

Subregional RTEP Committee – Mid-Atlantic FirstEnergy Supplemental Projects MetEd Transmission Zone

Needs

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-2025-003

Process Stage: Need Meeting 12/11/2025

Project Driver:

Operational Flexibility and Efficiency

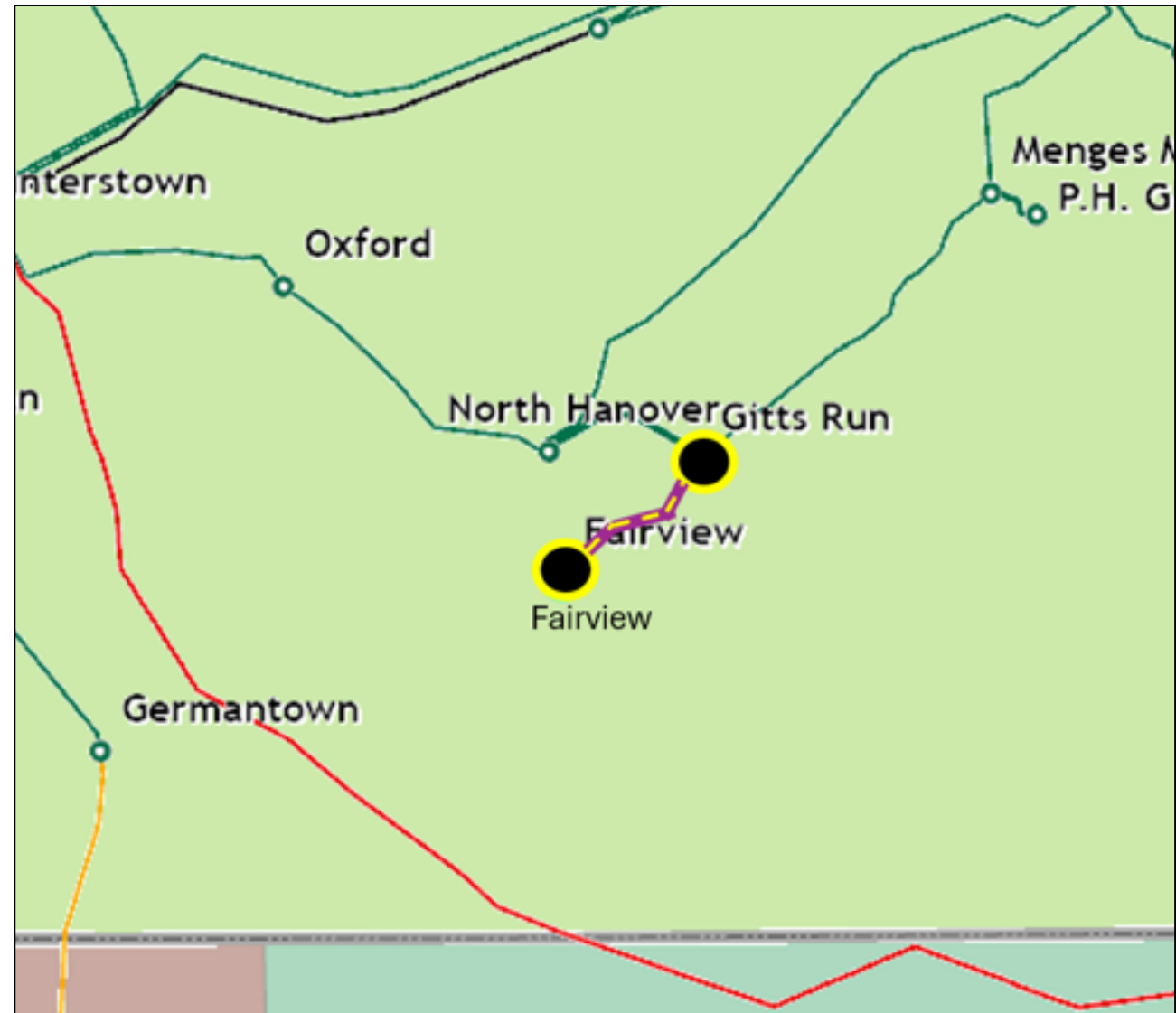
Specific Assumption References:

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
- Accommodate future transmission facilities

Problem Statement:

A fault on the Fairview - Gitts Run 115 kV Line would result in the loss of the Fairview Substation. Fairview Substation serves approximately 41 MW of load and 7000 customers.



