PECO 2025
Submission of Supplemental Projects for Inclusion in the Local Plan

PECO Transmission Zone M-3 Process
Byberry 6th 138/13 kV Transformer

Need Number: PE-2024-004

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/26/2025

Previously Presented:

Needs Meeting 9/19/2024

Solutions Meeting 10/17/2024

Project Driver:

- Customer Service
- Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

- Transmission System configuration changes due to new or expansion of existing distribution substations

Problem Statement:

- PECO Distribution Capacity Planning requested additional capacity in the North Philadelphia region to accommodate load growth of 15 MVA by 6/1/2028. Existing distribution facilities do not have enough capacity to accommodate this load growth.

PECO Transmission Zone M-3 Process
Byberry 6th 138/13 kV Transformer

Need Number: PE-2024-004

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/26/2025

Selected Solution:

- Install 6th Byberry 138/13 kV 62 MVA transformer with high side breaker

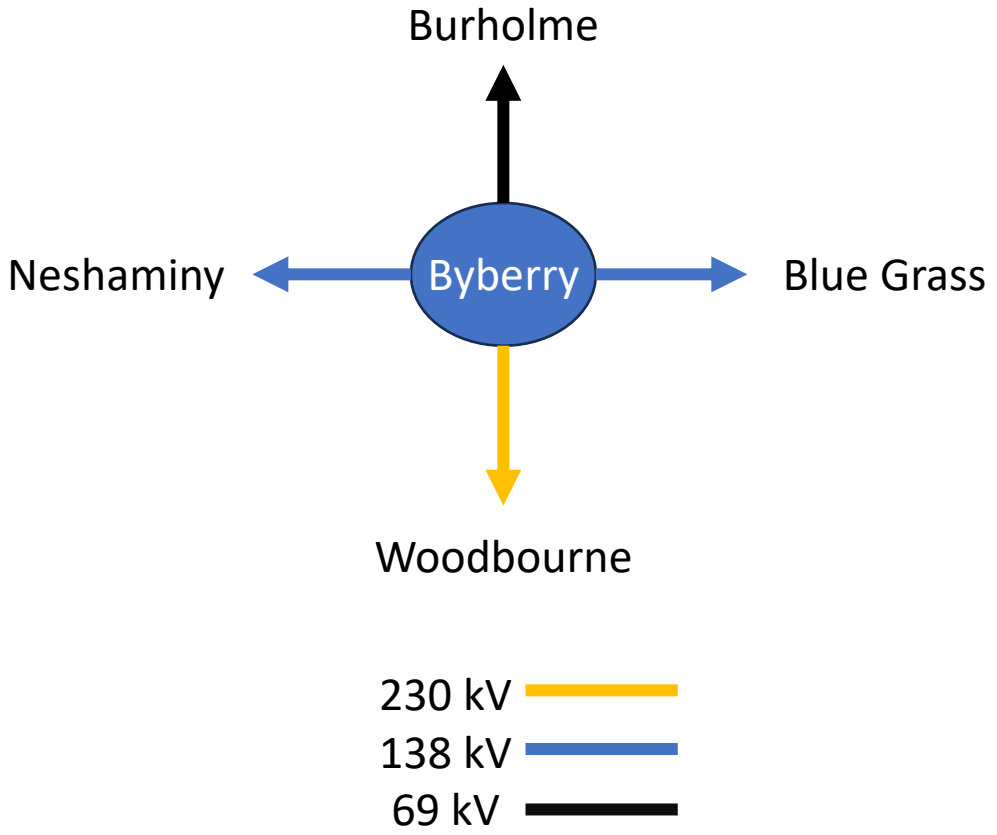
Estimated Cost: $0.85 M

Projected In-Service: 6/1/2028

Supplemental Project ID: s3661.1

Project Status: Conceptual

Model: 2028 RTEP



PECO Transmission Zone M-3 Process
Byberry #150 138kV Circuit Breaker Replacement

Need Number: PE-2024-005

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/26/2025

Previously Presented:

Needs Meeting 9/19/2024

Solutions Meeting 10/17/2024

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:

- Byberry #150 138 kV circuit breaker was installed in 1959. It is in deteriorating condition, has a lack of replacement parts and has elevated maintenance costs.

