Transmission Expansion Advisory Committee
Dayton Supplemental Projects

September 9th, 2025

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

Dayton Transmission Zone M-3 Process

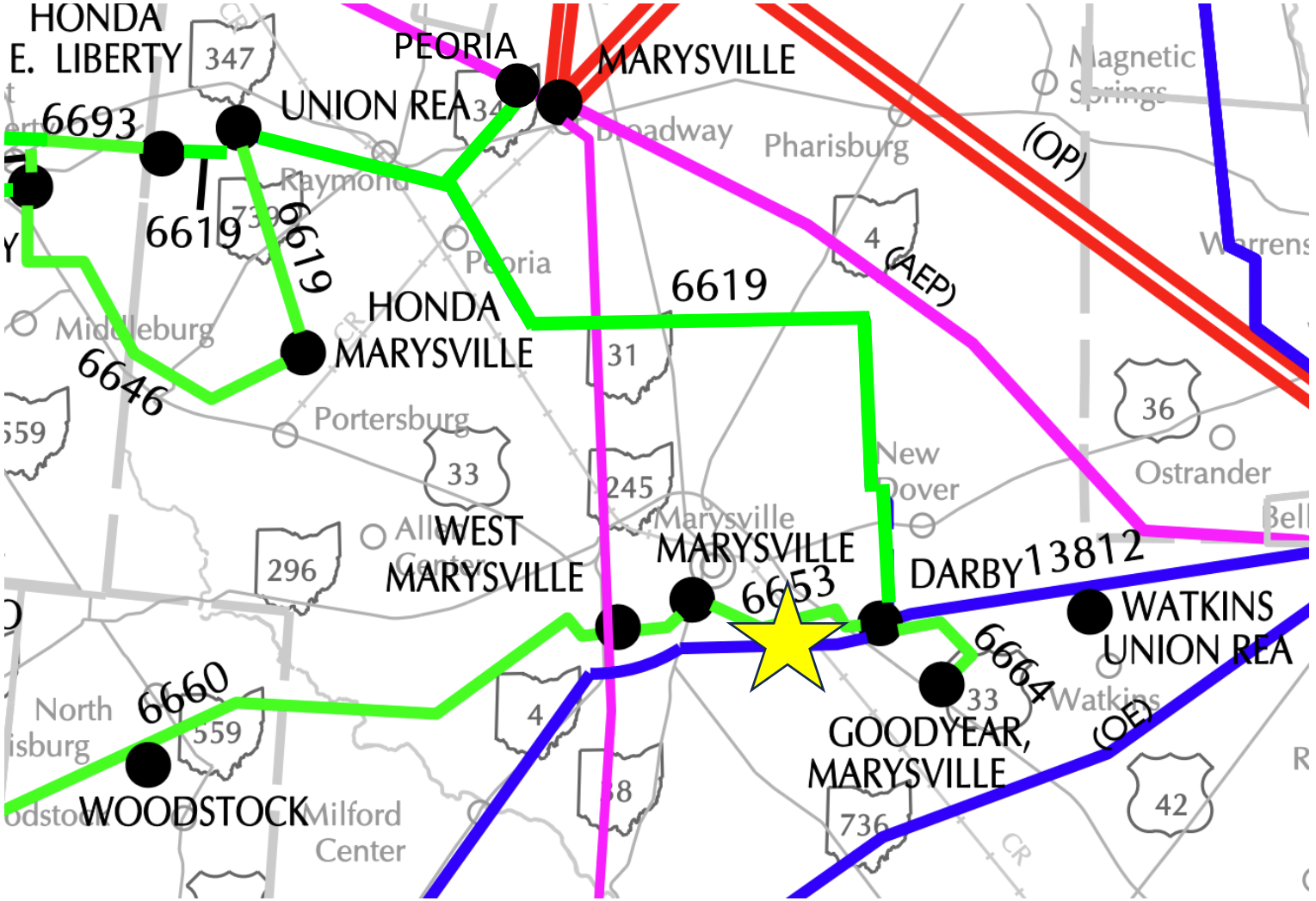
Need Number: Dayton-2025-008
Process Stage: Need Meeting 9/9/2025
Project Driver: Customer Request
Specific Assumption Reference: Dayton Local Plan Assumptions

Problem Statement:

- AES Ohio has a customer request for service in the vicinity of its Darby Substation in Marysville, OH.

