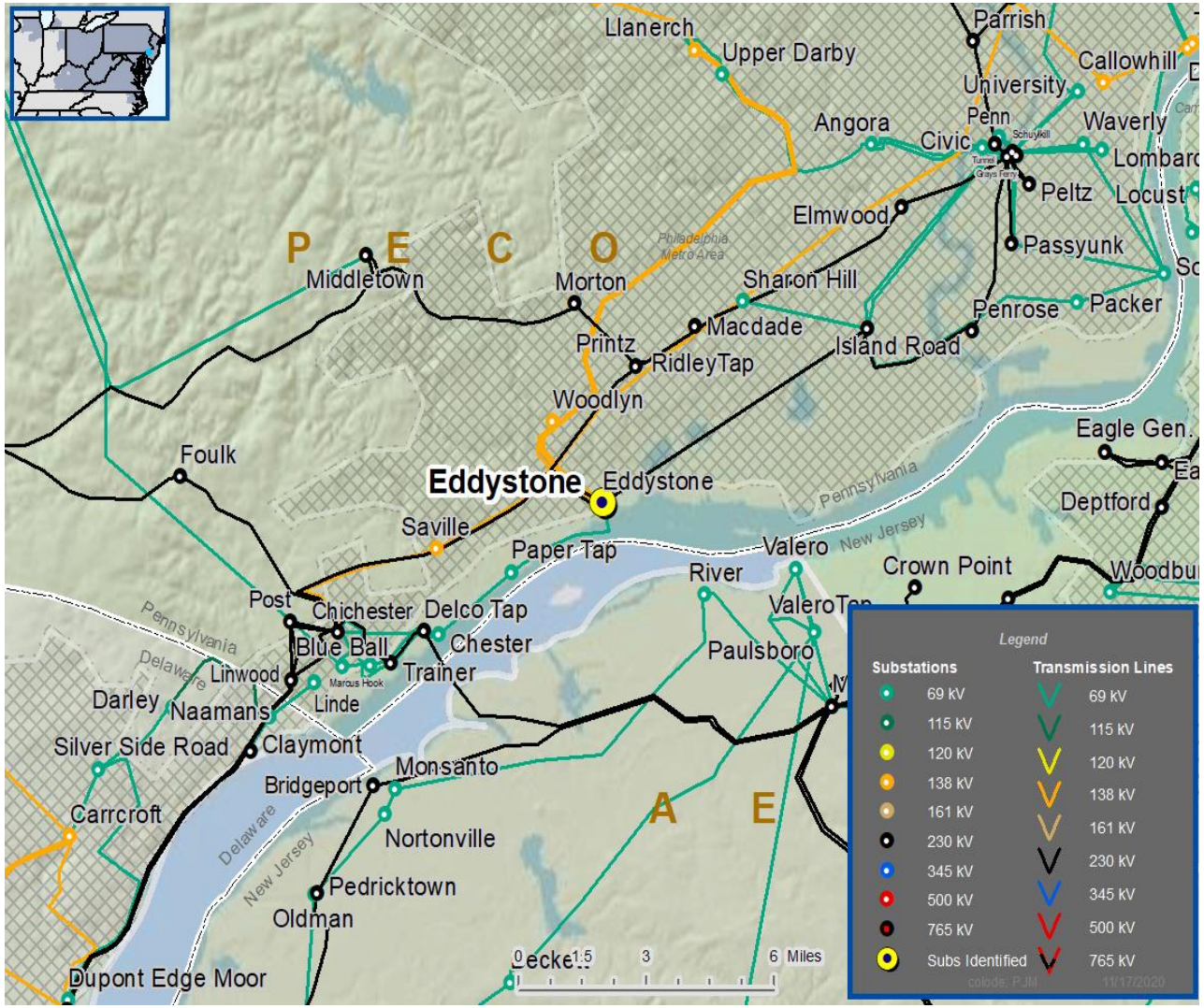
Equipment Material Condition, Performance, and Risk

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:

Eddystone 138kV circuit breaker #255 installed in 1968 is in deteriorating condition due to oil leaks, replacement part availability, and elevated maintenance cost.