PECO Transmission Zone M-3 Process
Byberry #150 138kV Circuit Breaker Replacement

Need Number: PE-2024-005

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/26/2025

Selected Solution:

Replace Byberry circuit breaker #150:

- Existing rating: 1600A, 42kA
- Proposed rating: 3000A, 63kA

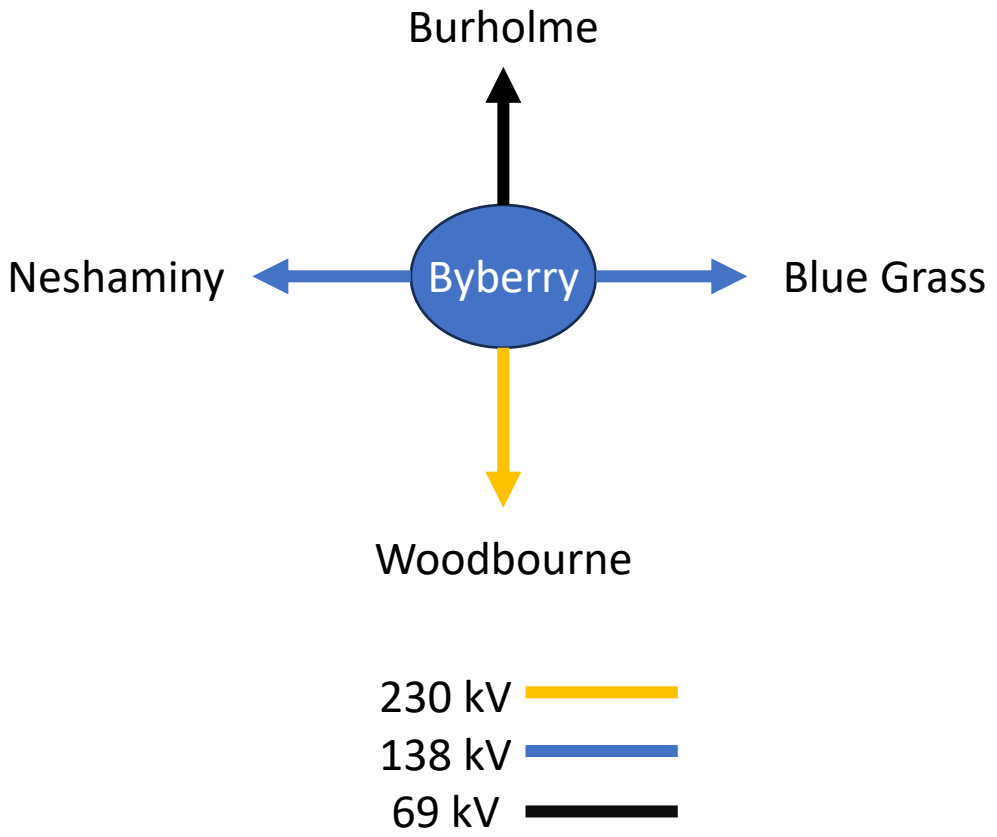
Estimated Cost: $0.55 M

Projected In-Service: 6/1/2028

Supplemental Project ID: s3662.1

Project Status: Conceptual

Model: 2028 RTEP



PECO Transmission Zone M-3 Process
Neshaminy 138kV Station Reconfiguration

Need Number: PE-2024-006

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/26/2025

Previously Presented:
Needs Meeting 9/19/2024
Solutions Meeting 10/17/2024

Project Driver:

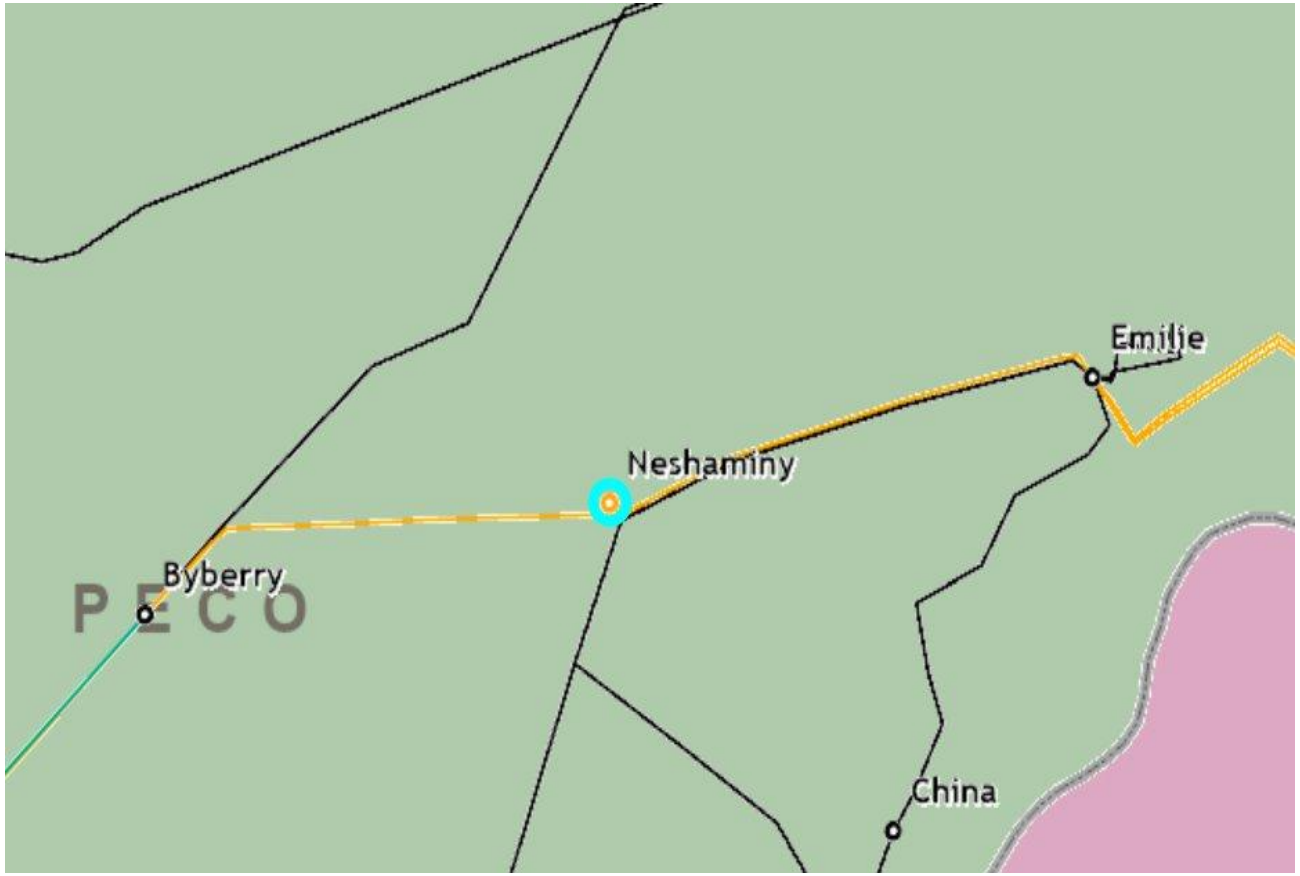
- Operational Flexibility and Efficiency
- Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:

- Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions
- Enhancing system functionality, flexibility, visibility, or operability

Problem Statement:

- Neshaminy 138 kV substation is in a straight bus configuration with three distribution transformers and switchgears. The substation equipment is in deteriorating condition and the configuration of the station results in a complicated non-standard control and protection scheme.