- Total MW load requests, associated timelines, & load totals

Requested In Service Date	Total Requested New Load
1/2029	800 MW



Model: 2024 RTEP Series, 2029 Summer Case

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: Dayton-2025-003

Previously Presented: Need Meeting 7/8/2025

Process Stage: Solution Meeting, 9/9/2025

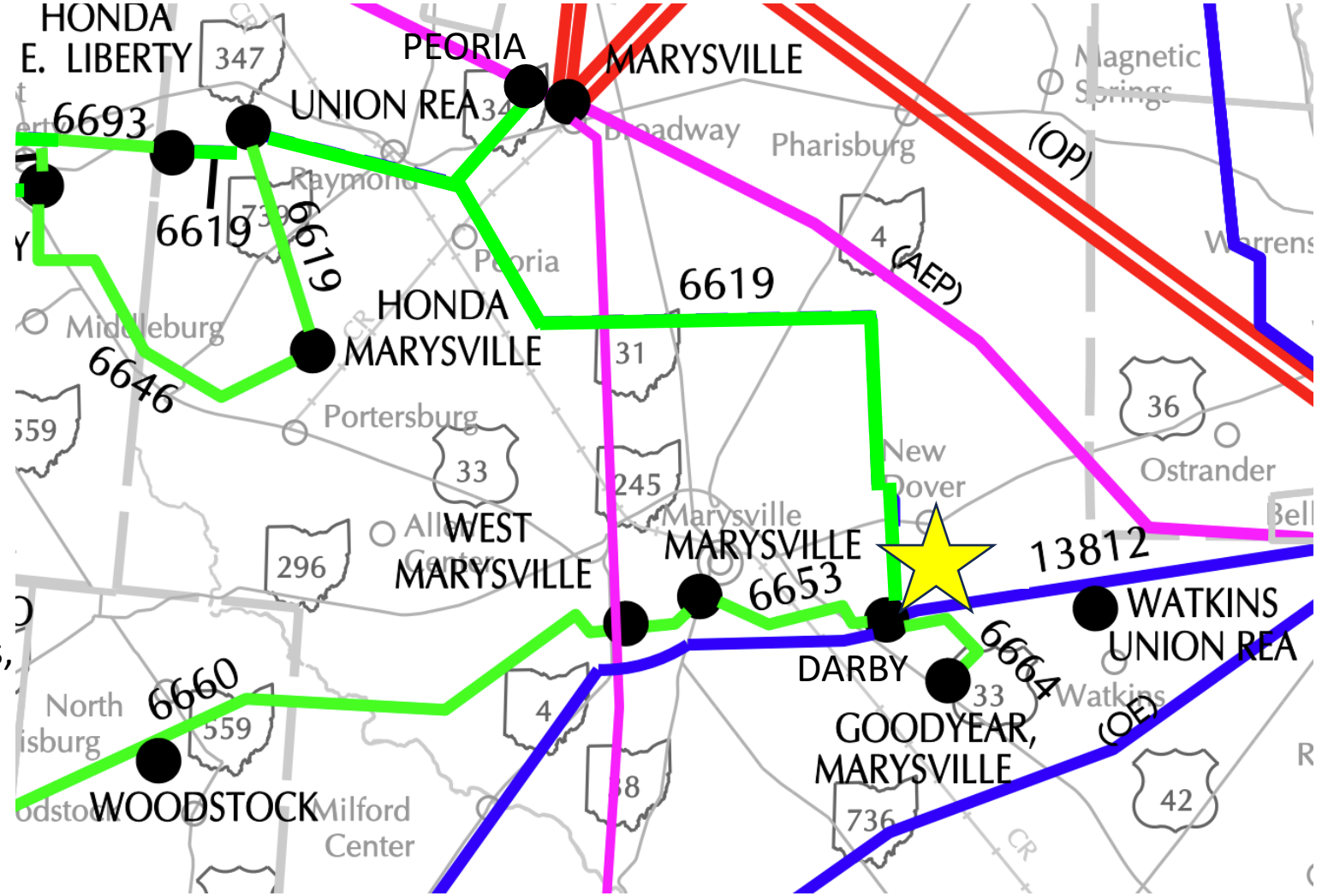
Project Driver: Customer Request

Specific Assumption Reference: Dayton Local Plan Assumptions

Problem Statement:

- AES Ohio has a customer request for service in the vicinity of its Darby Substation in Marysville, OH.
- Total MW load requests, associated timelines, & load totals

Requested In Service Date	Total Requested New Load
2/2027	22 MW
6/2027	40 MW
4/2028	90 MW
7/2028	135 MW



