

# Transmission Expansion Advisory Committee – JCPL Supplemental Projects

October 3, 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-2023-011

**Process Stage:** Need Meeting 10/3/2023

**Project Driver:**

*System Performance and Operational Flexibility*

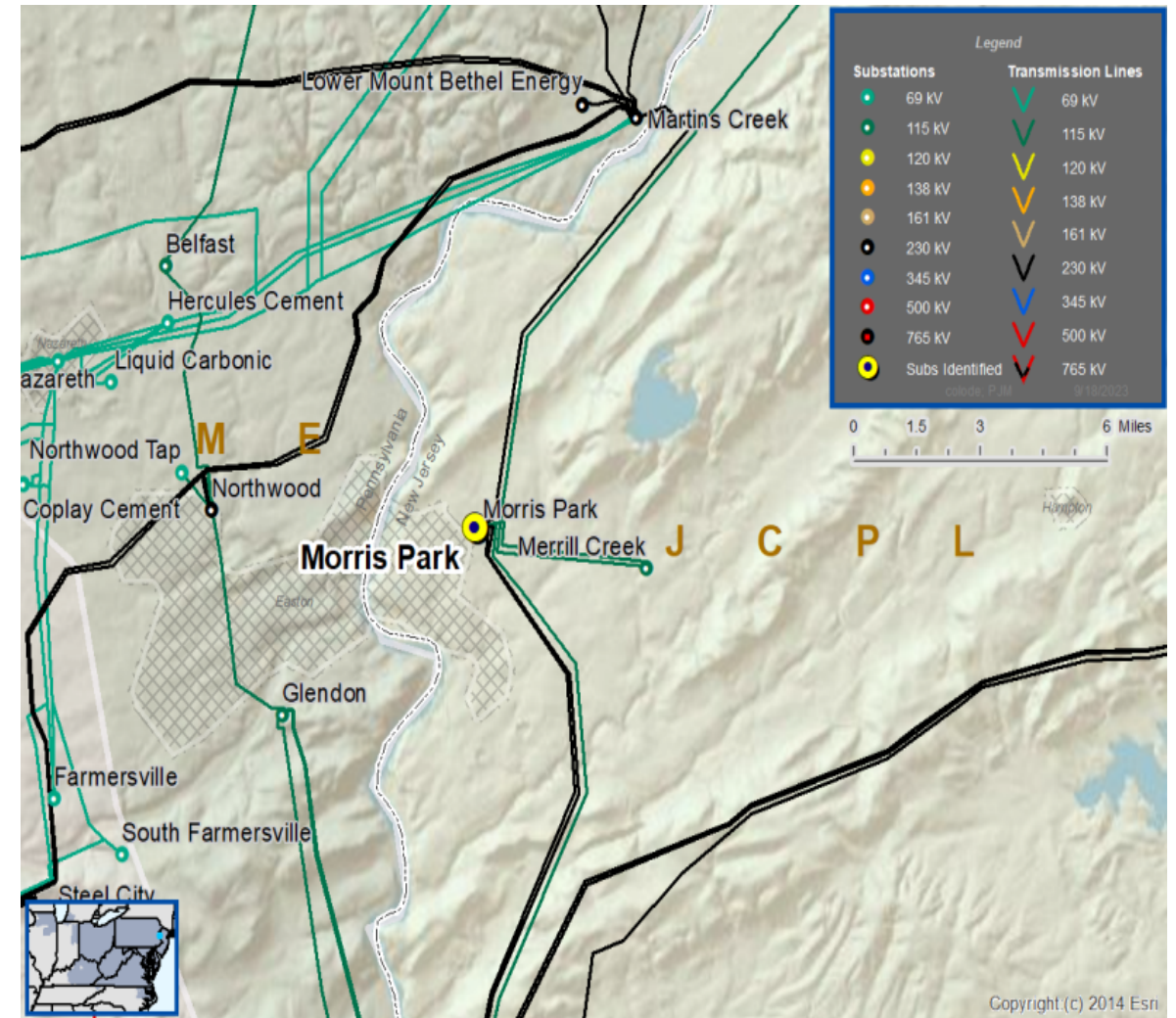
**Specific Assumption Reference:**

*Global Factors*

- System reliability and performance
- Add/Expand Bus Configuration
- Load at risk and/or customer affected

**Problem Statement:**

- The existing 230 kV and 115 kV sources to Morris Park Substation are fed radially. Gilbert – Martins Creek 230 kV and Gilbert – Pequest River 115 kV Lines are configured as three terminal lines.
- Morris Park serves approximately 13 MW of load and 4,240 customers which will be outaged by an N-1-1 contingency of the Gilbert – Martins Creek 230 kV and Gilbert – Pequest River 115 kV Lines.
- The existing 115 – 34.5 kV transformer at Morris Park was manufactured in 1953 and is approaching end of life.



