# 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

# Met-Ed Transmission Zone M-3 Process
# South Reading Substation

**Need Number:** ME-2023-025

**Process Stage:** Solution Meeting – 08/05/2025

**Previously Presented:** Need Meeting – 12/05/2023

**Project Driver:**

*Operational Flexibility and Efficiency*

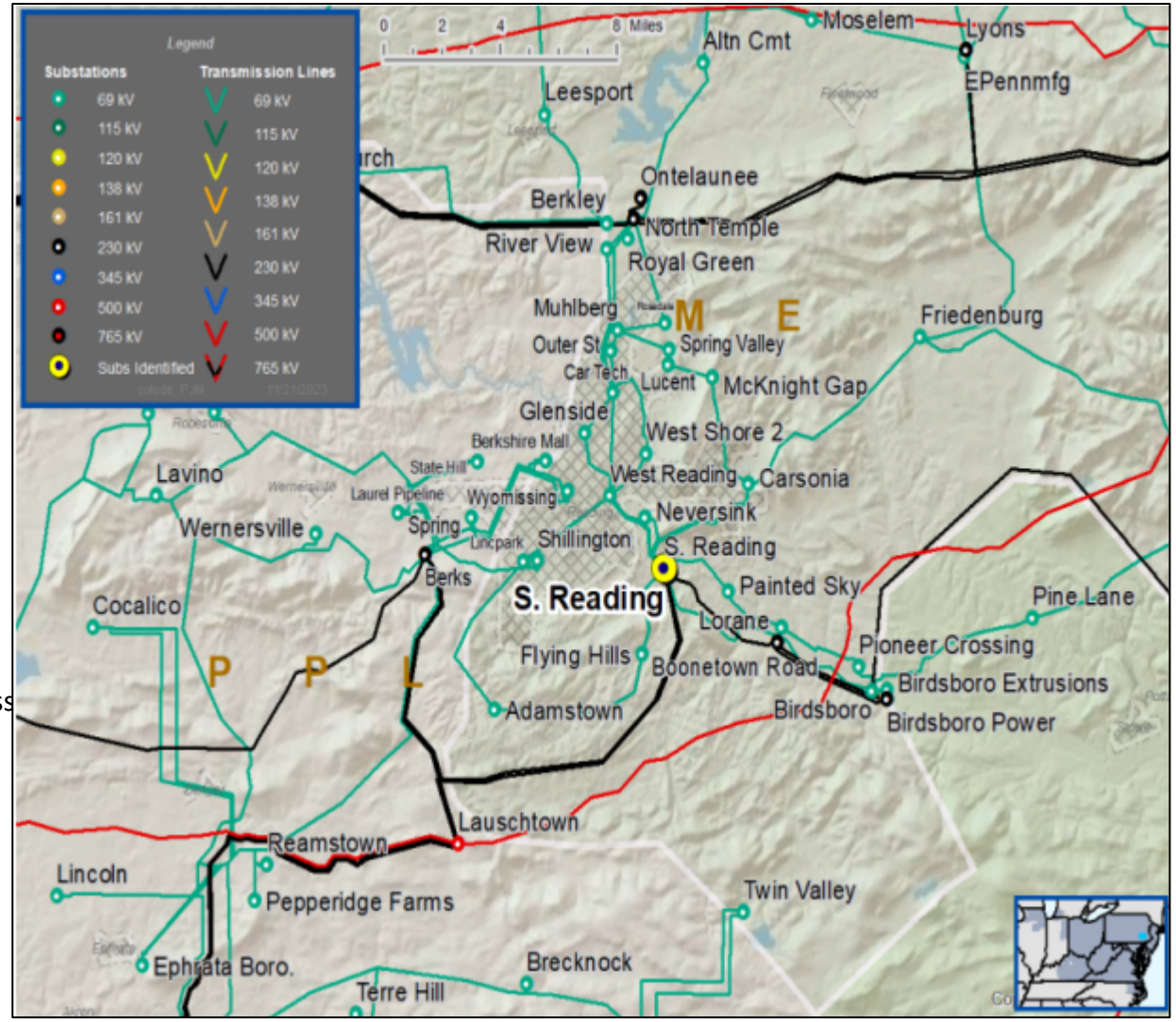
**Specific Assumption Reference:**

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:**

South Reading Substation contains two 230 – 69 kV transformers. Upon the N-1-1 loss of both transformers, there is low voltage seen on the surrounding 69 kV network.



# Met-Ed Transmission Zone M-3 Process
# South Reading Substation

**Need Number:** ME-2023-025

**Process Stage:** Solution Meeting – 08/05/2025

**Proposed Solution:**

**At South Reading Substation:**

- Install a new No. 9 230-69 kV 224 MVA transformer
- Install a new 69 kV grounding transformer
- Install two new 230 kV circuit breakers and associated switches
- Install one new 69 kV circuit breaker and associated switches
- Install new relaying

**Transformer Ratings:**

- Before Proposed Solution: N/A
- After Proposed Solution: 328 / 400 / 371 / 474 MVA (SN/SSTE/WN/WSTE)

**Alternatives Considered:**

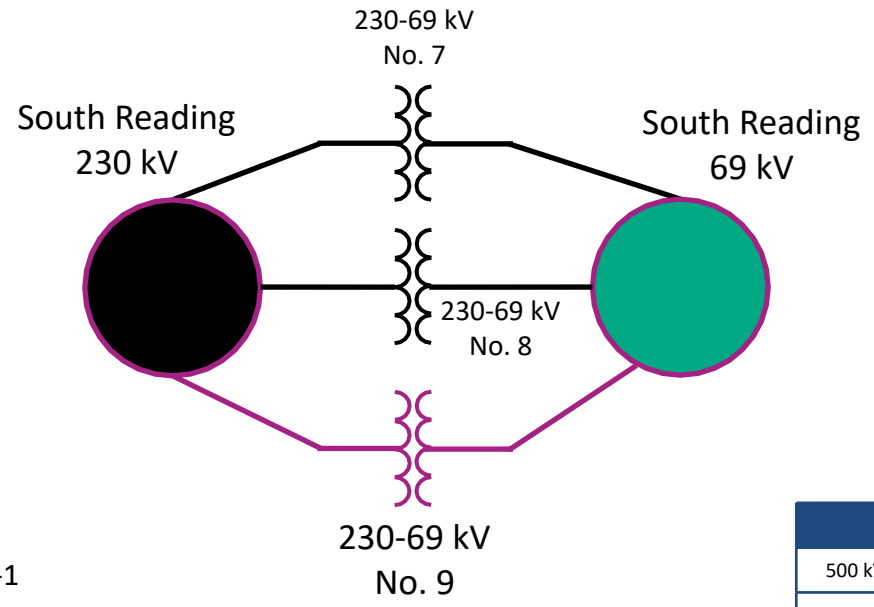
Maintain existing configuration with elevated risk of low voltage on the 69 kV system under N-1-1 conditions.

**Estimated Project Cost:** $20.4M

**Projected In-Service:** 11/15/2027

**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 | |

# Revision History

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