



Subregional RTEP Committee - Mid-Atlantic PECO Supplemental Projects

October 17, 2024

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-2024-004

Process Stage: Solutions Meeting 10/17/2024

Previously Presented:

Need Meeting 9/19/2024

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.



Need Number: PE-2024-004

Process Stage: Solutions Meeting 10/17/2024

Proposed Solution:

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

Estimated Transmission Cost: \$0.85M

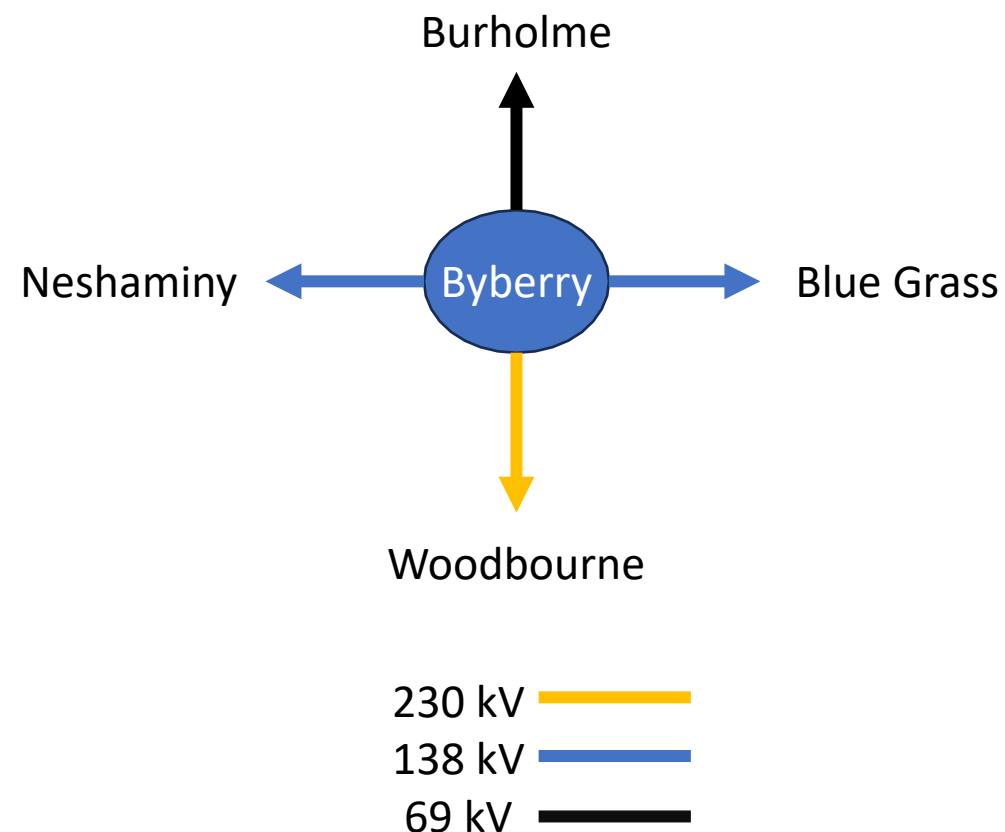
Alternatives Considered:

- No feasible alternatives available

Projected In-Service: 6/1/2028

Project Status: Conceptual

Model: 2028 RTEP



Need Number: PE-2024-005

Process Stage: Solutions Meeting 10/17/2024

Previously Presented:

Need Meeting 9/19/2024

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.



Need Number: PE-2024-005

Process Stage: Solutions Meeting 10/17/2024

Proposed Solution:

Replace Byberry circuit breaker #150:

Existing rating: 1600A, 42kA

Proposed rating: 3000A, 63kA

Estimated Transmission Cost: \$0.55M

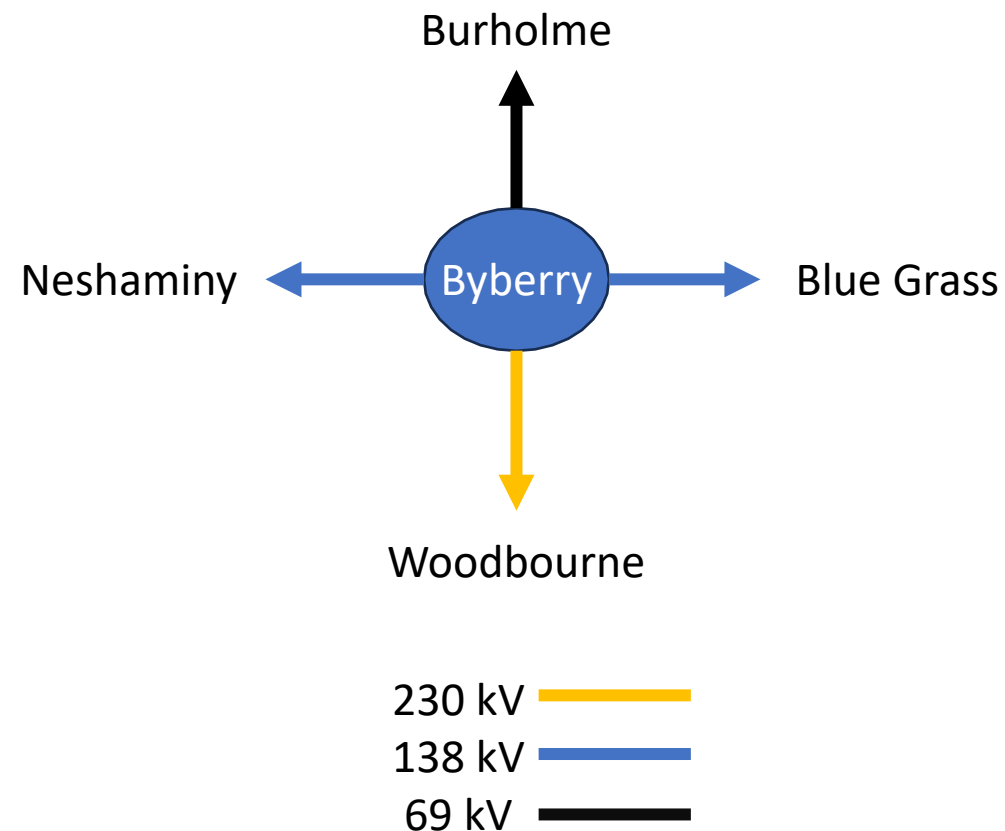
Alternatives Considered:

- No feasible alternatives available

Projected In-Service: 6/1/2028

Project Status: Conceptual

Model: 2028 RTEP



Need Number: PE-2024-006

Process Stage: Solutions Meeting 10/17/2024

Previously Presented:

Need Meeting 9/19/2024

Project Driver:

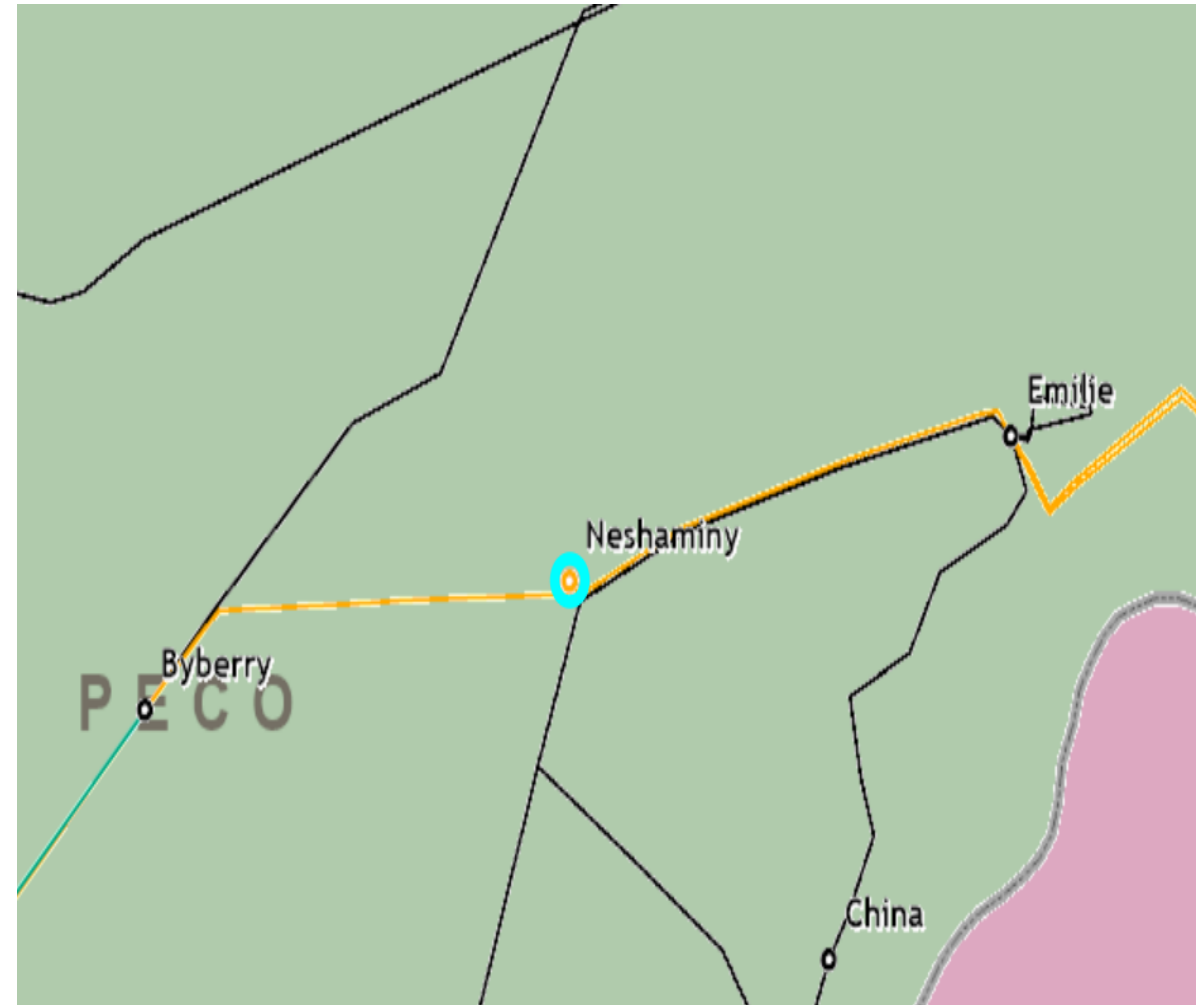
- Operational Flexibility and Efficiency
- Equipment Material Condition, Performance, and Risk

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.



Need Number: PE-2024-006

Process Stage: Solutions Meeting 10/17/2024

Proposed 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 Transmission Cost: \$4.2M

Alternatives Considered:

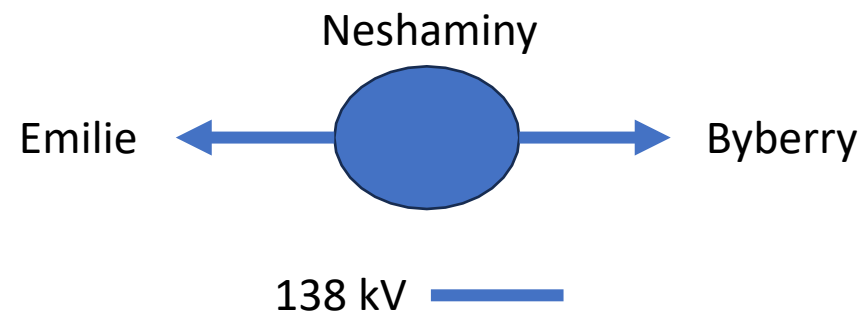
Replace existing protection scheme

- Will not address deteriorating condition of the substation equipment or existing issues with current protection scheme.

Projected In-Service: 12/31/27

Project Status: Conceptual

Model: 2028 RTEP



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

10/07/2024 – V1 – Original version posted to pjm.com