M-3 Process PECO Transmission Zone
138kV circuit breaker #255

Need Number: PE-2020-014

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/23/21

Selected Solution:

Replace the Eddystone 138kV circuit breaker #255

The **estimated cost** of the project is $0.8M

Existing rating 2000 A, 50kA

New rating 3000 A, 63kA

Alternatives Considered:

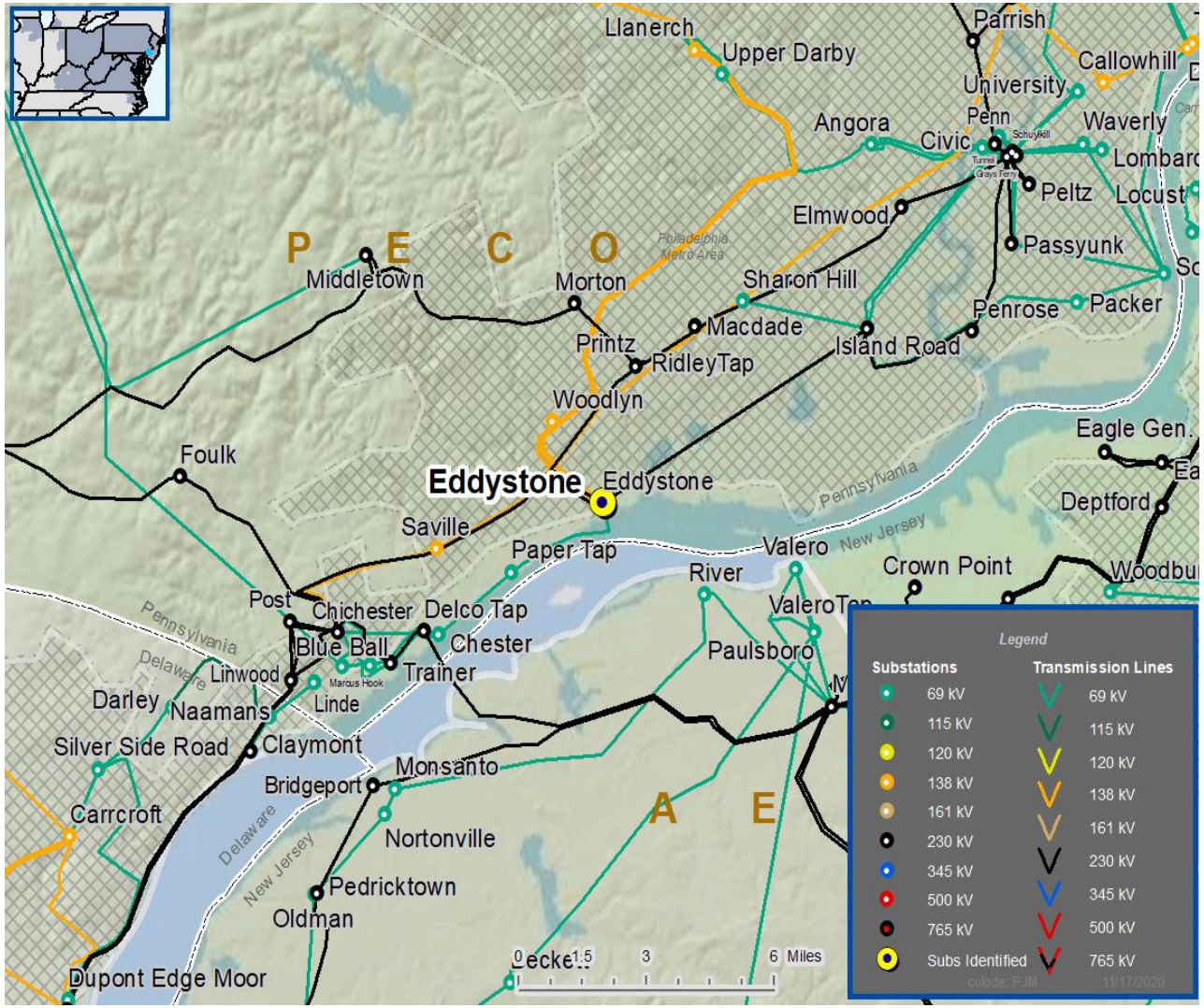
None

Projected In-Service: 2/19/2021

Supplemental Project ID: s2485

Project Status: Completed

Model: 2025 RTEP



M-3 Process PECO Transmission Zone
Heaton 230kV circuit breaker

Need Number: PE-2020-004

Process Stage:

Original Submission of Supplemental Project for inclusion in the Local Plan 11/13/2020

Updated Submission of Supplemental Project for inclusion in the Local Plan 11/12/2021

Previously Presented:

Need – 7/7/2020

Solution – 10/6/2020

Supplemental Project Driver:

Project Driver:

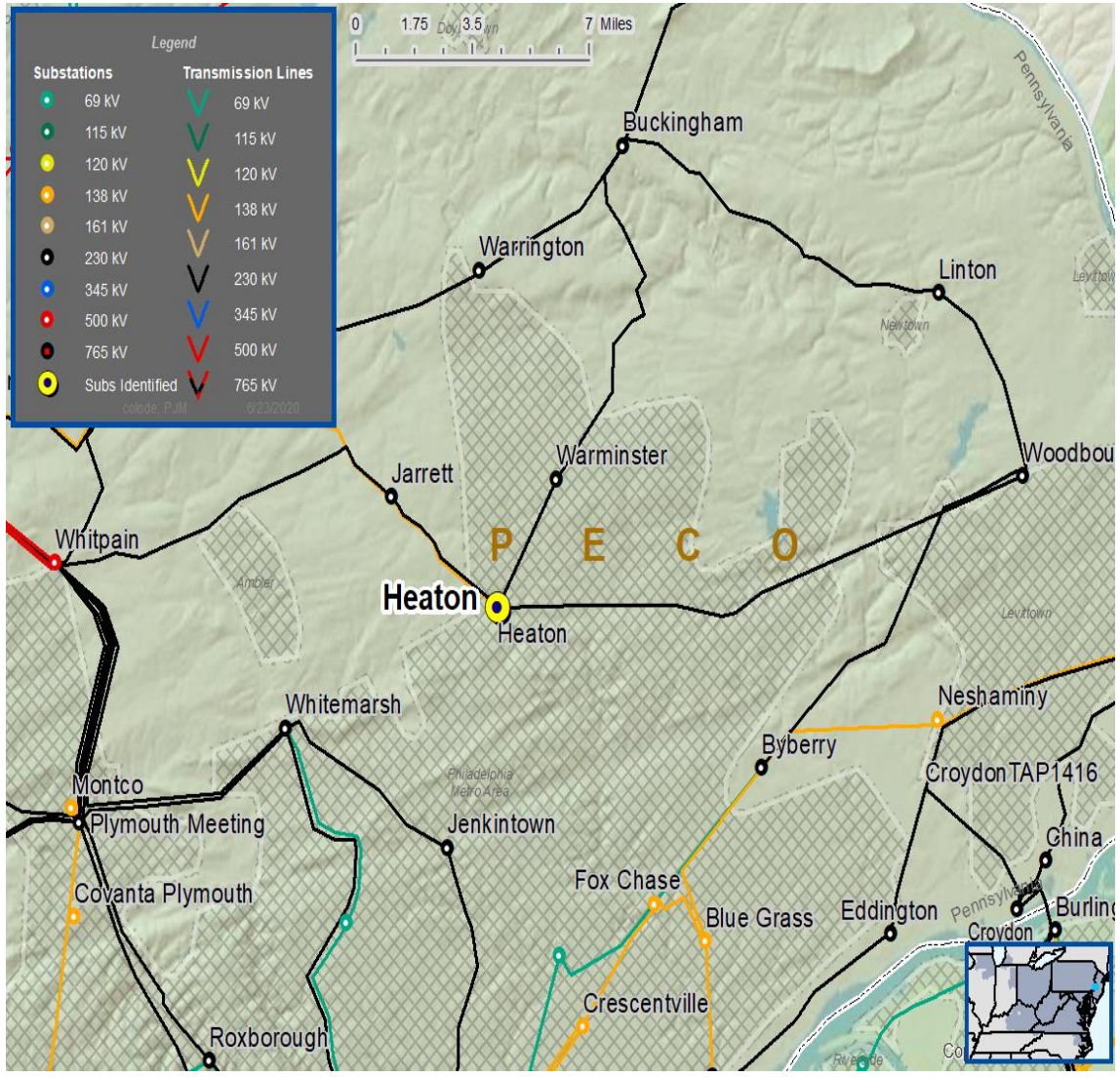
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:

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

Problem Statement:

Heaton 230kV circuit breaker #805 installed in 1968 is in deteriorating condition due to SF6 gas leaks, replacement part availability, and elevated maintenance cost.



M-3 Process PECO Transmission Zone
Heaton 230kV circuit breaker

Need Number: PE-2020-004

Process Stage:

Original Submission of Supplemental Project for inclusion in the Local Plan 11/13/2020

Updated Submission of Supplemental Project for inclusion in the Local Plan 11/12/2021

Selected Solution:

Replace Heaton 230kV circuit breaker #805.