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-2024-021

Process Stage: Solution Meeting SRRTEP-MA - 12/11/2025

Previously Presented: Need Meeting 10/17/2024

Project Driver:

Equipment Condition/Performance/Risk

Specific Assumption References:

System Performance Projects Global Factors

- System reliability/performance
- Substation/line equipment limits

Substation Condition Rebuild/Replacement

- Age/condition of substation equipment
- Circuit breakers and other fault interrupting devices

Problem Statement:

The existing 69 kV breaker 83692 at Carpenter Technology Substation is over 50 years old and approaching end of life.

Replacement components are difficult to source in quantity leading to non-standard repairs.

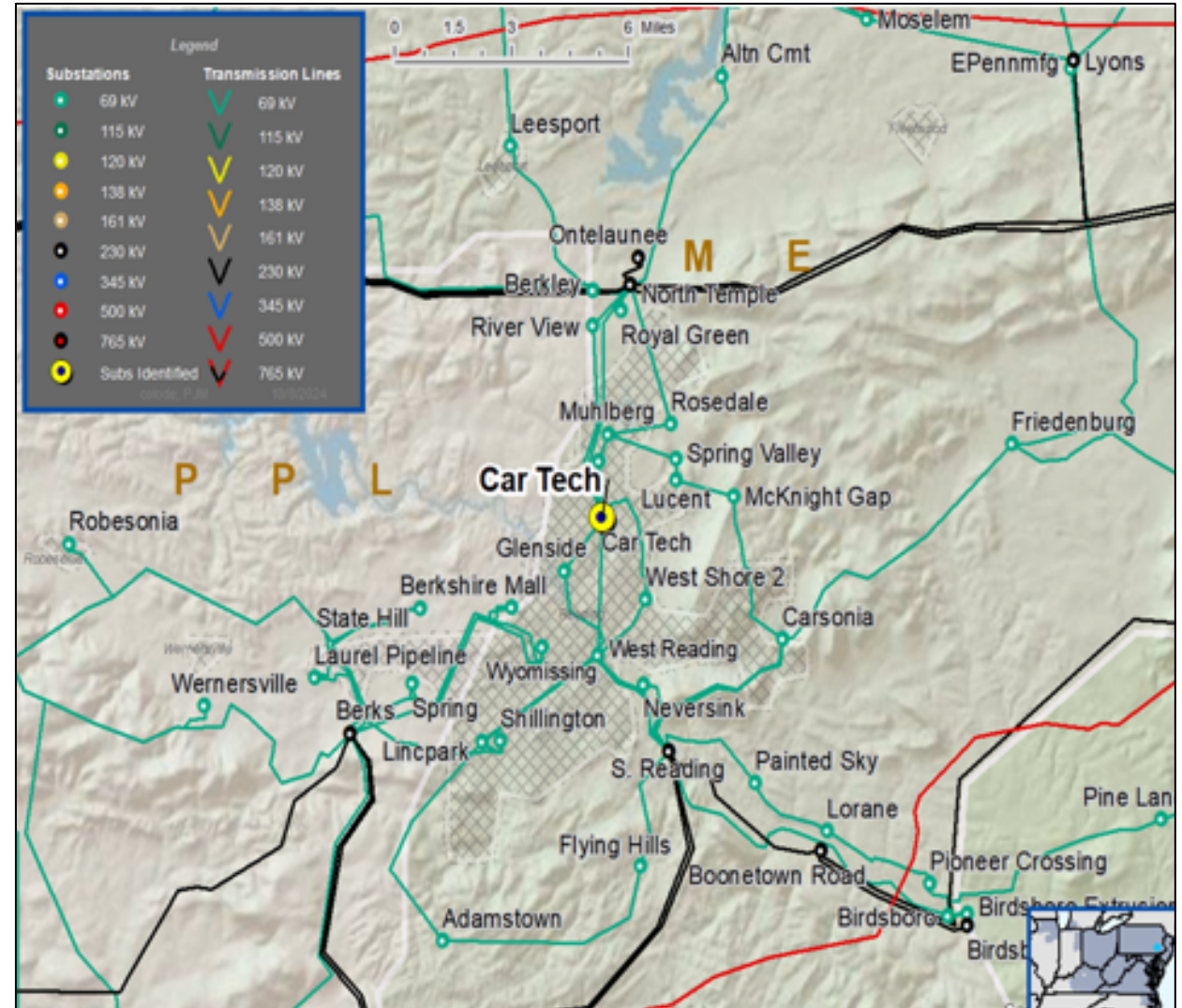
The circuit breaker requires frequent maintenance to preserve the integrity of the oil and to replace parts on pneumatic systems.

