

# Transmission Expansion Advisory Committee – JCPL Supplemental Projects

September 5, 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:** JCPL-2023-010

**Process State:** Need Meeting – 09/05/2023

**Project Driver:**

*Performance and Risk, Operational Flexibility and Efficiency*

**Specific Assumption Reference:**

System Performance Projects Global Factors

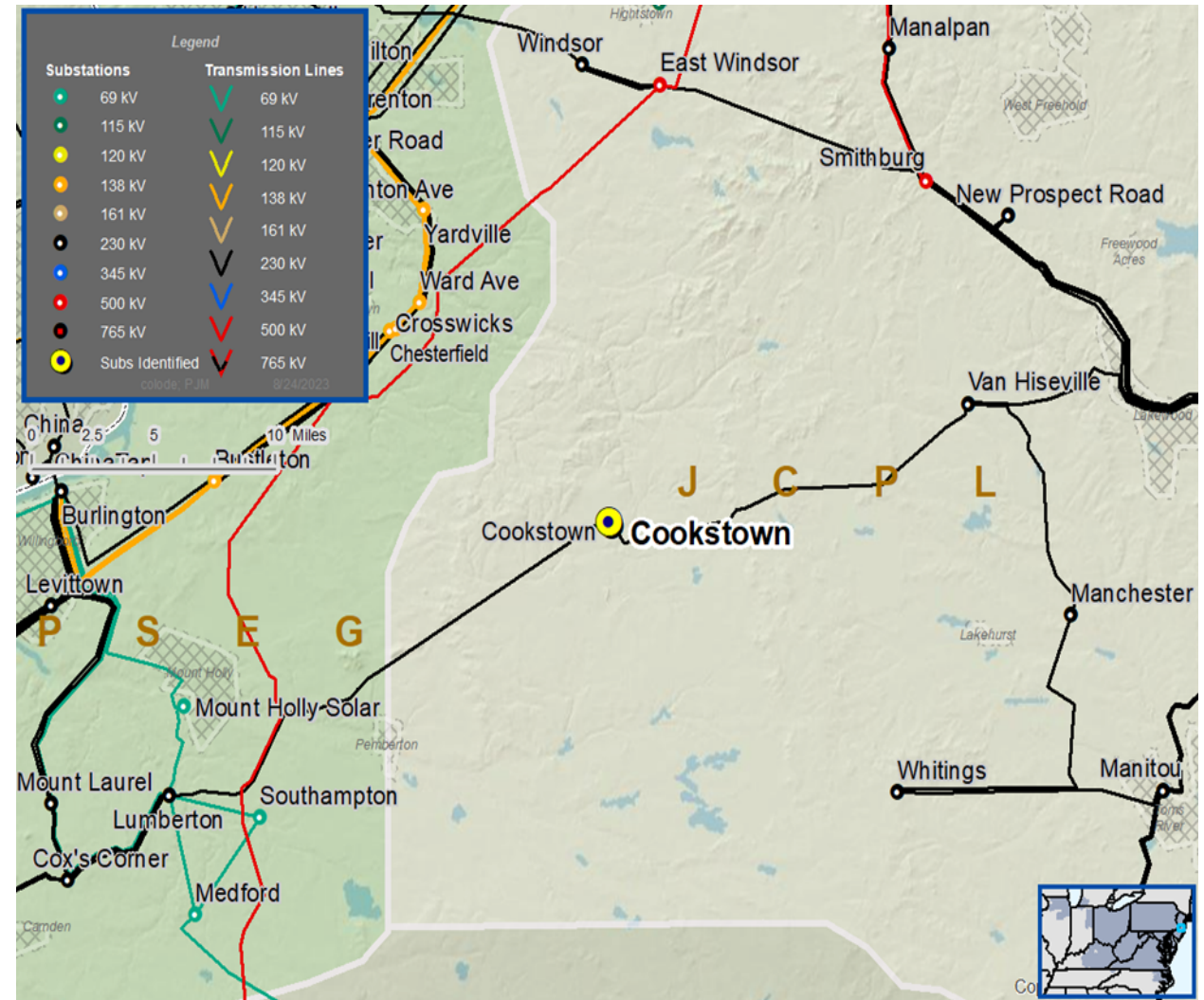
- System reliability and performance
- Reliability of Non-Bulk Electric System (Non-BES) Facilities

Add/Replace Transformers

Past System Reliability/Performance

**Problem Statement:**

- The 230 – 34.5 kV No. 2 Transformer at Cookstown was installed 49 years ago and is approaching end of life.
  - Ethane gas has consistently been exhibited as elevated compared to IEEE standards.
- Existing TR Ratings:
  - 141 / 141 MVA (SN / SLTE)



