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

ACE Transmission Zone 3M Process

Need Number: ACE-2021-0002

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 10/30/2021

Previously Presented: Needs Meeting 2/16/2021

Solutions Meeting 5/20/2021

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

Specific Assumption Reference:

Transmission Infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient Asset Management decisions, Transmission System configuration changes due to new or expansion of existing distribution substations, Enhancing system functionality, flexibility, or operability

Problem Statement:

/ l· NJ y˝ Ŝ è Ω ă Pennsgrove Substation Ř are both tapped 69/4kV transformer stations with obsolete and deteriorating 4kV equipment. The Oldmans Substation breaker is experiencing gas leaks and is in need of replacement.. In addition, projected load growth in this region is expected to overload existing distribution infrastructure.

ACE Transmission Zone 3M Process

Need Number: ACE-2021-0003

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 10/30/2021

Previously Presented: Needs Meeting 4/14/2021

Solutions Meeting 5/20/2021

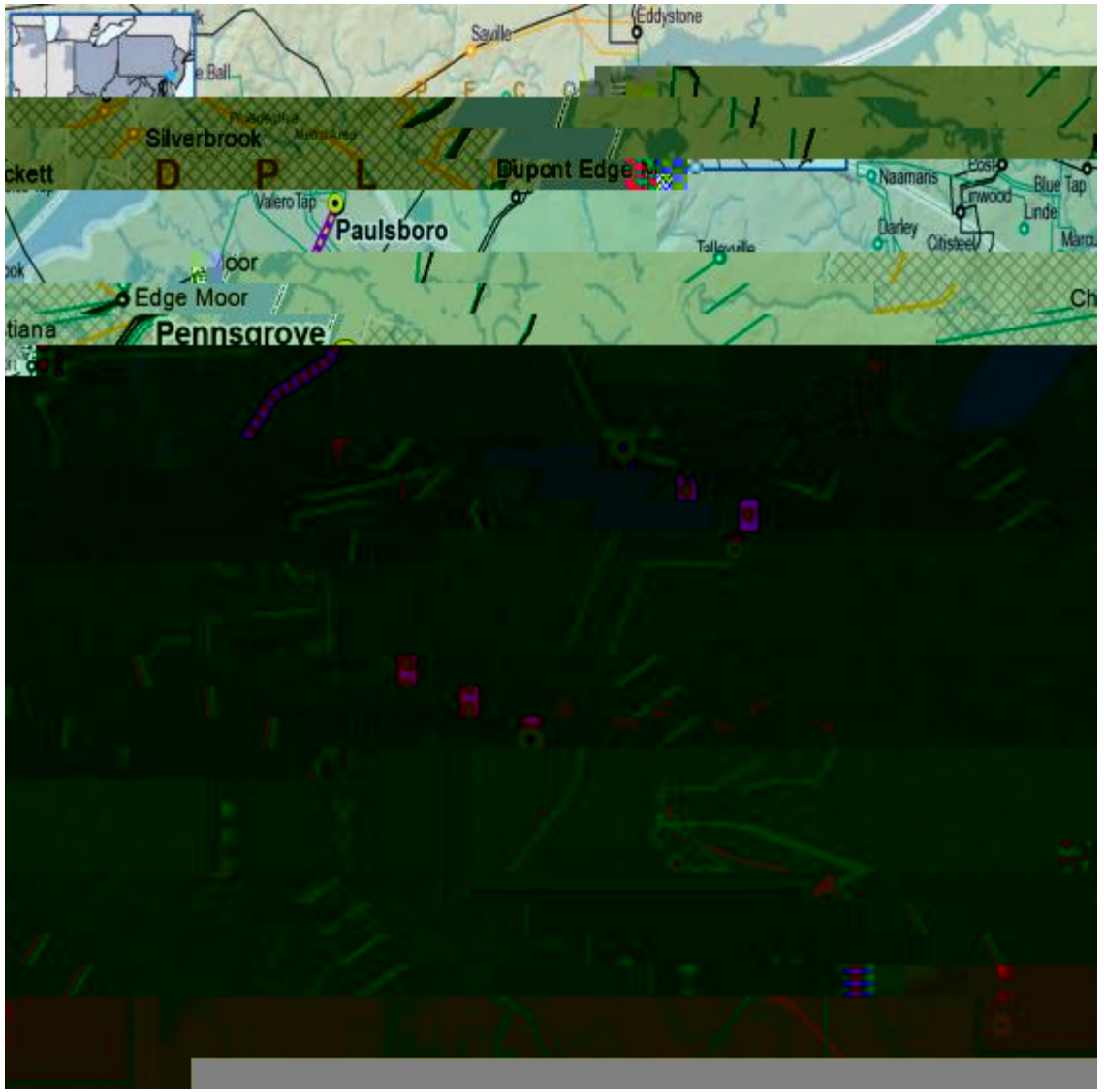
Project Driver: Operational Flexibility and Efficiency