The estimated cost of the project is $0.8M

Existing rating 2500 A, 42kA

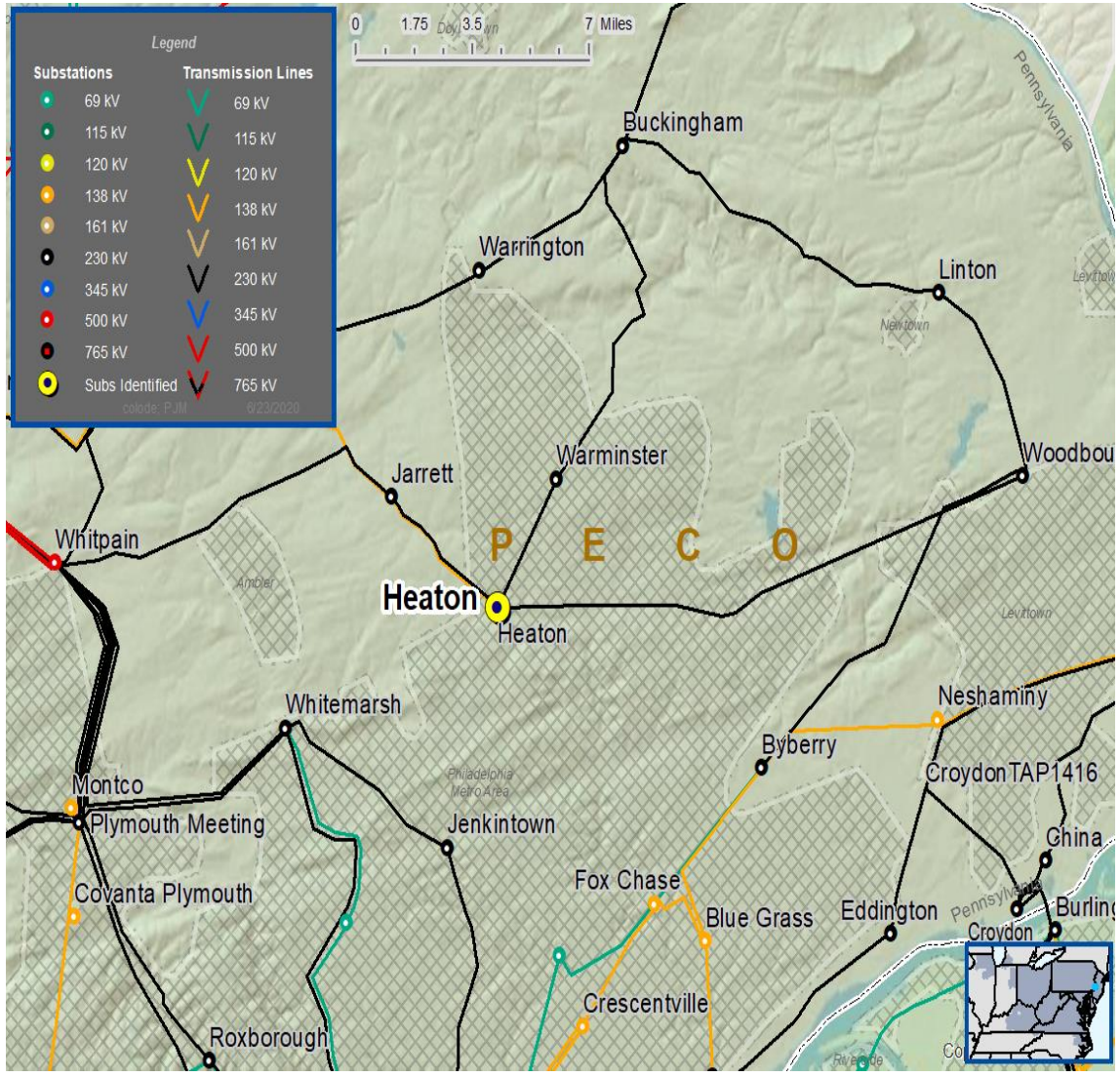
New rating 3000 A, 63kA

Projected In-Service: 12/31/2020

Supplemental Project ID: s2361

Project Status: Engineering

Model: 2025 RTEP



M-3 Process PECO Transmission Zone
Woodbourne 230kV circuit breaker

Need Number: PE-2020-005

Process Stage:

Original Submission of Supplemental Project for inclusion in the Local Plan 11/13/2020

Updated Submission of Supplemental Project for inclusion in the Local Plan 11/12/2021

Previously Presented:

Need – 7/7/ 2020

Solution – 10/6/2020

Supplemental Project Driver:

Project Driver:

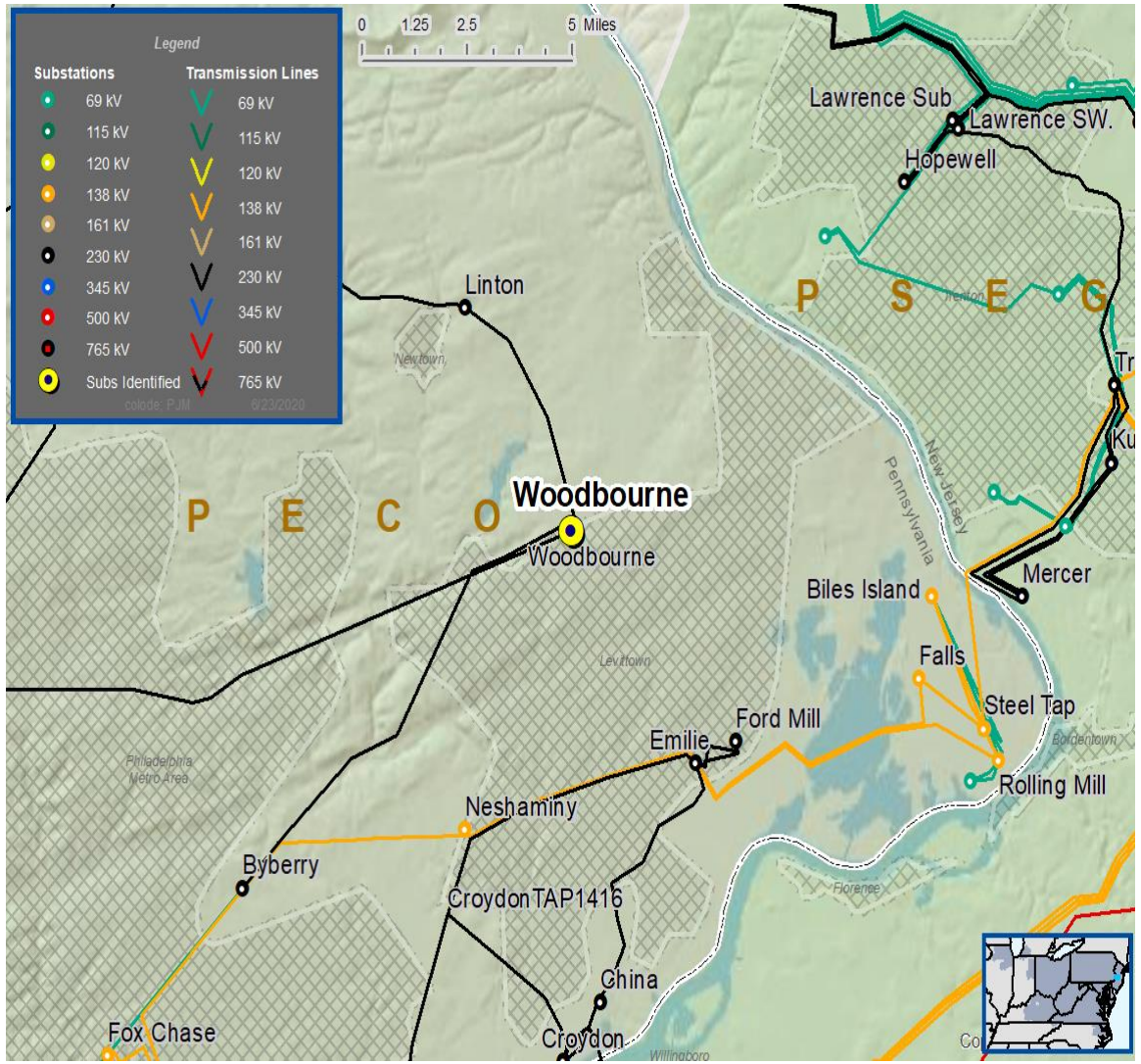
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:

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

Problem Statement:

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



M-3 Process PECO Transmission Zone
Woodbourne 230kV circuit breaker

Need Number: PE-2020-005

Process Stage:

Original Submission of Supplemental Project for inclusion in the Local Plan 11/13/2020

Updated Submission of Supplemental Project for inclusion in the Local Plan 11/12/2021

Selected Solution:

Replace Woodbourne 230kV circuit breaker #905.

