

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-2026-002

Process Stage: Need Meeting – SRRTEP-MA – 05/14/2026

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
 - Add/Replace Transformers

Problem Statement:

The Jackson Substation 115 kV bus is currently configured in a straight bus layout with five 115 kV transmission line terminations, three 230/115 kV transformer terminations, and one shared breaker termination for a 115-69 kV transformer and a 115-13.2 kV distribution transformer.

A bus fault, tie breaker fault, or line fault with a stuck breaker at Jackson Substation would result in the partial loss of the Jackson Substation 115 kV yard resulting in the loss of approximately 21 MW of load and 2,900 customers.

The existing Jackson No. 1A 115-69 kV Transformer was manufactured in 1963. The transformer is experiencing nitrogen leaks.

In the last seven years, there have been three unscheduled, sustained outages at Jackson Substation.

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Need Number: ME-2026-002

Problem Statement: *(Cont'd from previous slide)*

Existing Ratings:

- Jackson No. 1A 115-69 kV Transformer
 - Overall Facility: 65 / 69 / 81 / 84 MVA (SN/SSTE/WN/WSTE)

Transmission line ratings are limited by terminal equipment:

- Jackson - Menges Mill 115 kV Line:
 - Overall Facility: 184 / 223 / 208 / 264 MVA (SN/SE/WN/WE)
 - Conductor: 232 / 282 / 263 / 334 MVA (SN/SE/WN/WE)
- Bair T - Jackson 115 kV Line:
 - Overall Facility: 133 / 160 / 150 / 190 MVA (SN/SE/WN/WE)
 - Conductor: 232 / 282 / 263 / 334 MVA (SN/SE/WN/WE)
- Hamilton - Jackson 115 kV Line:
 - Overall Facility: 184 / 223 / 208 / 264 MVA (SN/SE/WN/WE)
 - Conductor: 232 / 282 / 263 / 334 MVA (SN/SE/WN/WE)
- Jackson - JE Baker 115 kV Line:
 - Overall Facility : 339 / 406 / 374 / 452 MVA (SN/SE/WN/WE)
 - Conductor: 373 / 430 / 263 / 334 MVA (SN/SE/WN/WE)



Need Number: ME-2026-006

Process Stage: Need Meeting – SRRTEP-MA – 05/14/2026

Project Driver:
Customer Service

Specific Assumption References:

New customer connection requests will be evaluated per FirstEnergy's "Requirements for Transmission Connected Facilities" document and "Transmission Planning Criteria" document.

Problem Statement:

New Customer Connection - A customer requested 115 kV service for load of approximately 22 MW near the Hill - Jackson 115 kV 969 Line. The request is approximately five miles from Hill Substation.

Requested in-service date is 4/1/2028.



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-2024-022

Process Stage: Solution Meeting – SRRTEP-MA – 05/14/2026

Previously Presented: Need Meeting – SRRTEP-MA – 11/14/2024

Project Driver:

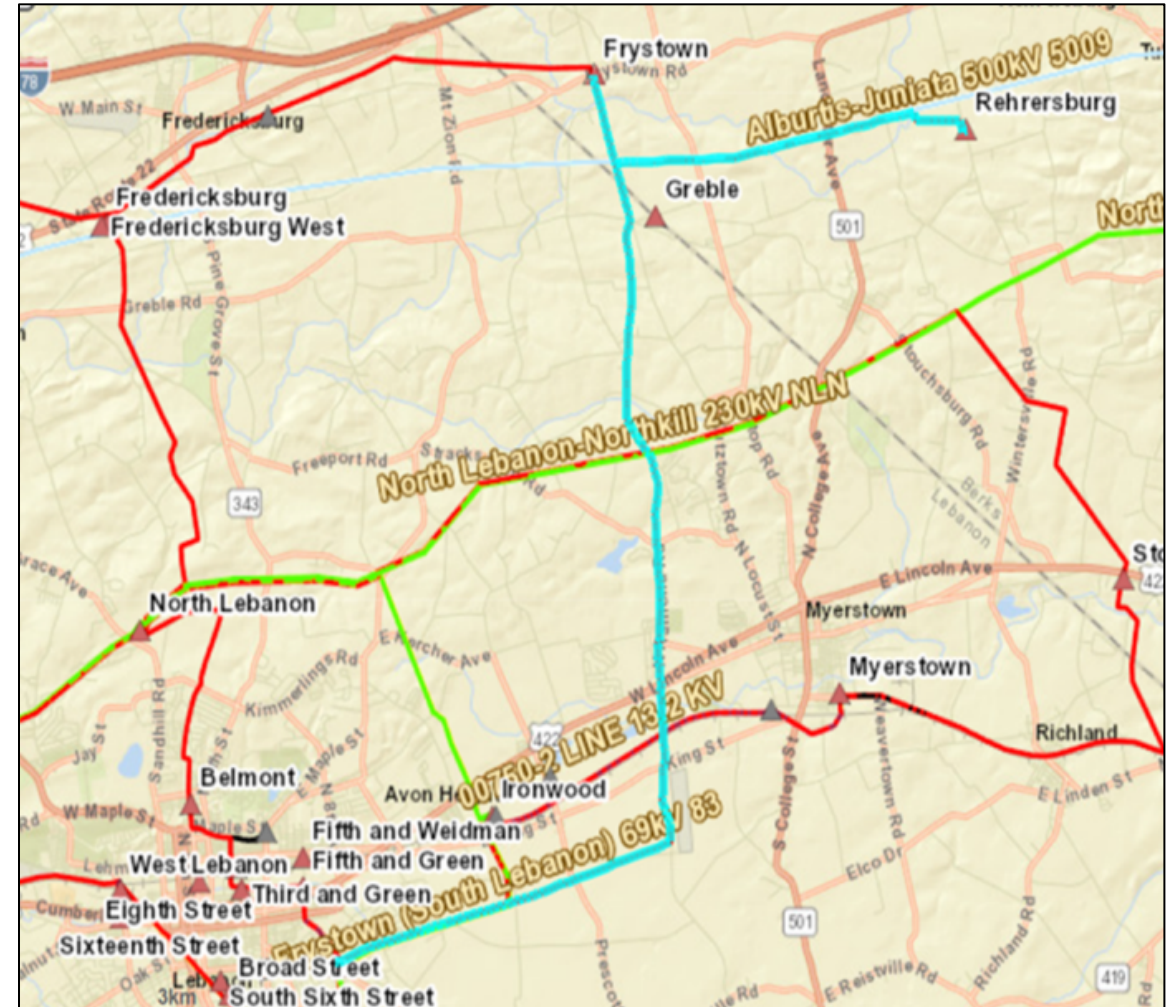
Equipment Material Condition, Performance, and Risk