Specific Assumption Reference:

Enhancing system functionality, flexibility, visibility or operability; Remedy recurring operational problems

Problem Statement:

Beckett Substation is currently configured as two (2) tapped 69/12kV transformers off the 69kV Churchtown Paulsboro line with no high side breakers. Beckett Substation has experienced six (6) bus interruptions since 2018



ACE Transmission Zone 3M Process

Need Number: ACE-2021-0002/ACE-2021-0003

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 10/30/2021

Previously Presented: Needs Meeting 2/16/2021 & 4/14/2021
Solutions Meeting 5/20/2021

Proposed Solution:

- Upgrade Beckett Substation to Line Bus configuration by installing four (4) 69kV CBs
- Construct new seven (7) breaker 69kV Ring Bus Substation on Churchtown-Monsanto line
- Construct new 5.6 mile 69kV line from Beckett to new substation
- w Ŝ ú ƛ NJ Ŝ / l· Pennsgrove, Oldman 2 substations

Estimated Cost: $34M

Alternatives Considered:

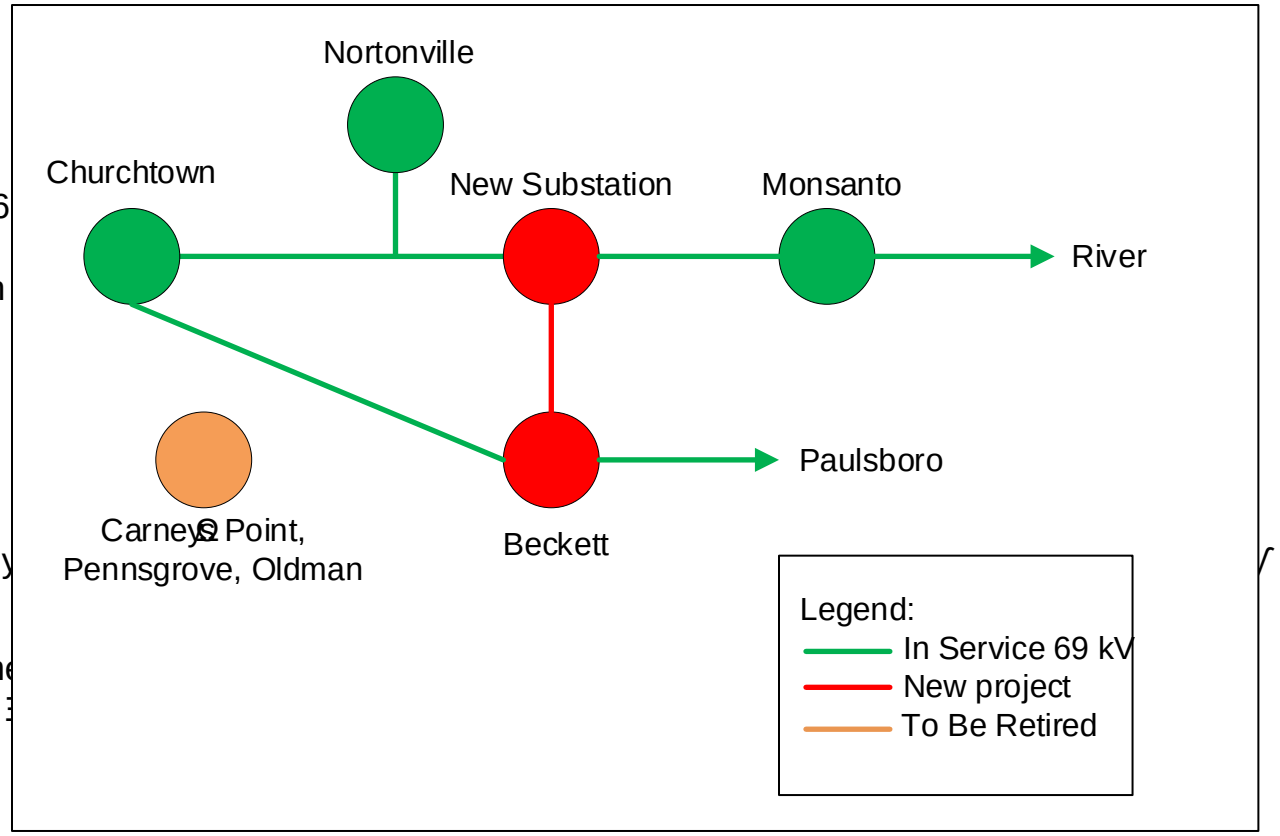
- 5 Ŝ Y ƨ l· y Ř NJ Ŝ ō dz ƛ f Ř h f Ř Y l· y { dz ō ă ú l· ú ƛ ƨ y Pennsgrove ($32M)
  - Existing property not large enough for expanded station, limited reliability impact due to configuration and reliance on 4kV equipme
- Add 2nd ¢ NJ l· y ă Ŧ ƨ NJ Y Ŝ NJ l· ú b ƨ NJ ú ƨ y Ø ƛ f f Ŝ Σ dz LJ Pennsgrove and Oldman ($37M)
  - Additional space needed to fit 2nd transformer, limited reliability impact due to configuration

Anticipated In Service Date: 12/31/2024

Supplemental Project ID: s2567 (s2567.1, s2567.2, s2567.3)

Project Status: Engineering

PJM Model: 2026 RTEP Model



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

Need Number: BGE-2021-001

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 09/28/2021

Previously Presented:
Need 06/08/2021
Solution 07/13/2021

Specific Assumption Reference:
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(EOL/condition/obsolescence) that are consistent with efficient asset management decisions
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wood poles, cables, etc.

Problem Statement:

- Riverside 230kV circuit breaker #B51 installed in 1974 is in deteriorating condition due to compressor issues/air leaks, replacement part availability, and elevated maintenance cost

Need Number: BGE-2021-001

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 09/28/2021

Selected Solution

Replace Riverside 230kV circuit breaker #B51

Estimated Cost: $1.25M

Projected In-Service: 11/30/2021

Supplemental Project ID: S2587

Project Status: Engineering & Procurement

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

DPL Transmission Zone 3V Process

Need Number: DPL-2019-0001

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 10/30/10/2021

Previously Presented: Needs Meeting 1/25/2019

Solutions Meeting 2/16/2021

Project Driver: Customer Service

Specific Assumption Reference:

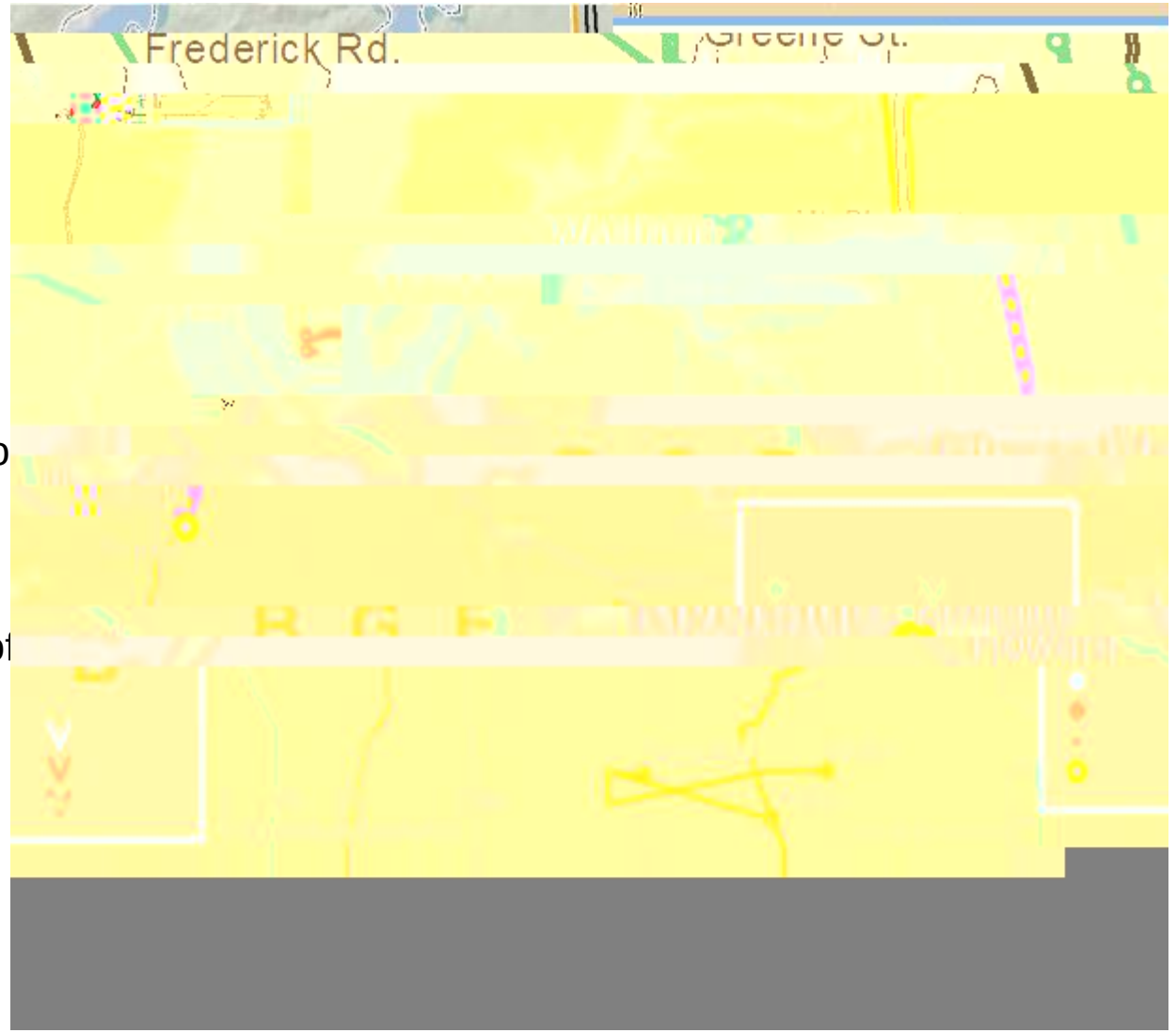
New transmission customer interconnections or modification to existing customer

Problem Statement:

Customer has requested a new 138 kV interconnection point of the Mt. Pleasant to Townsend 138 kV line due to load growth within the municipality.