PECO Transmission Zone M-3 Process
Neshaminy 138kV Station Reconfiguration

Need Number: PE-2024-006

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/26/2025

Selected Solution:

Rebuild Neshaminy 138kV straight bus to a 7 breaker AIS ring bus configuration

- Install two new 138kV circuit breakers #705 and #905 with associated buses, switches, and protection equipment.
- Remove the #175 138kV circuit breaker and associated relay equipment
- Remove specialized protection scheme upon completion of new ring bus

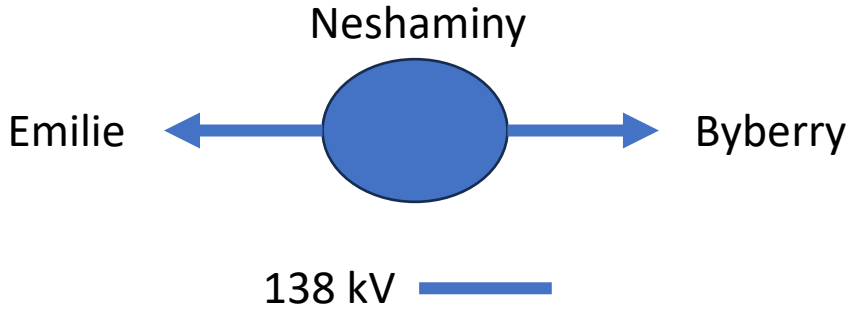
Estimated Cost: $4.2 M

Projected In-Service: 12/31/2027

Supplemental Project ID: s3663.1

Project Status: Conceptual

Model: 2028 RTEP



PECO Transmission Zone M-3 Process
Neshaminy 138kV Station Reconfiguration

Need Number: PE-2024-007

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/26/2025

Previously Presented:

Needs Meeting 11/6/2024

Solutions Meeting 2/4/2025

Project Driver:

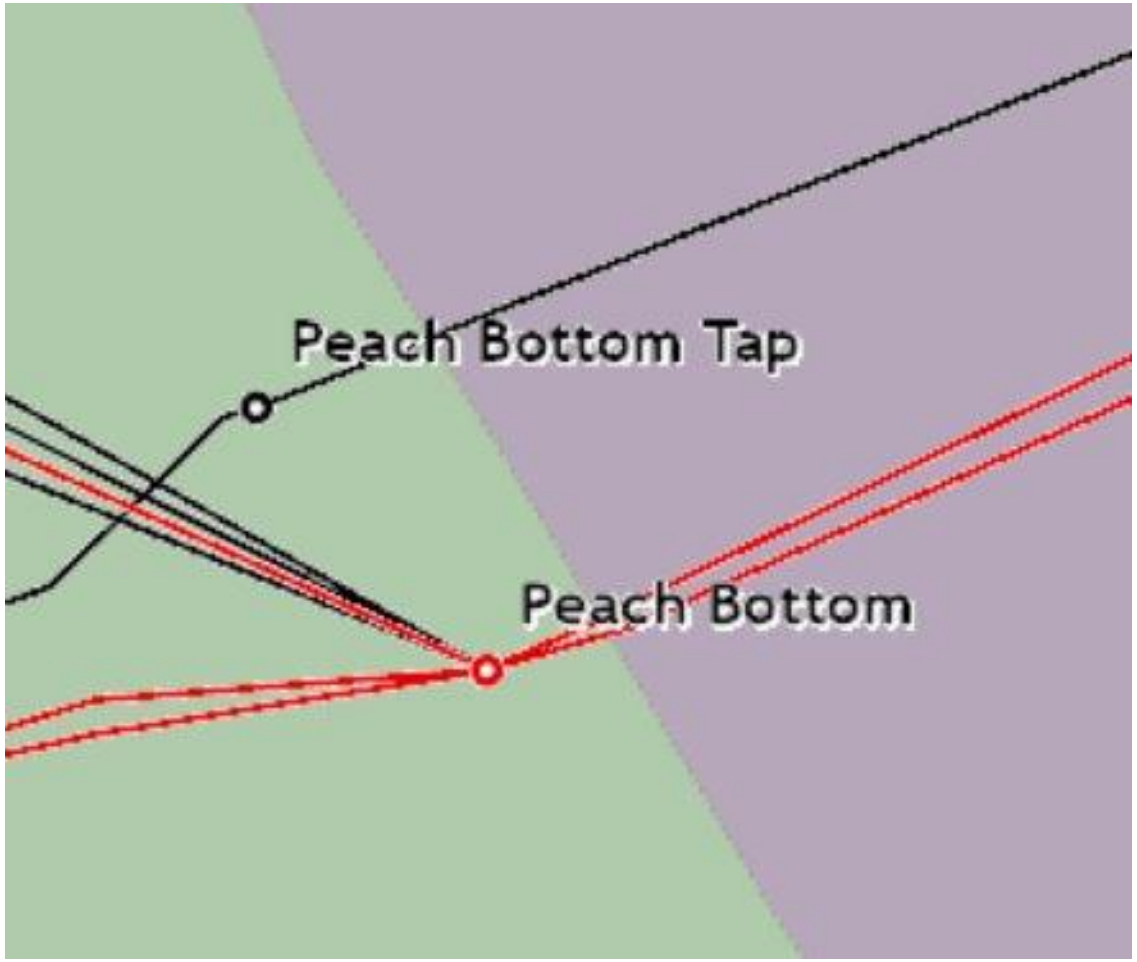
- Operational Flexibility and Efficiency
- Equipment Material Condition, Performance, and Risk

