

# Subregional RTEP Committee – Mid-Atlantic FirstEnergy (Met-Ed) Supplemental Projects

September 14, 2023

# 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-2023-010

**Process Stage:** Need Meeting – 09/14/2023

**Project Driver:**

*Performance and Risk, Operational Flexibility and Efficiency*

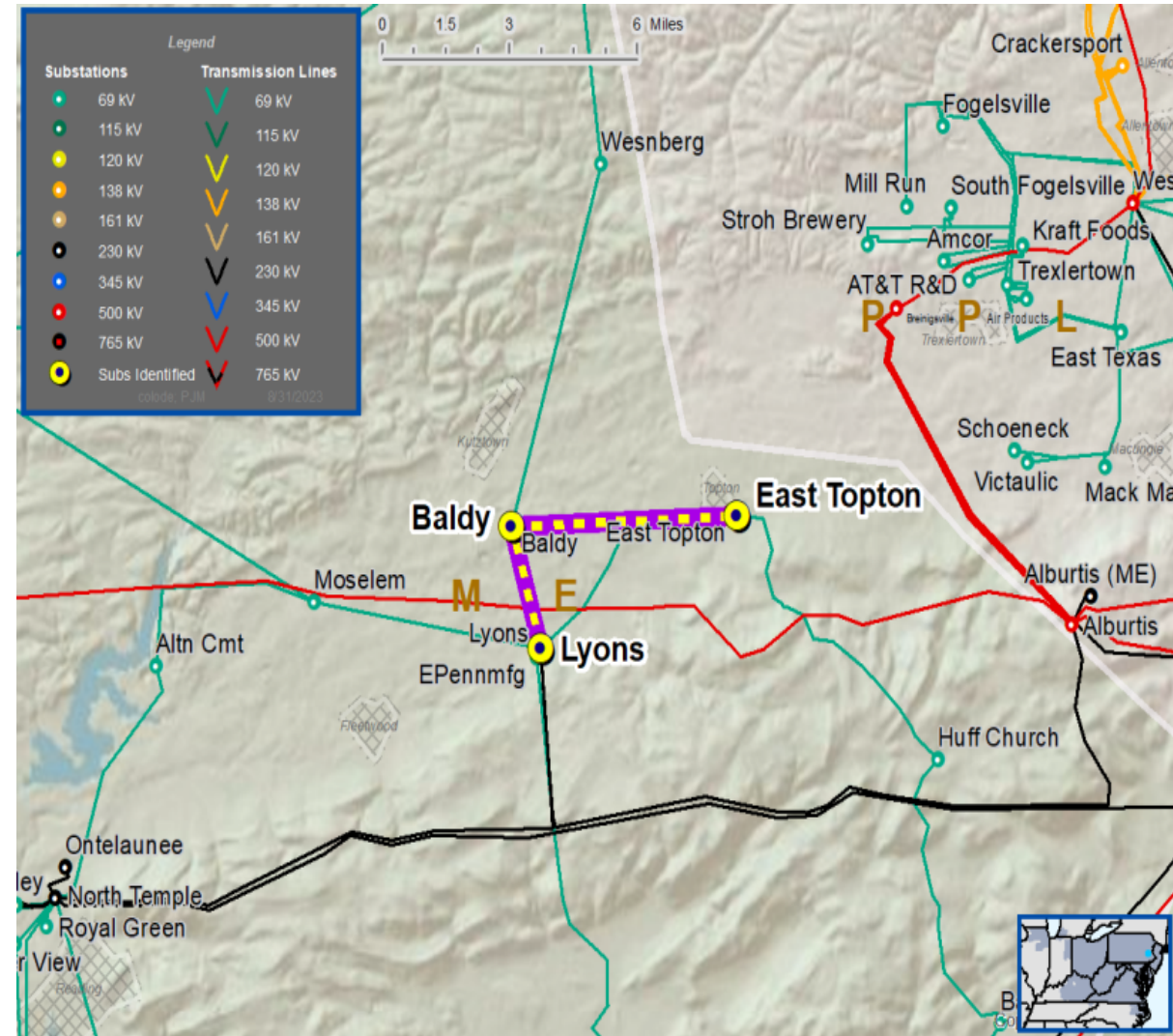
**Specific Assumption Reference:**

System Performance Projects

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

**Problem Statement:**

An N-1-1 outage of Baldy – Lyons 69 kV Line and Baldy – East Tipton 69 kV Line can lead to a voltage collapse resulting in loss of service to 10,688 customers or 70 MW of load.



