

# 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:** JCPL-2023-011

**Process Stage:** Solution Meeting – 11/6/2024

**Previously Presented:** Need Meeting – 10/03/2023

**Project Driver:**

*System Performance and Operational Flexibility*

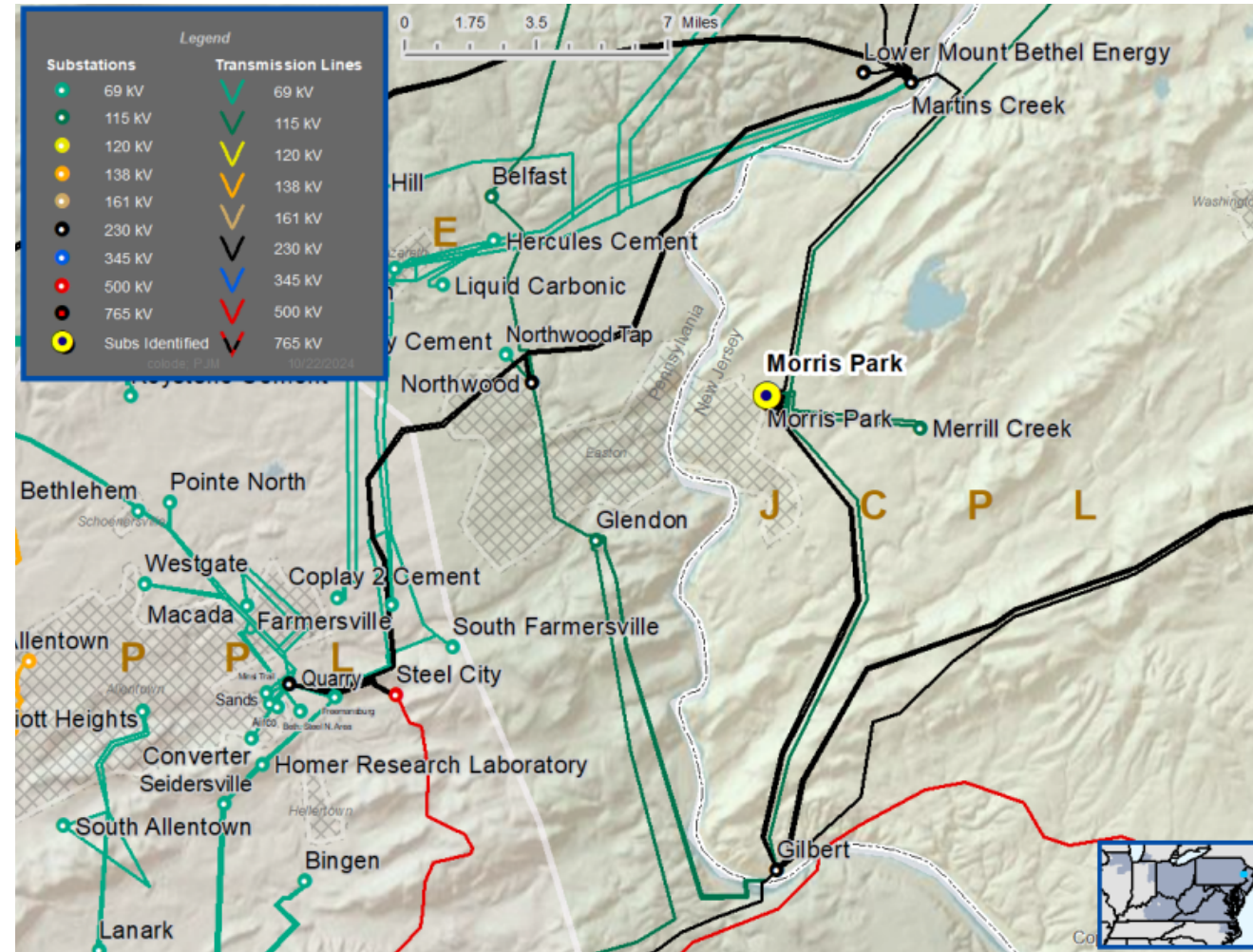
**Specific Assumption Reference:**

*Global Factors*

- System reliability and performance
- Add/Expand Bus Configuration
- Load at risk and/or customer affected

