

Transmission Expansion Advisory Committee FirstEnergy Supplemental Projects

November 06, 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: ME-2023-022

Process Stage: Solution Meeting 11/6/2024

Previously Presented: Needs Meeting 12/05/2023

Project Driver:

Operational Flexibility and Efficiency

Specific Assumption Reference:

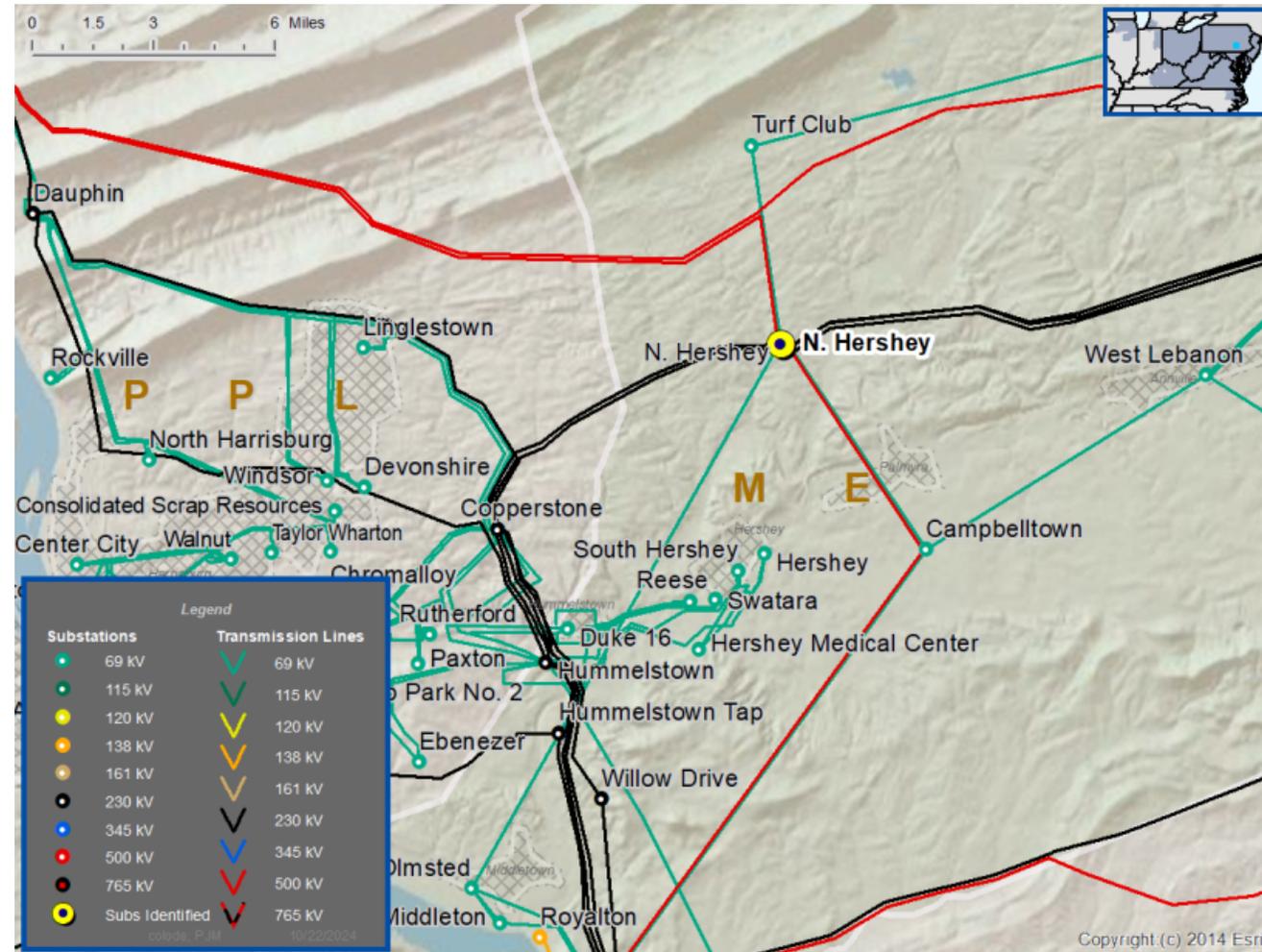
System Performance Projects

- Add/Expand Bus Configuration
- Load at risk in planning and operational scenarios
- Reduce the amount of exposed potential local load loss during contingency conditions
- Eliminate simultaneous outages to multiple networked elements

Problem Statement:

Multiple stuck breaker contingencies at North Hershey Substation or a fault on the 69 kV bus at North Hershey Substation results in the loss of two 69 kV networked elements and one 230-69 kV transformer.

The N-1-1 loss of the 230-69 kV transformer at North Hershey Substation followed by a 69 kV outage causes low voltage at multiple 69 kV buses.



Need Number: ME-2023-022

Process Stage: Solution Meeting – 11/06/2024

Proposed Solution:

- Convert the 69 kV bus at North Hershey Substation into a four-breaker ring bus
- Install a 2nd 230-69 kV transformer at North Hershey Substation
- At North Hershey Substation:
 - Install one 230 kV, 3000 A circuit breaker and associated equipment
 - Install four 69 kV, 3000 A circuit breakers and associated equipment

New Transformer Ratings:

- 211 / 217 / 260 / 268 MVA (SN/SE/WN/WE)

Alternatives Considered:

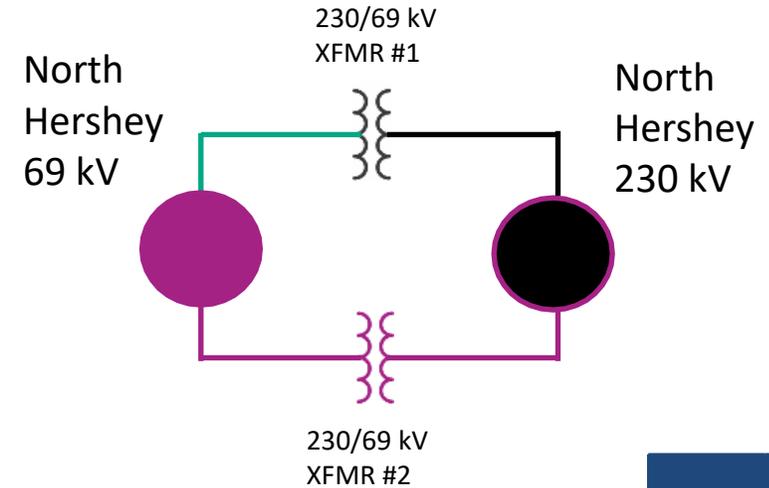
Maintain equipment in existing configuration with elevated risk of low voltage

Estimated Project Cost: \$16.31M

Projected In-Service: 12/17/2027

Status: Conceptual

Model: 2023 RTEP model for 2028 Summer (50/50)



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

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

10/28/2024 – V1 – Original version posted to pjm.com