# 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-2023-002

**Process State:** Solution Meeting 09/14/2023

**Previously Presented:** Need Meeting 03/16/2023

**Project Driver:**

*Operational Flexibility and Efficiency*

**Specific Assumption Reference:**

System Performance Projects

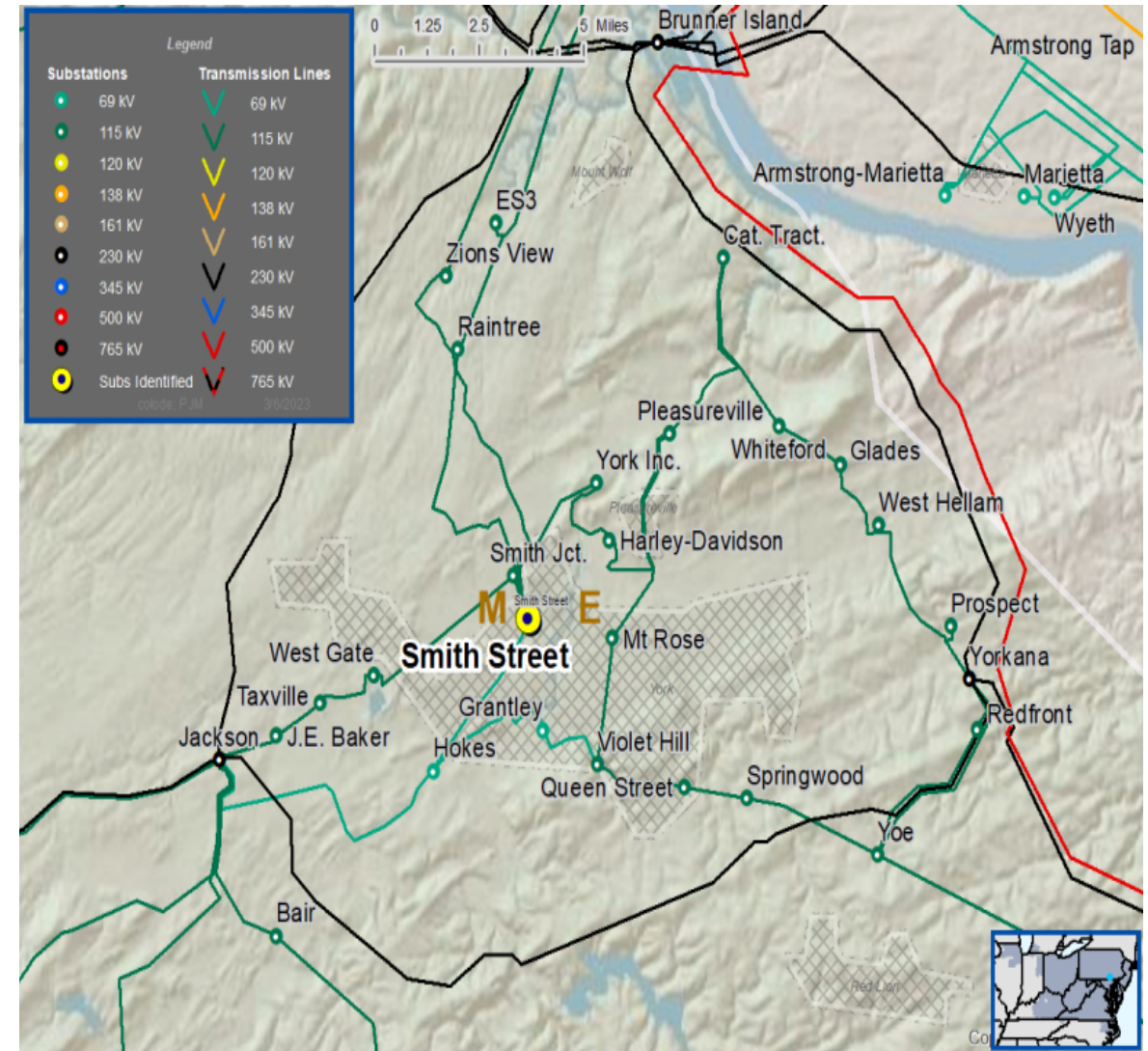
- Add/Expand Bus Configuration
- Load at risk in planning and operational scenarios
- Reduce the amount of exposed potential local load loss during contingency conditions
- Eliminate simultaneous outages to multiple networked elements