The line is currently limited by terminal equipment.

Carpenter Technology – Riverview 69 kV Line

Existing Line Rating: 147 / 180 / 187 / 211 MVA (SN/SE/WN/WE)

Existing Conductor Rating: 218 / 250 / 218 / 263 MVA (SN/SE/WN/WE)



MetEd Transmission Zone M-3 Process Carpenter Technology Substation 69kV Circuit Breaker

Need number(s): ME-2024-021

Process Stage: Solution Meeting SRRTEP-MA - 12/11/2025

Proposed Solution:

- Replace Carpenter Technology 69 kV breaker 83692 and associated disconnect switches.

Transmission Line Ratings:

Carpenter Technology - Riverview 69 kV 836 Line:

- Before Proposed Solution: 147 / 180 / 187 / 211 MVA (SN/SE/WN/WE)
- After Proposed Solution: 147 / 188 / 193 / 211 MVA (SN/SE/WN/WE)

Alternatives Considered:

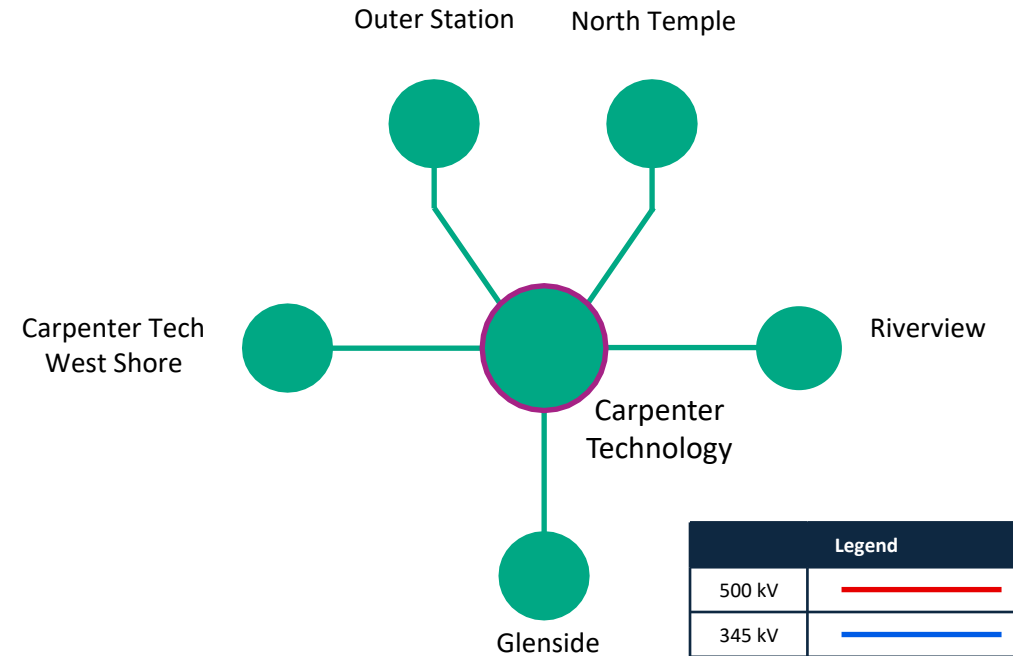
Maintain existing condition with elevated risk of failure due to breaker condition.

