

Transmission Expansion Advisory Committee FirstEnergy Supplemental Projects

August 5, 2025

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: PN-2023-029

Process Stage: Re-present Solution – 08/05/2025 (Changes in Red)

Previously Presented:

- Previous Solution Meeting – 08/06/2024
- Need Meeting – 12/05/2023

Supplemental Project Driver(s):

System Condition, System Performance

Specific Assumption Reference(s):

FE Global Factors

- Past system reliability/performance
- Substation/Line Equipment Limits

Line Condition Rebuild/Replacement

- Transmission Steel Tower, Wood & Steel Poles
- Transmission Line Hardware

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Previously Presented:

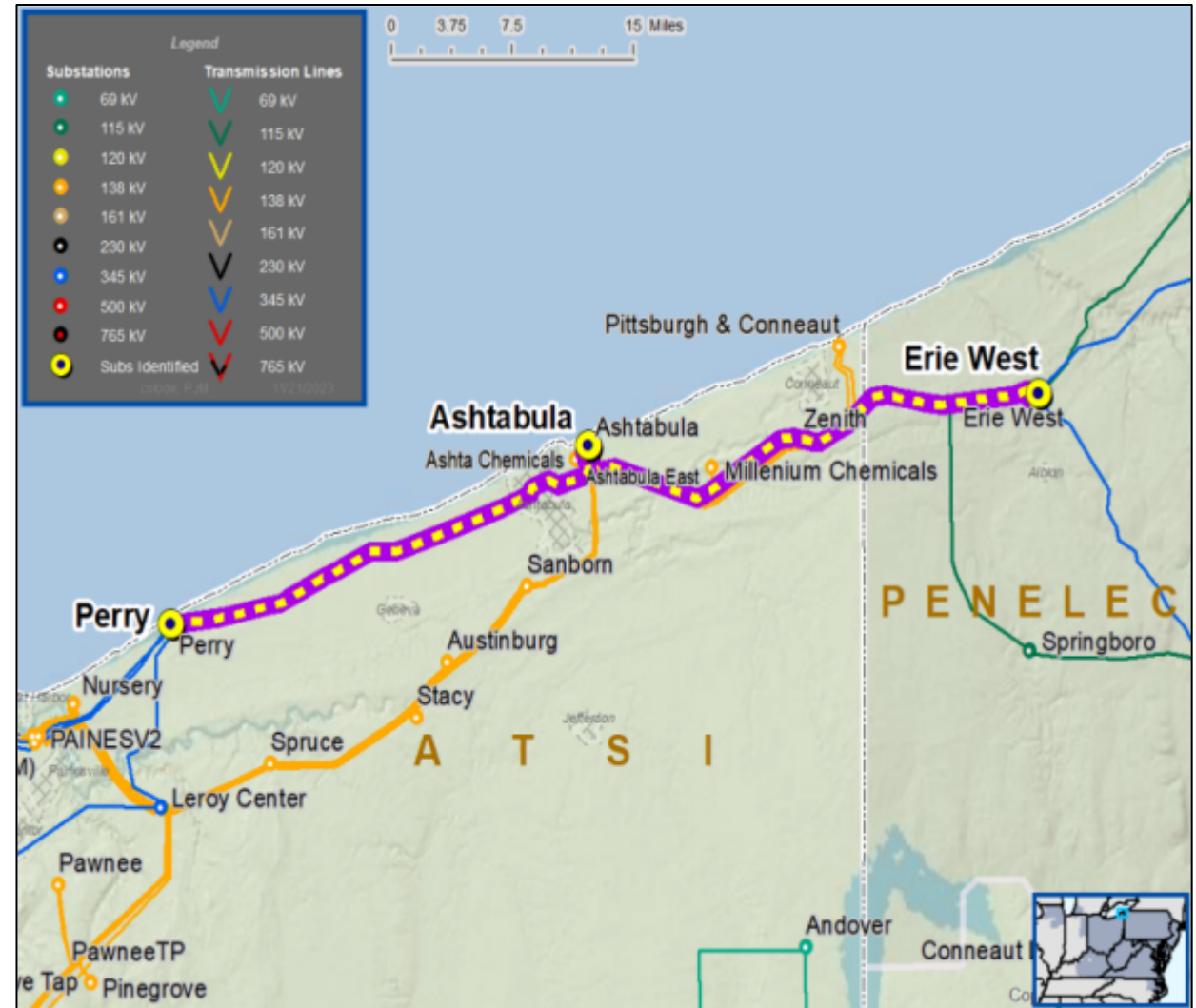
- Previous Solution Meeting – 08/06/2024
- Need Meeting – 12/05/2023

Problem Statement:

- The Perry-Ashtabula-Erie West 345 kV Line was constructed approximately 60 years ago. It is a critical east-to-west power transfer interface.
- The Ashtabula – Erie West 345 kV Line is approximately 20 miles long with 7.2 miles in the Penelec territory in Pennsylvania.
- The insulators and related hardware are severely corroded and reaching end of life.

Below information is only for the Penelec section of the line (7.2 miles).

- The 27 of 39 structures in Pennsylvania are H-frame steel-pole structures which are exhibiting extensive coating failure resulting in ongoing corrosion.
- The steel pole structures have hinged bases and use guying for keeping vertical. The guying system at 19 of the 27 steel pole structures is severely deteriorated.
- Many of the original double rod attachments for supporting the crossarms to the steel poles have failed and have been replaced with wire supports.
- Since 2014, the line has had seven scheduled repair outages and four protection-operated outages due to failure of line equipment.





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Proposed Solution:

- Rebuild the 7.2 mile, Penelec section of the Ashtabula – Erie West 345 kV Line

At Erie West:

- Replace disconnect switches.

At Ashtabula:

- Revise relay settings

Alternatives Considered:

Maintain existing configuration with elevated risk of failure due to deteriorated structures.

Estimated Project Cost: ~~\$38.7M~~ \$52.4 M

Projected In-Service: ~~04/09/2027~~ 5/31/2027

Status: Conceptual

Model: ~~2023 Series 2028 RTEP Case Summer (50/50)~~ 2024 RTEP model for 2029 Summer (50/50)

Penelec Transmission Zone M-3 Process Perry – Ashtabula – Erie West 345 kV Line



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

Revision History

7/25/2025– V1 – Original version posted to pjm.com