

Transmission Expansion Advisory Committee

FirstEnergy Supplemental Projects

JCPL 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: JCPL-2026-026

Process Stage: Need Meeting 06/02/2026

Project Driver:

Equipment Condition/Performance/Risk

Specific Assumption References:

System Performance Global Factors

- System reliability and performance
- Substation/line equipment limits

Line Condition Rebuild/Replacement

- Age/condition of wood pole transmission line structures

System Conversion Methodology

- Low voltage conditions
- Lines being operated with normally open points

Condition-based rebuilds

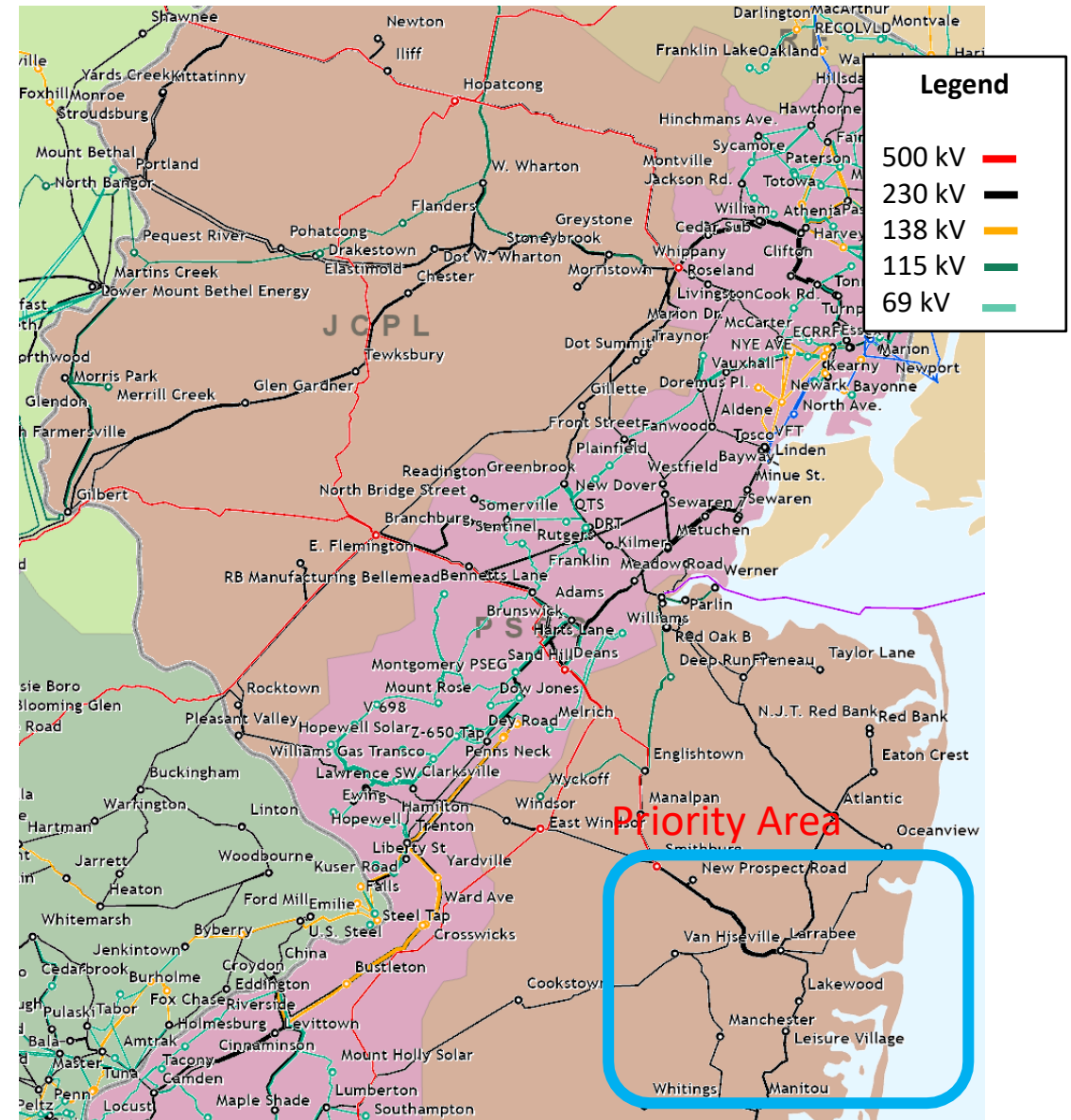
Build New Transmission Line

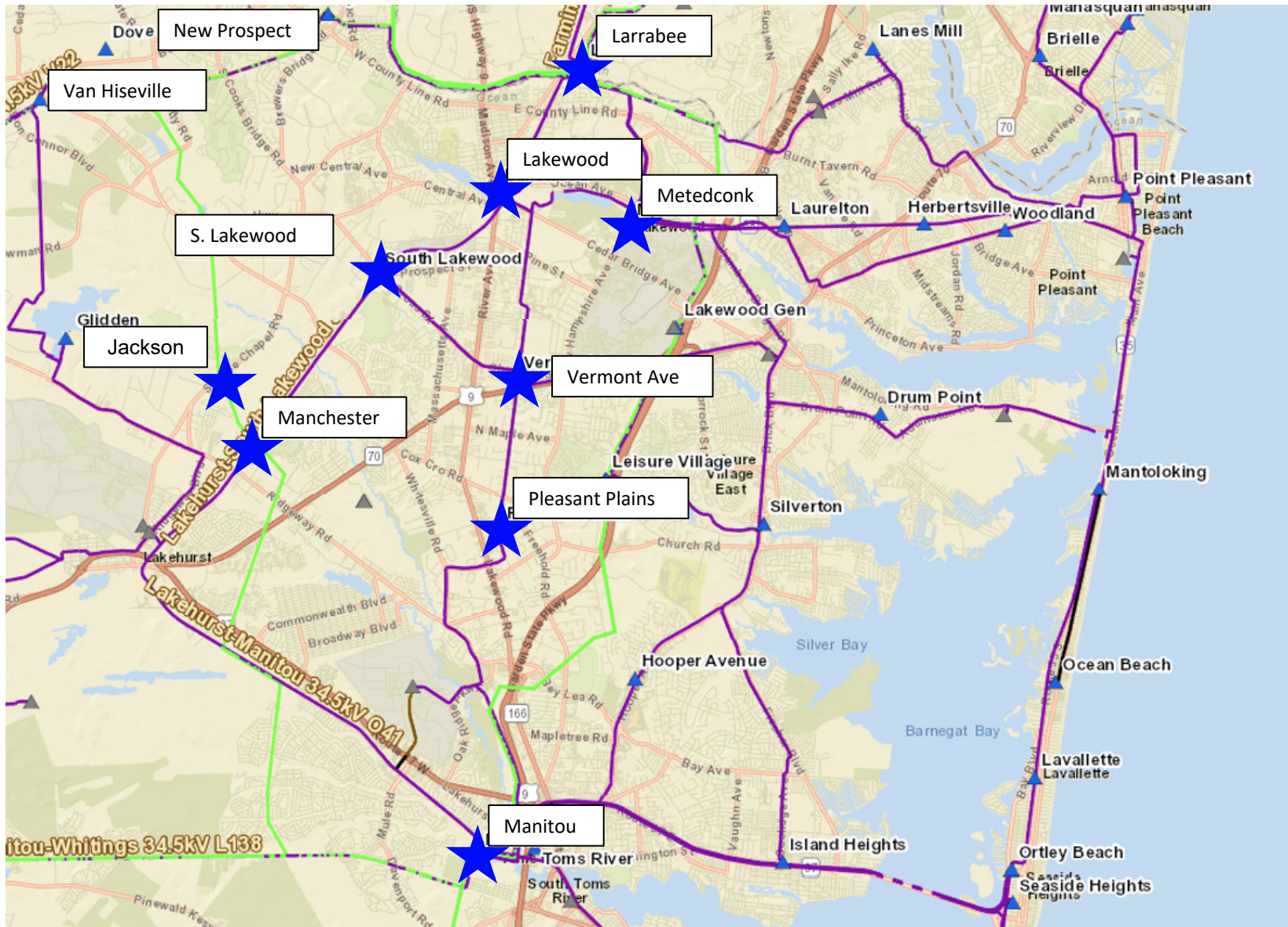
- Contingency constrained facilities
- Elevated loading on adjacent circuits

Problem Statement:

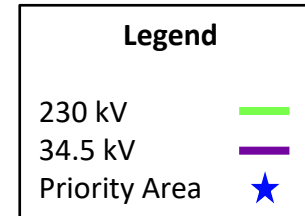
The JCP&L 34.5 kV transmission system is operating close to its maximum capacity with increased challenges related to operational switching and limitations due to normally open points. The existing 34.5 kV system serves ~90% of the load with minimal alternative connections.

Much of the 34.5 kV transmission system was originally constructed during the 1950s. Load growth will require additional infrastructure.





JCPL 34.5 kV Existing Facilities



Need Number: JCPL-2026-026

Problem Statement (continued): Small load increases (<5 MW) are exposing deficiencies in the capacity of the 34.5 kV system in this area as thermal and voltage violations have been observed in load studies.

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

5/22/2025 – V1 – Original version posted to pjm.com