Transmission Cost Estimate: \$1.01M

Projected In-Service: 06/15/2027

Project Status: Conceptual

Model: 2024 RTEP model for 2029 Summer (50/50)



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

Need Number: ME-2023-009

Process Stage: Solution Meeting SRRTEP-MA - 12/11/2025

Previously Presented: Need Meeting - 07/20/2023

Project Driver:

Equipment Condition/Performance/Risk, Operational Flexibility and Efficiency

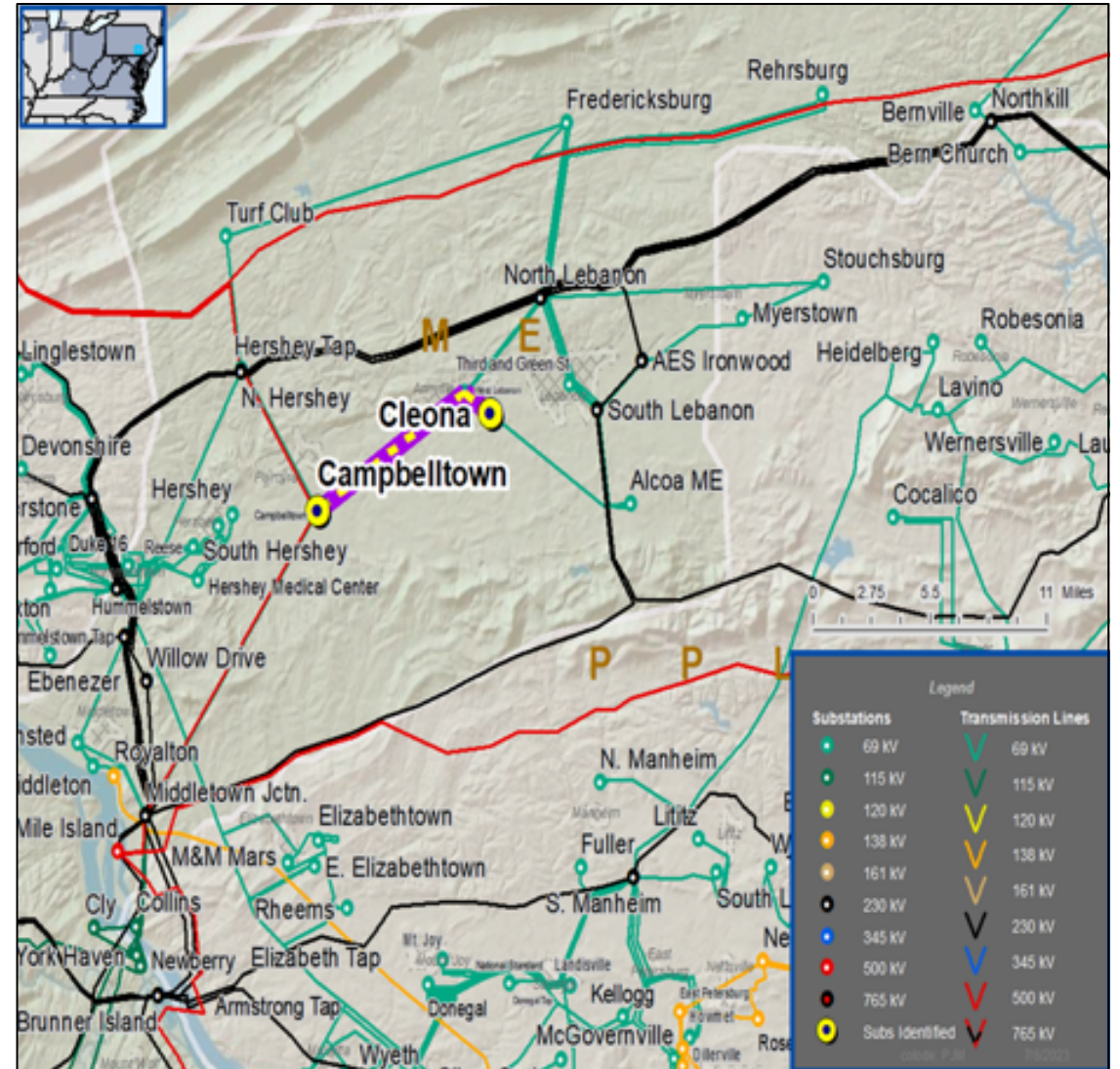
Specific Assumption References:

System Performance Projects Global Factors

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

Problem Statement:

An N-1-1 outage of the N. Hershey – Mill St. - Campbelltown 69 kV Line & Middletown Jct. 230-69 kV Transformer #3 can cause the North Lebanon - Annville 69 kV line to overload to 131% of its Summer Emergency rating.