# 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:** JCPL-2023-005

**Previously Presented:** Need Meeting 06/06/2023

**Project Driver:**

*Performance and Risk, Operational Flexibility and Efficiency*

**Specific Assumption Reference:**

System Performance Projects Global Factors

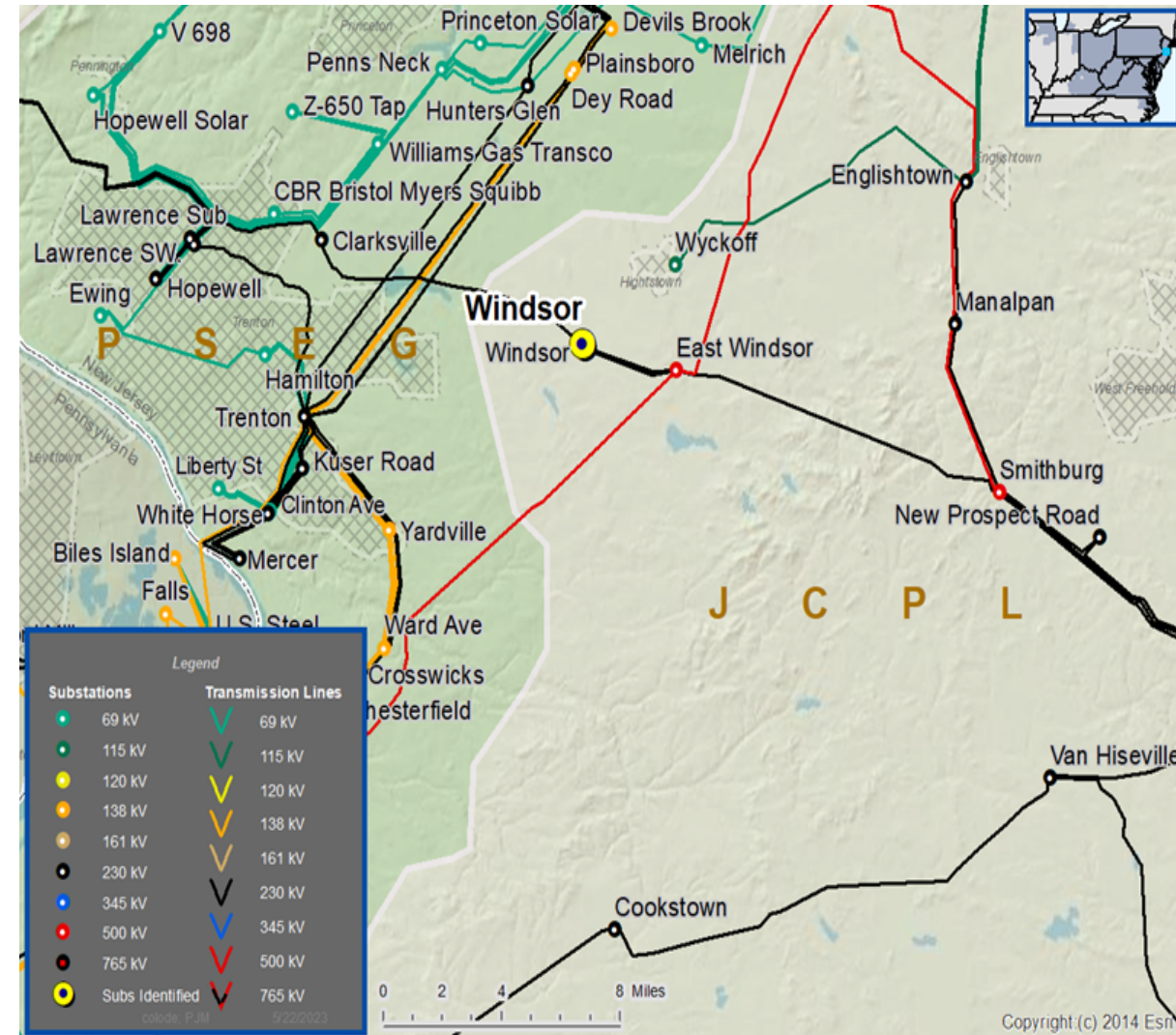
- System reliability and performance
- Reliability of Non-Bulk Electric System (Non-BES) Facilities

Add/Replace Transformers

Past System Reliability/Performance

**Problem Statement:**

- The 230 – 34.5 kV No. 1 Transformer at Windsor was manufactured in 1973 and is approaching end of life.
- At the transformer, combustible hot metal gasses have developed and continue to fluctuate.
  - Outages have cost \$33k O&M in last 5 years.
  - Transformer has a high risk of failure.
- Existing TR Ratings:
  - 140 / 140 MVA (SN / SE)



**Need Number:** JCPL-2023-005

**Process Stage:** Solution Meeting 09/05/2023

**Proposed Solution:**

- Replace the 230 – 34.5 kV No. 1 Transformer at Windsor with a 168 MVA unit.
- Upgrade transformer relaying

**Transformer Ratings:**

- Windsor 230 – 34.5 kV No. 1 Transformer:
  - Before Proposed Solution: 140 / 140 MVA (SN / SE)
  - After Proposed Solution: 216 / 216 MVA (SN / SE)

**Alternatives Considered:**

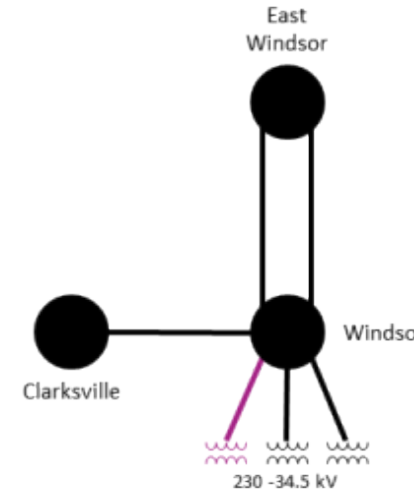
- Maintain transformer in existing condition & replace upon failure

**Estimated Project Cost:** \$6.3M

**Projected In-Service:** 11/2/2023

**Project Status:** Under Construction

**Model:** 2022 RTEP model for 2027 Summer (50/50)



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

8/25/2023 - V1 – Original version posted to pjm.com