**Need Number:** JCPL-2023-035

**Process Stage:** Need Meeting 10/3/2023

**Project Driver:**

*Equipment Material Condition, Performance and Risk*

**Specific Assumption References:**

*Global Factors*

- System reliability and performance
- Substation / line equipment limits

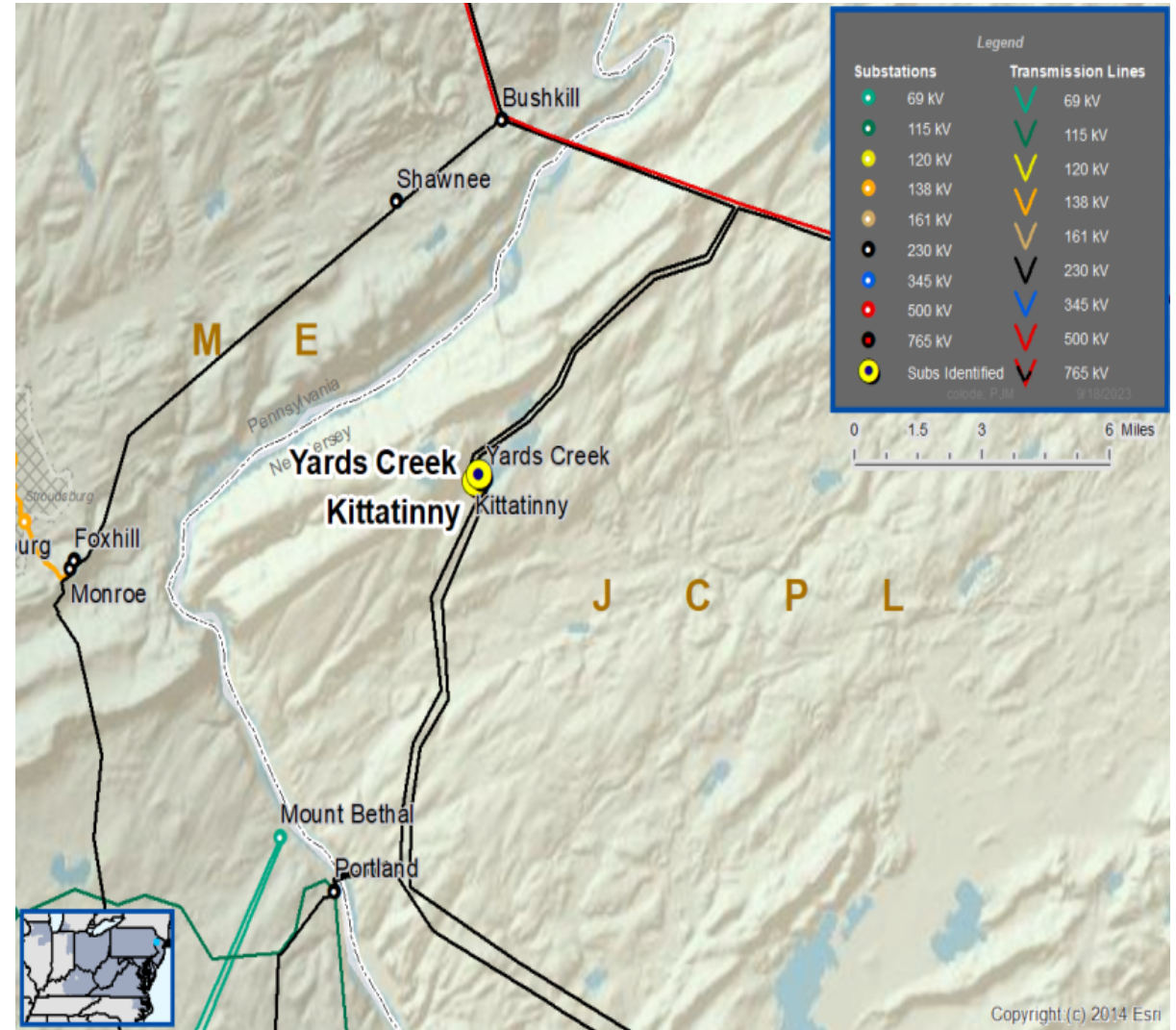
*Upgrade Relay Schemes*

- Relay schemes that have a history of misoperation
- Obsolete and difficult to repair communication equipment (DTT, Blocking, etc.)
- Communication technology upgrades
- Bus protection schemes

**Problem Statement:**

- FirstEnergy has identified protection schemes using a certain vintage of relays and communication equipment that have a history of misoperation.
- Proper operation of the protection scheme requires all the separate components perform adequately during a fault
- In many cases the protection equipment cannot be repaired due to a lack of replacement parts and available expertise in the outdated technology.
- Transmission line ratings are limited by terminal equipment.

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# JCPL Transmission Zone M-3 Process Kittatinny-Yards Creek 230 kV Misoperation Relays

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| Need Number   | Transmission Line / Substation Locations | Existing Line Rating (SN / SE) | Existing Conductor Rating (SN / SE) |
|---------------|--|--------------------------------|-------------------------------------|
| JCPL-2023-035 | Kittatinny-Yards Creek 230 kV M1027 Line | 648 / 648                      | 709 / 869                           |

# 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

9/22/2023 - V1 – Original version posted to pjm.com