Specific Assumption Reference:

- System Performance Global Factors
 - Past system reliability/performance
- Line Condition Rebuild/Replacement
 - Age/condition of wood pole transmission line structures

Problem Statement:

- The Frystown – South Lebanon 69 kV Line was constructed approximately 52 years ago and is approaching end of life. The line is approximately 15 miles long with a total of 311 structures; 295 wood pole structures, two steel structures, and 13 are laminate transmission line structures.
- Large sections (approximately six miles) of the Frystown – South Lebanon 69 kV Line have copper conductor.
- Since 2019, the line has had 16 unscheduled, sustained outages. Most of the outages were due to conductors contacting.
- Existing Transmission Line Ratings:
 - Overall Facility: 55 / 56 / 62 / 62 MVA (SN/SE/WN/WE)
 - Conductor: 55 / 56 / 62 / 62 MVA (SN/SE/WN/WE)



Need number: ME-2024-022

Process Stage: Solution Meeting –SRRTEP-MA – 05/14/2026

Proposed Solution:

Frystown – South Lebanon 69 kV Line Rebuild

- Rebuild 10.85 miles of the Frystown - South Lebanon 69 kV 83 Line and install new conductor

At South Lebanon Substation:

- Reterminate new line conductor into substation

At Frystown Substation:

- Reterminate new line conductor into substation

Ratings:

- Frystown - Rehrersburg 69 kV Line
 - Before Proposed Solution: 55 / 56 / 62 / 62 MVA (SN/SE/WN/WE)
 - After Proposed Solution: 111 / 134 / 125 / 159 MVA (SN/SE/WN/WE)
- Rehrersburg - South Lebanon 69 kV Line
 - Before Proposed Solution: 55 / 56 / 62 / 62 MVA (SN/SE/WN/WE)
 - After Proposed Solution: 111 / 134 / 125 / 159 MVA (SN/SE/WN/WE)

Alternatives Considered:

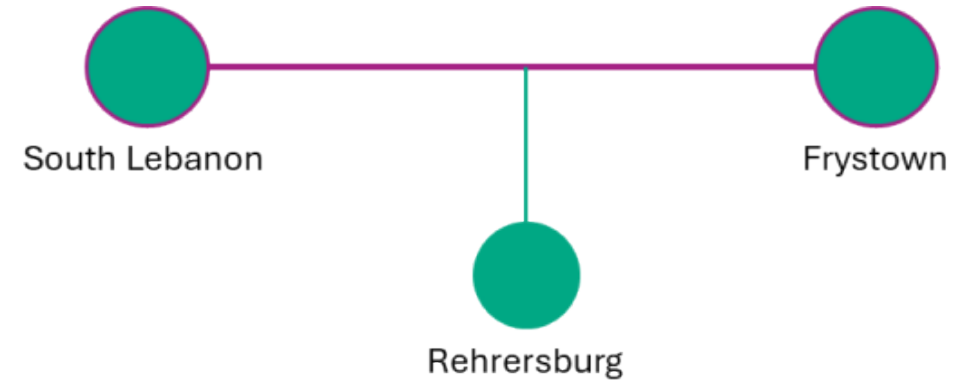
Maintain line in existing condition with risk of failure due to equipment deterioration.

Estimated Project Cost: \$32.59M

Projected In-Service: 12/14/2029

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	

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

05/04/2026 – V1 – Original version posted to pjm.com