Subregional RTEP Committee - Mid-Atlantic
FirstEnergy Supplemental Projects

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

Met-Ed Transmission Zone M-3 Process
Hamilton Substation

Need Number: ME-2019-033
Process Stage: Solutions Meeting 10/19/2023
Previously Presented: Needs Meeting 05/31/2019

Project Driver:
Operational Flexibility and Efficiency

Specific Assumption Reference:
Global Considerations

- System reliability and performance
- Load at risk in planning and operational scenarios

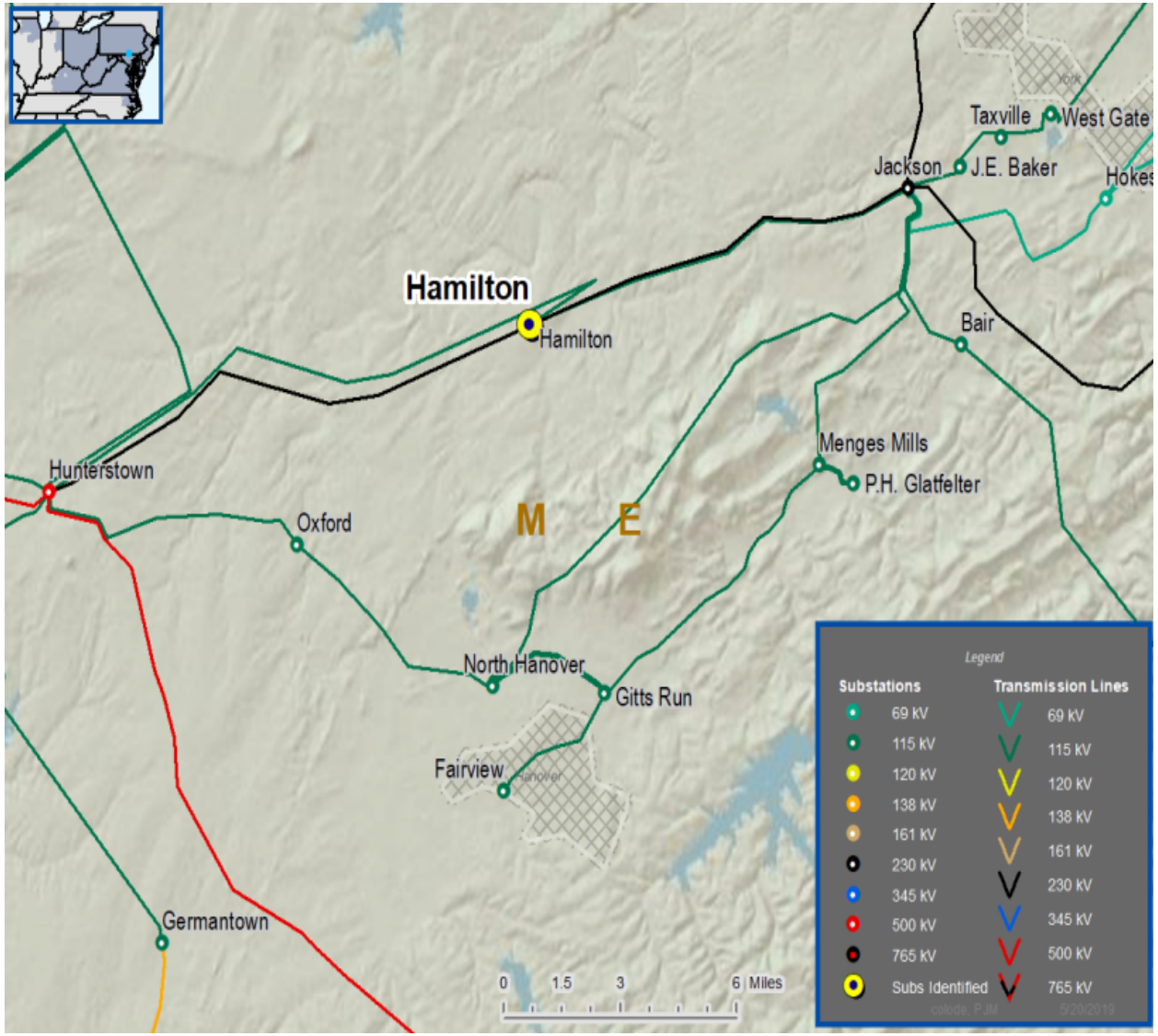
Add/Expand Bus Configuration

- Reduce the amount of exposed potential local load loss during contingency conditions
- Eliminate simultaneous outages to multiple networked elements

Problem Statement:
The loss of Hamilton Substation results in loss of approximately 30 MW of load and approximately 3600 customers.