MetEd Transmission Zone M-3 Process Carpenter Technology Substation 69kV Circuit Breaker

Need number(s): ME-2023-009

Process Stage: Solution Meeting SRRTEP-MA - 12/11/2025

Proposed Solution:

- Rebuild and convert Campbelltown - Cleona 69 kV Line from six-wired to double circuit (approximately 7.4 miles).
- At Campbelltown Substation: Install one 69 kV circuit breaker, associated disconnect switches and line relaying.

Transmission Line Ratings:

Campbelltown - Hershey Beta Tap 69 kV Line

- Before Proposed Solution: 71 / 72 / 72 / 72 MVA (SN/SE/WN/WE)
- After Proposed Solution: 111 / 134 / 125 / 159 MVA (SN/SE/WN/WE)

Hershey Beta Tap - Millards Quarry 69 kV Line:

- Before Proposed Solution: 107 / 128 / 120 / 152 MVA (SN/SE/WN/WE)
- After Proposed Solution: 111 / 134 / 125 / 159 MVA (SN/SE/WN/WE)

Annville - Millards Quarry 69 kV Line:

- Before Proposed Solution: 82 / 103 / 108 / 124 MVA (SN/SE/WN/WE)
- After Proposed Solution: 111 / 134 / 125 / 159 MVA (SN/SE/WN/WE)

Annville - North Lebanon 69 kV Line:

- Before Proposed Solution: 71 / 89 / 101 / 108 MVA (SN/SE/WN/WE)
- After Proposed Solution: 111 / 134 / 125 / 159 MVA (SN/SE/WN/WE)

Campbelltown - Cleona 69 kV Line:

- Before Proposed Solution: NA
- After Proposed Solution: 111 / 134 / 125 / 159 MVA (SN/SE/WN/WE)

Alternatives Considered:

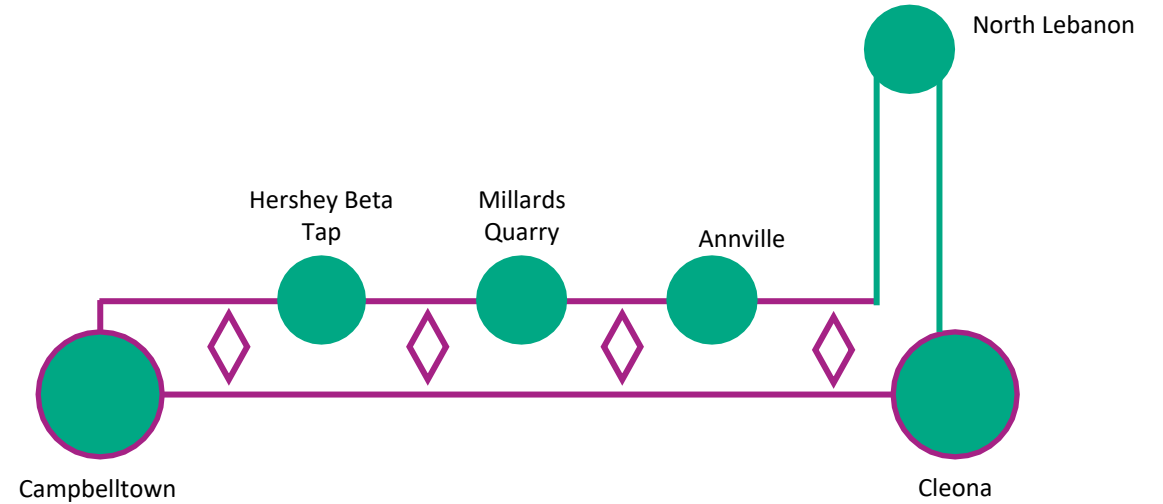
Maintain existing configuration with risk of equipment overload under contingency scenarios.

Estimate Project Cost: \$32.33M

Projected In-Service: 06/01/2028

Project Status: Conceptual

Model: 2024 RTEP model for 2029 Summer 50/50



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

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

12/1/2025 – V1 – Original version posted to pjm.com

12/2/2025 – V2 – Formatting corrected