2019 Actual Peak: 60 MW

2023 Project Load: 105 MW



DPL Transmission Zone 3 Process

Need Number: DPL-2019-0001

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 10/30/10/2021

Previously Presented: Needs Meeting 1/25/2019

Solutions Meeting 2/16/2021

Proposed Solution:

Construct new 138 kV feed (approx. 4 mi) out of Townsend substation, utilizing an open terminal position, to a new 4 [illegible] substation. Deenergize remainder of line from existing Middletown Tap to Townser

- Addresses customer reliability concerns while providing increased capa

Estimated cost: $23M

Alternatives Considered:

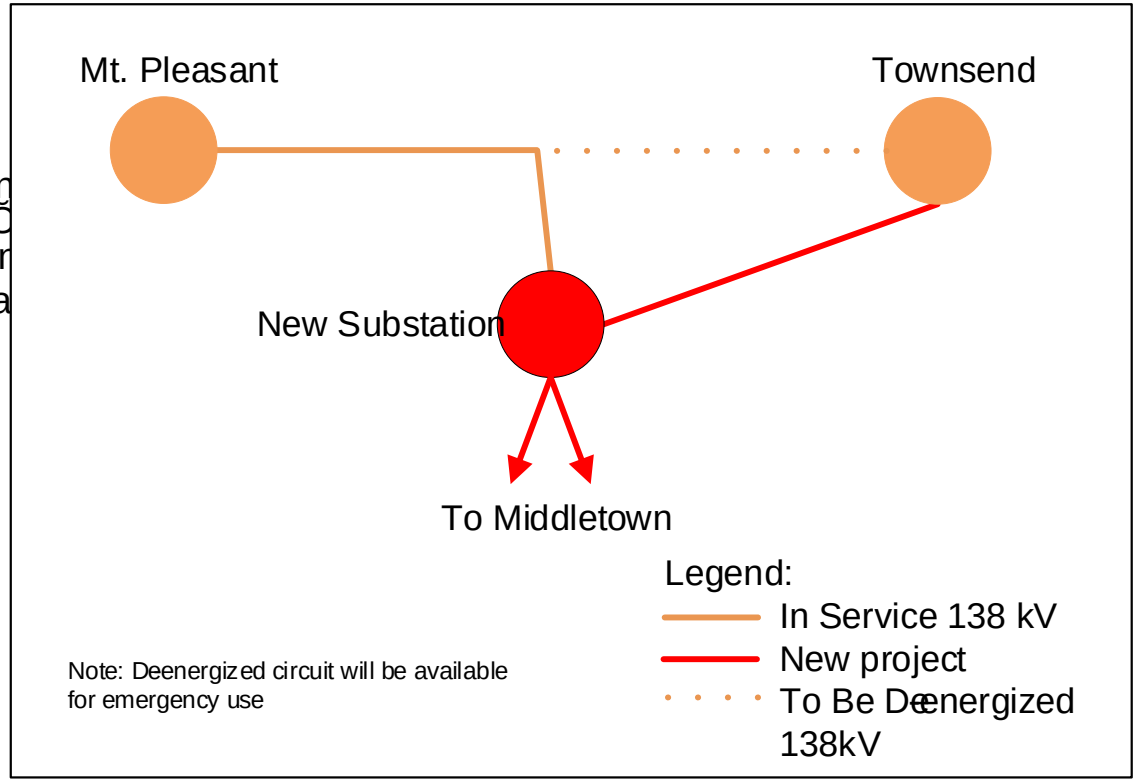
1. Replace existing tap with a 4 breaker ring bus, utilize existing corridor for 2nd 138kV feed to Middletown
   Estimated cost: $25M
   - Limited land options in area surrounding existing tap
2. Reconfigure Mt. Pleasant Substation to add additional terminal position to provide new 138 kV feed, utilizing same corridor as existing feed, to new 4 breaker ring bus adjacent to existing substation
   Estimated cost: $32M
   - Significantly higher cost option

Projected In-Service: 5/31/2025

PJM Supplemental Project ID: 52489

Project Status: Engineering

Model: 2025 PJM RTEP



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:

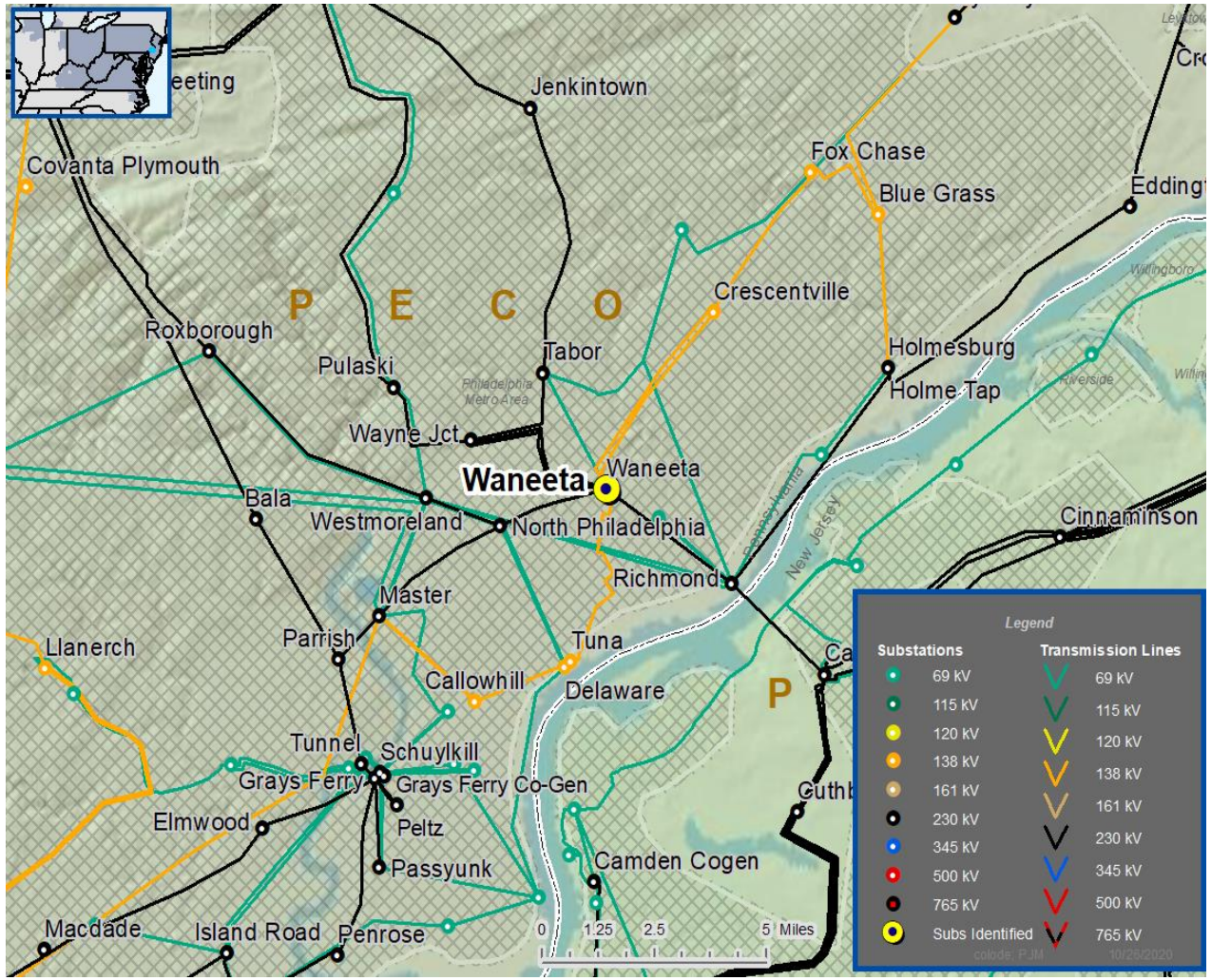
Equipment Material Condition, Performance, and Risk

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