The estimated cost of the project is $0.8M

Existing rating 2500 A, 42kA

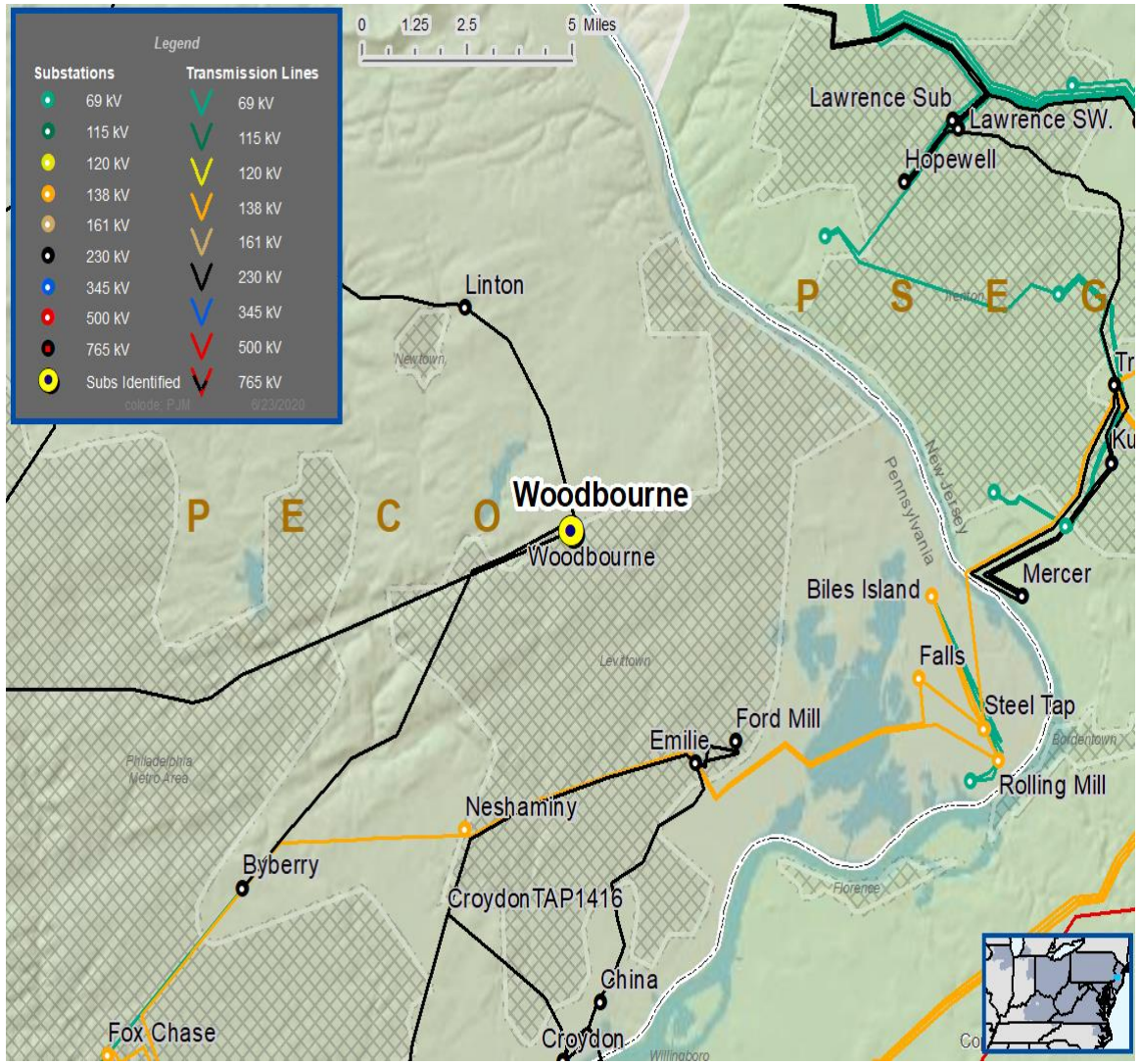
New rating 3000 A, 63kA

Projected In-Service: 12/31/2020

Supplemental Project ID: s2362

Project Status: Engineering

Model: 2025 RTEP



PECO Transmission Zone M-3 Process

Need Number: PE-2020-006

Process Stage:

Original Submission of Supplemental Project for inclusion in the Local Plan 11/13/2020

Updated Submission of Supplemental Project for inclusion in the Local Plan 11/12/2021

Previously Presented:

Need – 7/16/ 2020

Solution – 9/10/2020

Supplemental Project Driver:

Project Driver:

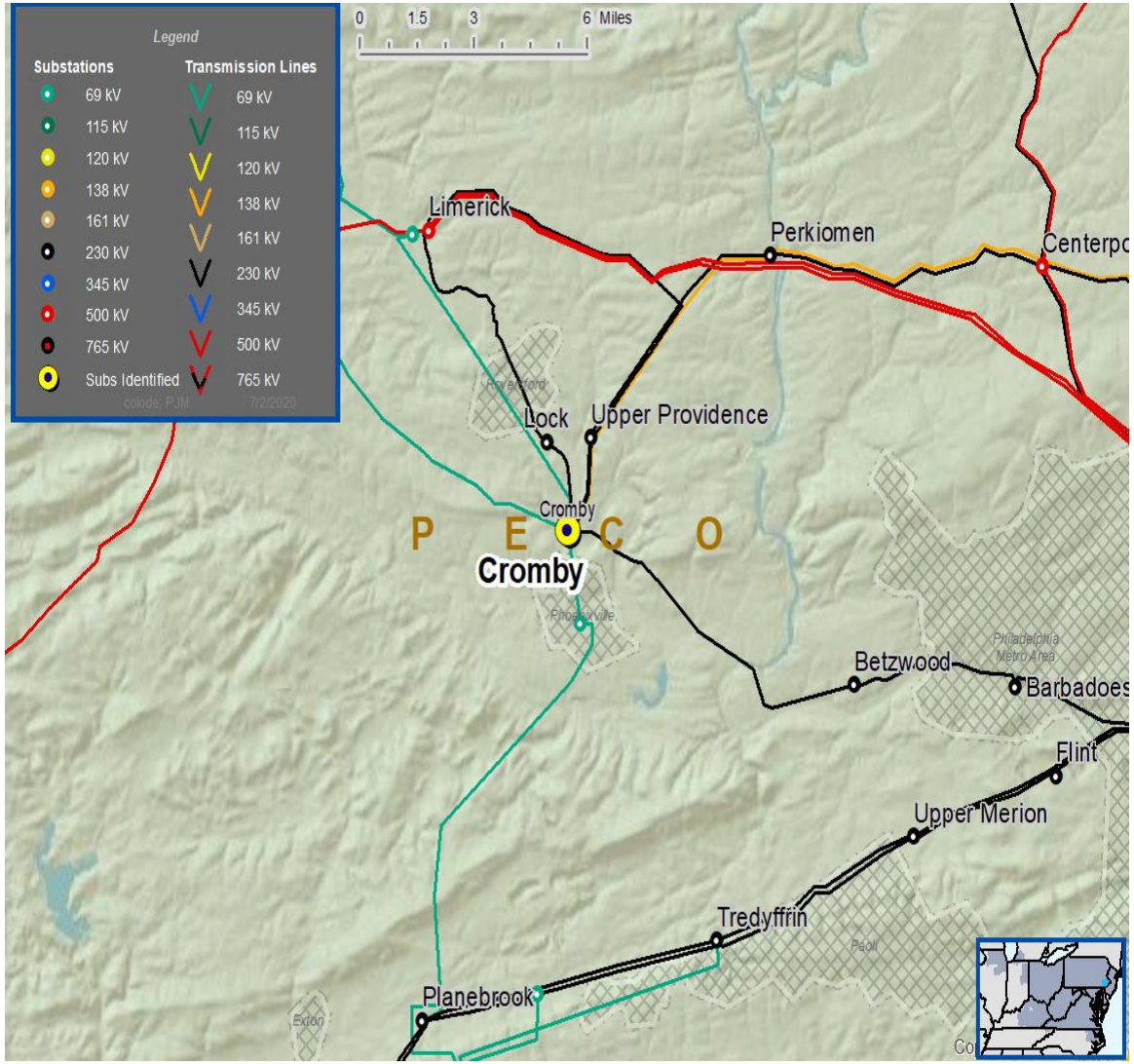
- Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:

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

Problem Statement:

- Cromby 138kV circuit breaker #270 installed in 1953 is in deteriorating condition due to oil leaks, spare part availability, and elevated maintenance cost.



PECO Transmission Zone M-3 Process

Need Number: PE-2020-006

Process Stage:

Original Submission of Supplemental Project for inclusion in the Local Plan 11/13/2020

Updated Submission of Supplemental Project for inclusion in the Local Plan 11/12/2021

Selected Solution:

Replace Cromby 138kV circuit breaker #270.