**Problem Statement:**

- The existing 230 kV and 115 kV sources to Morris Park Substation are fed radially. Gilbert – Martins Creek 230 kV and Gilbert – Pequest River 115 kV lines are configured as three terminal lines.
- Morris Park serves approximately 13 MW of load and 4,240 customers which will be outaged by an N-1-1 contingency of the Gilbert – Martins Creek 230 kV and Gilbert – Pequest River 115 kV lines.
- The existing 115 – 34.5 kV transformer at Morris Park was manufactured in 1953 and is approaching end of life.



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**Proposed Solution:**

- Convert Morris Park 230 kV Substation into a four-breaker ring bus
- Build 1600 feet of new 230 kV line to loop in the Gilbert - Martins Creek 230 kV P2016 Line into the Morris Park Substation 230 kV ring bus
- Install a 2<sup>nd</sup> 230-34.5 kV transformer at Morris Park Substation
- Remove the existing 115-34.5 kV transformer and all associated 115 kV equipment from Morris Park Substation

**New Transformer Ratings**

- 189 / 198 / 221 MVA (SN/SLTE/STE)
- 237 / 238 / 242 MVA (WN/WLTE/WSTE)

**Transmission Line Ratings**

- Gilbert – Morris Park 230 kV Line
  - Before: 1306 / 1593 / 1593 / 1593 (SN/SE/WN/WE)
  - After: 1306 / 1625 / 1610 / 1875 (SN/SE/WN/WE)

**Alternatives Considered:**

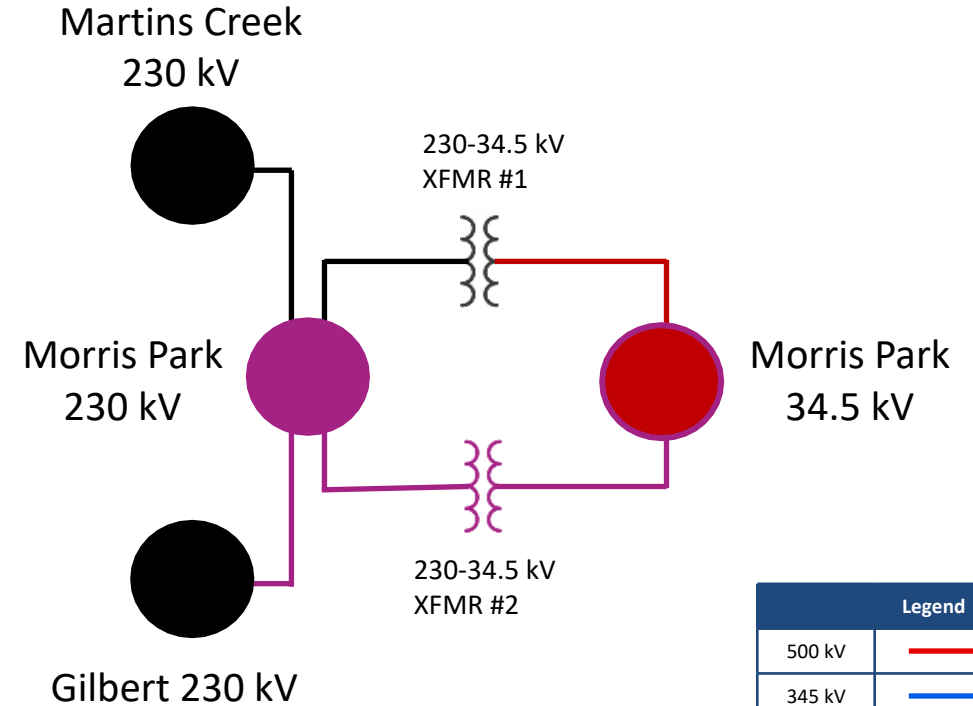
Maintain equipment and topology in existing condition with elevated risk of failure and customer interruptions.

**Estimated Project Cost:** \$15.4M

**Projected In-Service:** 1/29/2027

**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