The Substation consists of:

- Two (2) 115 kV lines
- Two (2) distribution transformers with high side disconnect switches
- One (1) generator connected with a high side disconnect switch



Met-Ed Transmission Zone M-3 Process
Hamilton 115 kV Ring Bus

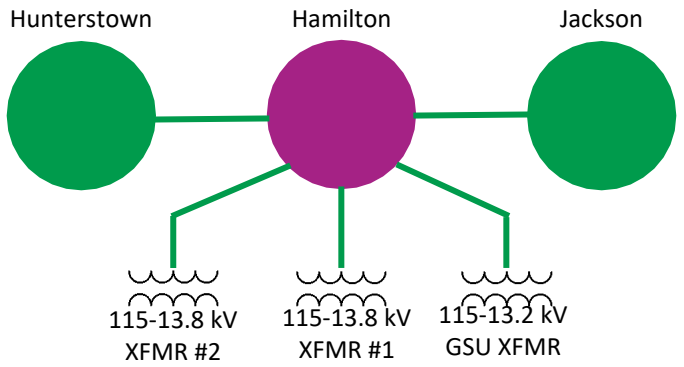
Need Number: ME-2019-033
Process Stage: Solutions Meeting 10/19/2023
Previously Presented: Needs Meeting 05/31/2019

Proposed Solution:
Convert Hamilton Substation into a 115 kV five (5) breaker ring bus

- Remove all 115 kV equipment and structures, excluding:
  - Three (3) transformer disconnect switches
  - Hamilton – Jackson 115 kV dead-end structure
- Install four (4) 115 kV breakers & associated disconnect switches and CVTs
- Relocate one (1) existing breaker and two (2) 115 kV line disconnect switches
- Upgrade relaying

Alternatives Considered:
Maintain existing condition and elevated risk

Estimated Project Cost: $7.70M
Projected In-Service: 06/01/2025
Project Status: Engineering
Model: 2023 Series 2028 RTEP Summer Case



Legend	
500 kV	
345 kV	
230 kV	
138 kV	
115 kV	
69 kV	
46 kV	
34.5 kV	
23 kV	
New	

Met-Ed Transmission Zone M-3 Process
Baldy 69 kV Substation

Need Number: ME-2023-010

Process Stage: Solution Meeting 10/19/2023

Previously Presented: Need Meeting 9/14/2023

Project Driver:

Performance and Risk, Operational Flexibility and Efficiency

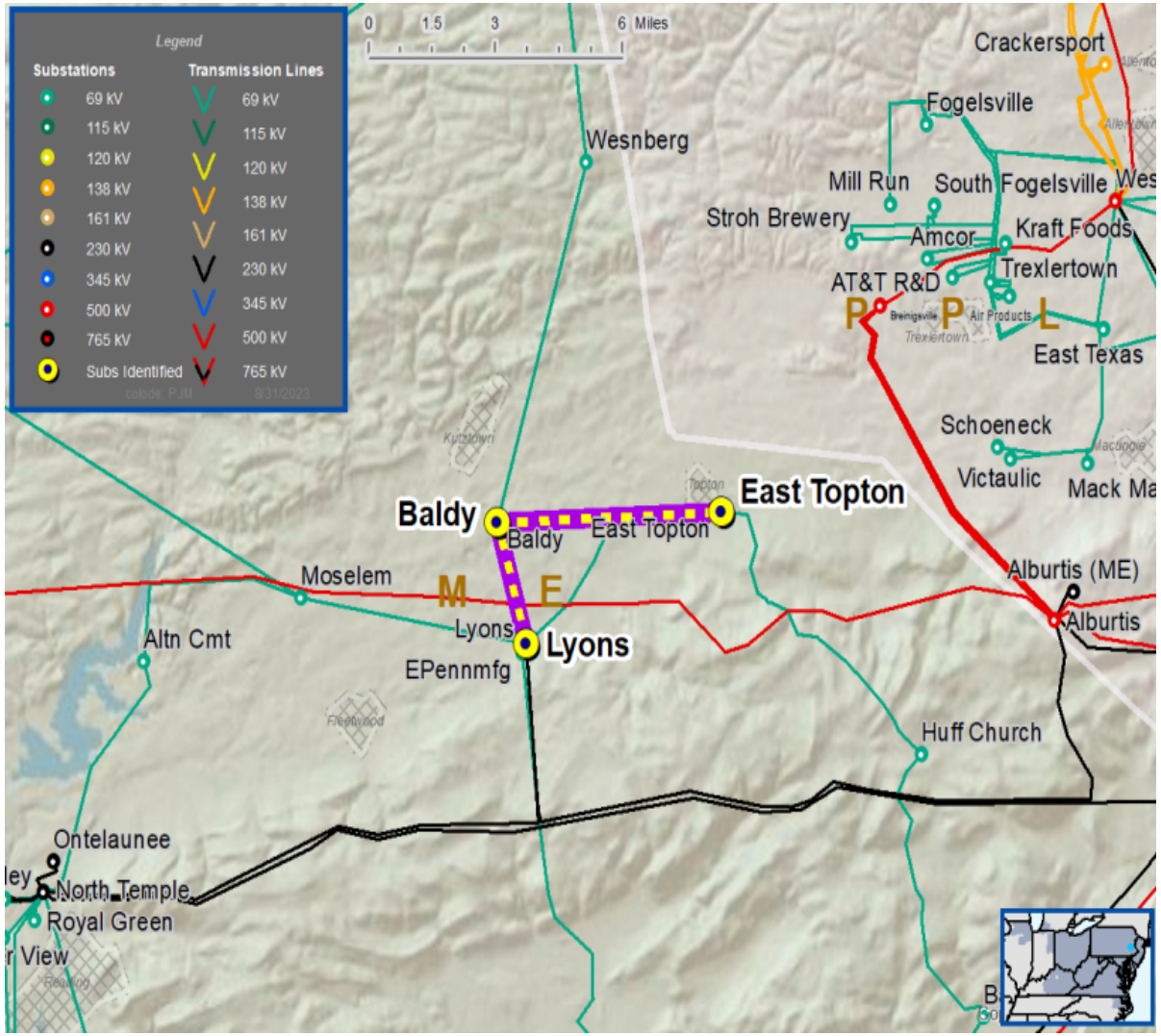
Specific Assumption Reference:

System Performance Projects

- System reliability and performance
- Reliability of Non-Bulk Electric System (Non-BES) Facilities

Problem Statement:

An N-1-1 outage of Baldy – Lyons 69 kV Line and Baldy – East Topton 69 kV Line can lead to a voltage collapse resulting in loss of service to 10,688 customers and 70 MW of load



Met-Ed Transmission Zone M-3 Process
Baldy 69 kV Substation

Need Number: ME-2023-010

Process Stage: Solution Meeting –10/19/2023

Proposed Solution:

- Install a 69 kV, 19.8 MVAR effective cap bank at Baldy 69 kV Substation

Alternatives Considered:

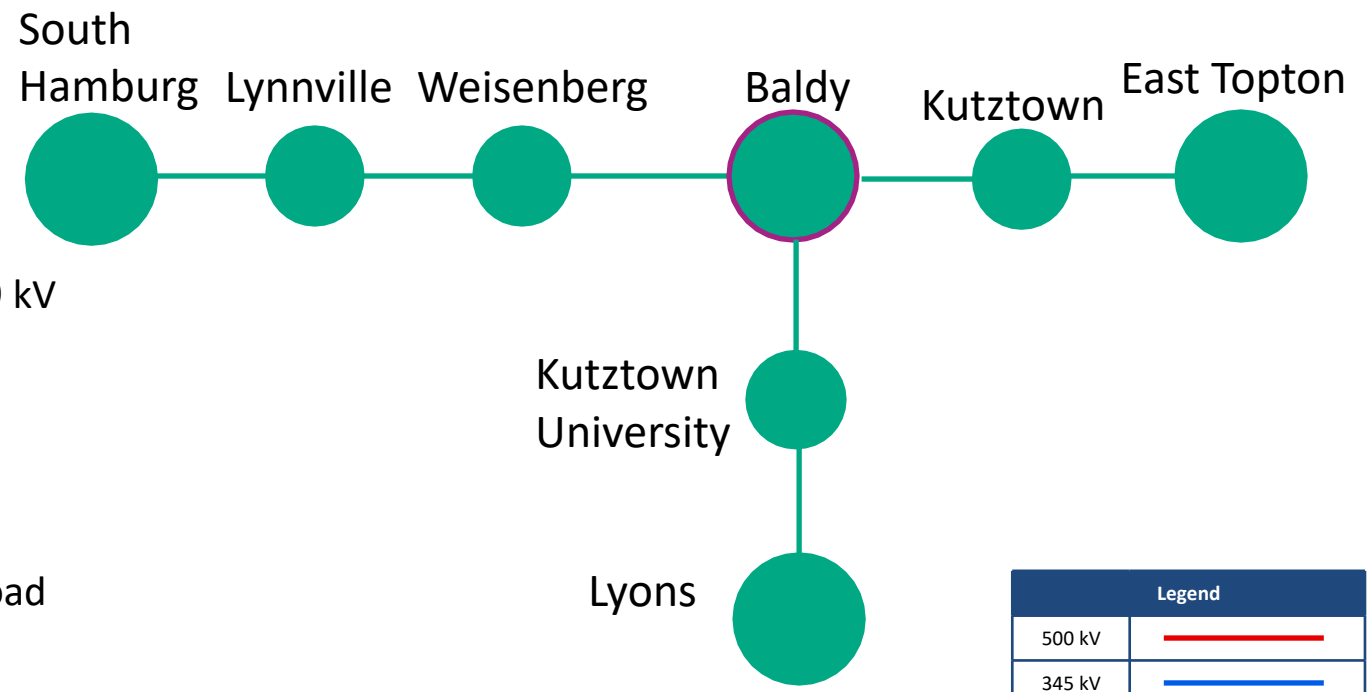
Maintain existing condition and elevated risk to customer load

Estimated Project Cost: $1.0M

Projected In-Service: 12/30/2024

Status: Conceptual

Model: 2023 Series 2028 RTEP Summer Case




Planning
Community

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

10/9/2023 – V1 – Original version posted to pjm.com