The estimated cost of the project is $0.8M

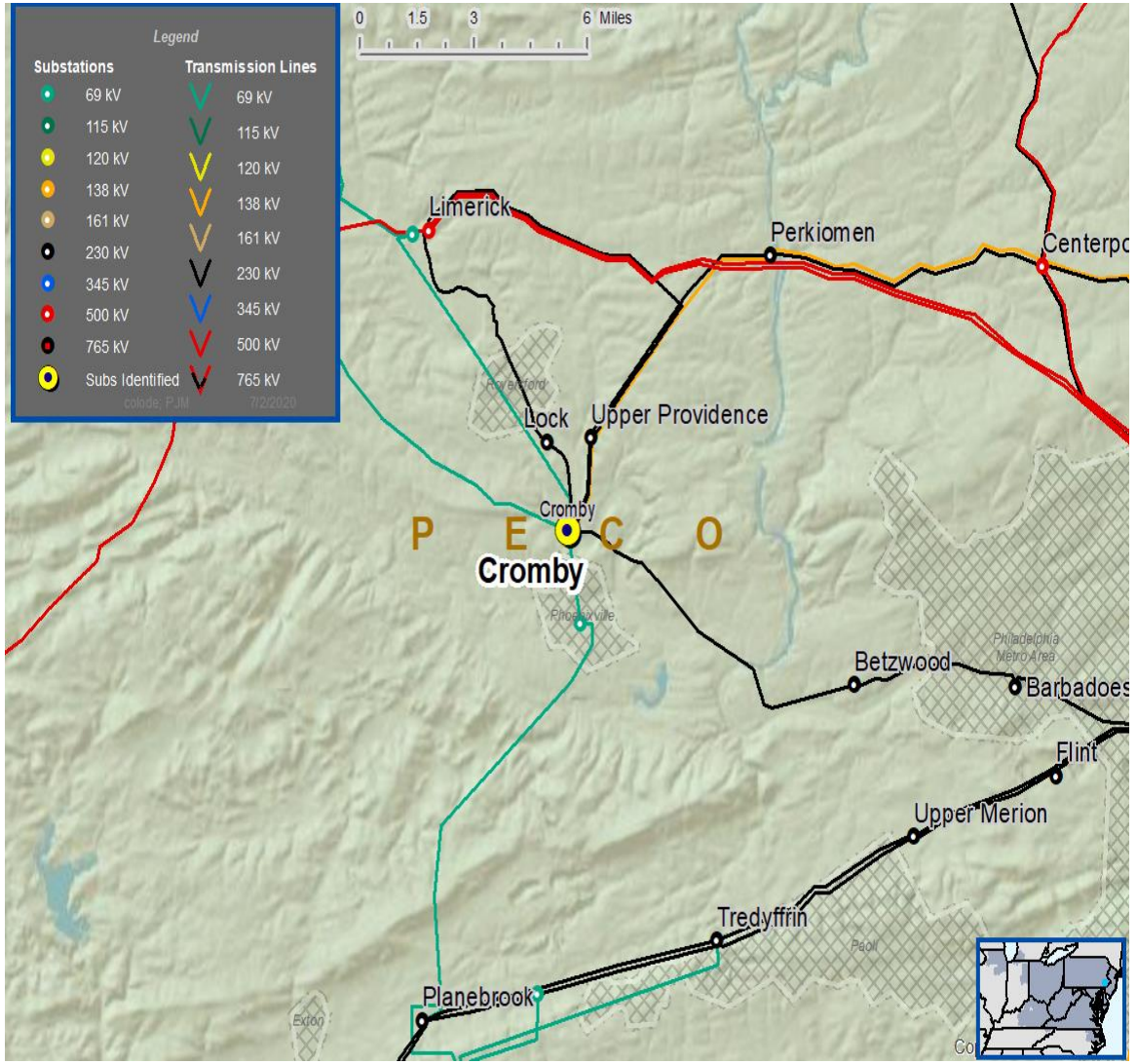
- Existing rating 1200 A, 14.7kA
- New rating 3000 A, 63kA

Projected In-Service: 12/31/2020

Supplemental Project ID: s2357

Project Status: Engineering

Model: 2025 RTEP



Revision History

09/23/2021 – V1 – Posted Local plan for s2417, s2418, s2486 s2487, s2508, s2562, s2558, s2559, s2560, s2561, s2484 and s2485

11/12/2021 – V2 – Added local plan for s2357, s2361 and s2362