**Problem Statement:**

The loss of 115 kV Smith Street substation results in loss of approximately 60 MW of load and approximately 9,533 customers.

Substation consists of:

- Three 115 kV transmission lines
- One 115-69 kV transformers
- Two 115-13.2 kV distribution transformers



# Met-Ed Transmission Zone M-3 Process Willis Road 115 kV Substation

**Need Number:** ME-2023-002

**Process State:** Solution Meeting 09/14/2023

**Previously Presented:** Need Meeting 03/16/2023

**Proposed Solution:**

Smith Street could not expand to accommodate breaker and a half substation, therefore a separate substation on adjoining property to be built. New name is Willis Road Substation.

*Willis Road 115 kV Substation*

- Construct a four string (ten breaker) breaker and a half bus
- 115-69 kV Bank #3A to be retired upon upgrading the 115-69 kV #1 bank
- Upgrade terminal equipment to transmission line ratings and adjust relay settings

**Transmission Line Ratings:**

**Smith Street– Westgate 115 kV Line (967)**

- Before Proposed Solution 221 / 267 MVA (SN/SE)
- After Proposed Solution 232 / 282 MVA (SN/SE)

**Smith Street- Zionview 115 kV Line (Middle Junction 977)**

- Before Proposed Solution 118 / 120 MVA (SN/SE)
- After Proposed Solution 129 / 156 MVA (SN/SE)

**Alternatives Considered:**

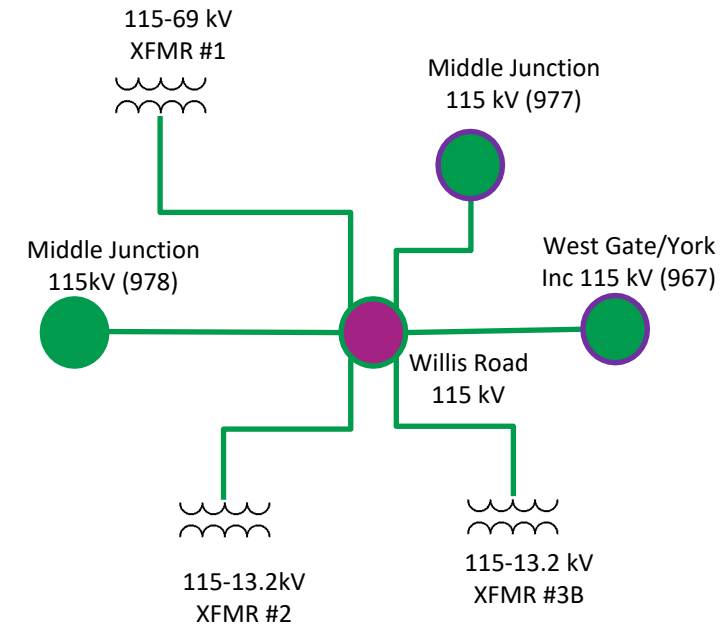
- Expand the existing Smith Street Substation
- Maintain existing configuration with risk to transmission system and customer reliability

**Estimated Project Cost:** \$25 M

**Projected In-Service:** 12/31/2027

**Project Status:** Engineering

**Model:** 2022 Series 2027 RTEP Case



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

# Questions?



# 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

9/1/2023 – V1 – Original version posted to pjm.com