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:

- Peach Bottom Unit #2 has obsolete relays and are being phased out of the system. It is becoming difficult to service existing electromechanical relays.



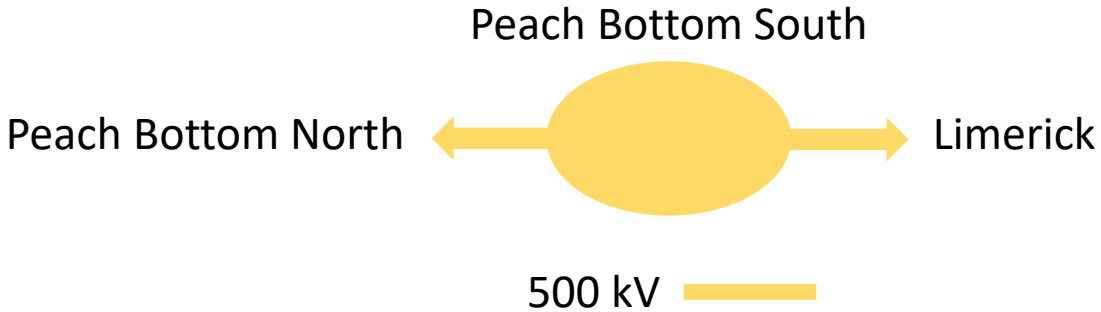
Need Number: PE-2024-007

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 9/26/2025

Selected Solution:

Upgraded Peach Bottom CB #225 relays and metering equipment, along with corresponding CT tap settings. These changes increased the Peach Bottom Bus Tie #2 ratings as seen below:

Existing ratings MVA)	**SN/SE**	**WN/WE**
Peach-Bottom Bus Tie #2	2477/2860	2598/3022
New Ratings (MVA)	**SN/SE**	**WN/WE**
Peach-Bottom Bus Tie #2	2598/3022	2598/3022



Estimated Cost: $836,000

In-Service: 11/3/2024

Supplemental Project ID: s3665.1

Project Status: Complete

Version History

- 09/26/2025 – V1 -- s3661.1, s3662.1, s3663.1, s3665.1