Dayton Transmission Zone M-3 Process

Need Number: Dayton-2025-003

Previously Presented: Need Presented, 7/8/2025

Process Stage: Solution Meeting, 9/9/2025

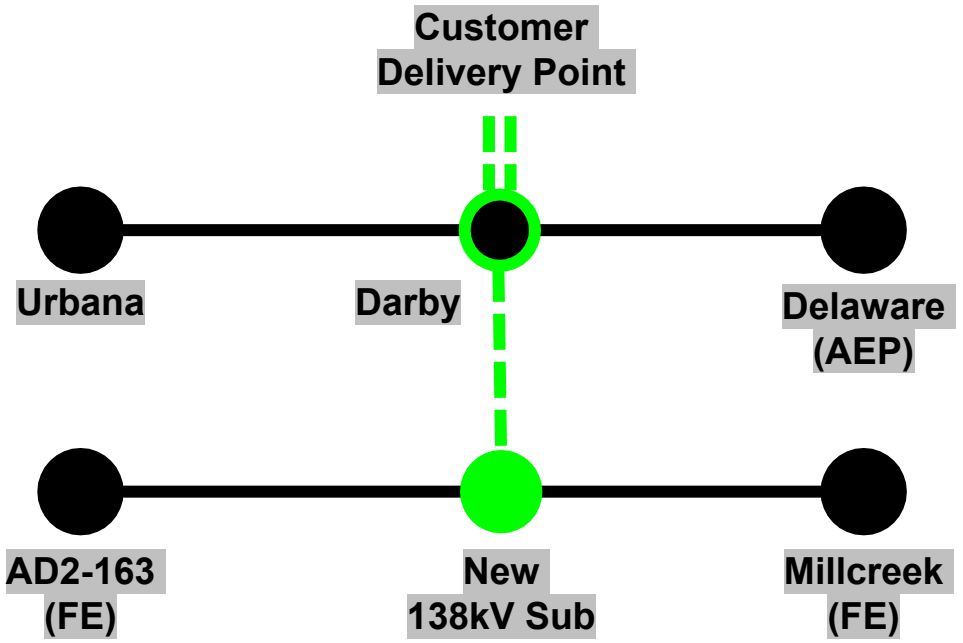
Project Driver: Customer Service; Operational Flexibility and Efficiency

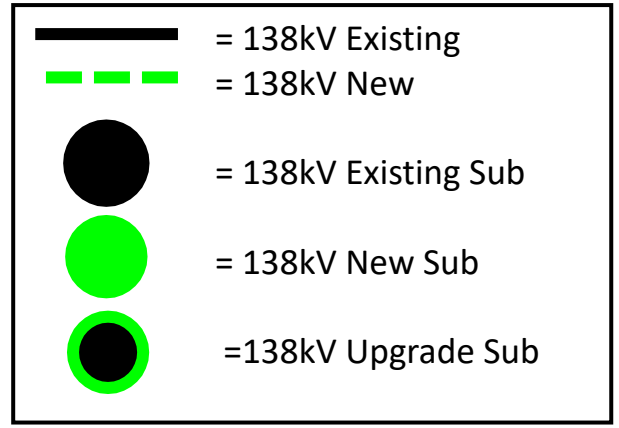
Specific Assumption Reference: Dayton Local Plan Assumptions

Selected Solution:

- **Phase 1:**
  - Construct New 0.5 Miles 138kV Single Circuit T-Line using 1351 ACSR from existing Darby to Customer Delivery Point.
  - Estimated Cost : $4.1M, ISD 02/2027
- **Phase 2:**
  - Construct New 138kV breaker and a half yard at Darby.
  - Construct New 0.5 Miles 138kV Single Circuit T-Line using 1351 ACSR from Darby to Customer Delivery Point.
  - Construct New 138kV breaker and a half substation cutting into the existing FE Millcreek to AD2-163 138kV line.
  - Construct New 5 Miles Single Circuit T-Line using 1351 ACSR from Darby to New 138kV sub.
  - Estimated Cost : $ 70M, ISD 4/2028
- **Total Estimated Transmission Cost :** $74.1M
- **Projected In-Service:** 4/2028
- **Project Status:** Conceptual
- **Alternatives Considered:**
  - New 138kV line to AES Peoria. Not selected due to high cost.

Model: 2024 RTEP Series





Dayton Transmission Zone M-3 Process

Need Number: Dayton-2025-005

Previously Presented: Need Meeting 7/08/2025

Process Stage: Solution Meeting, 9/9/2025

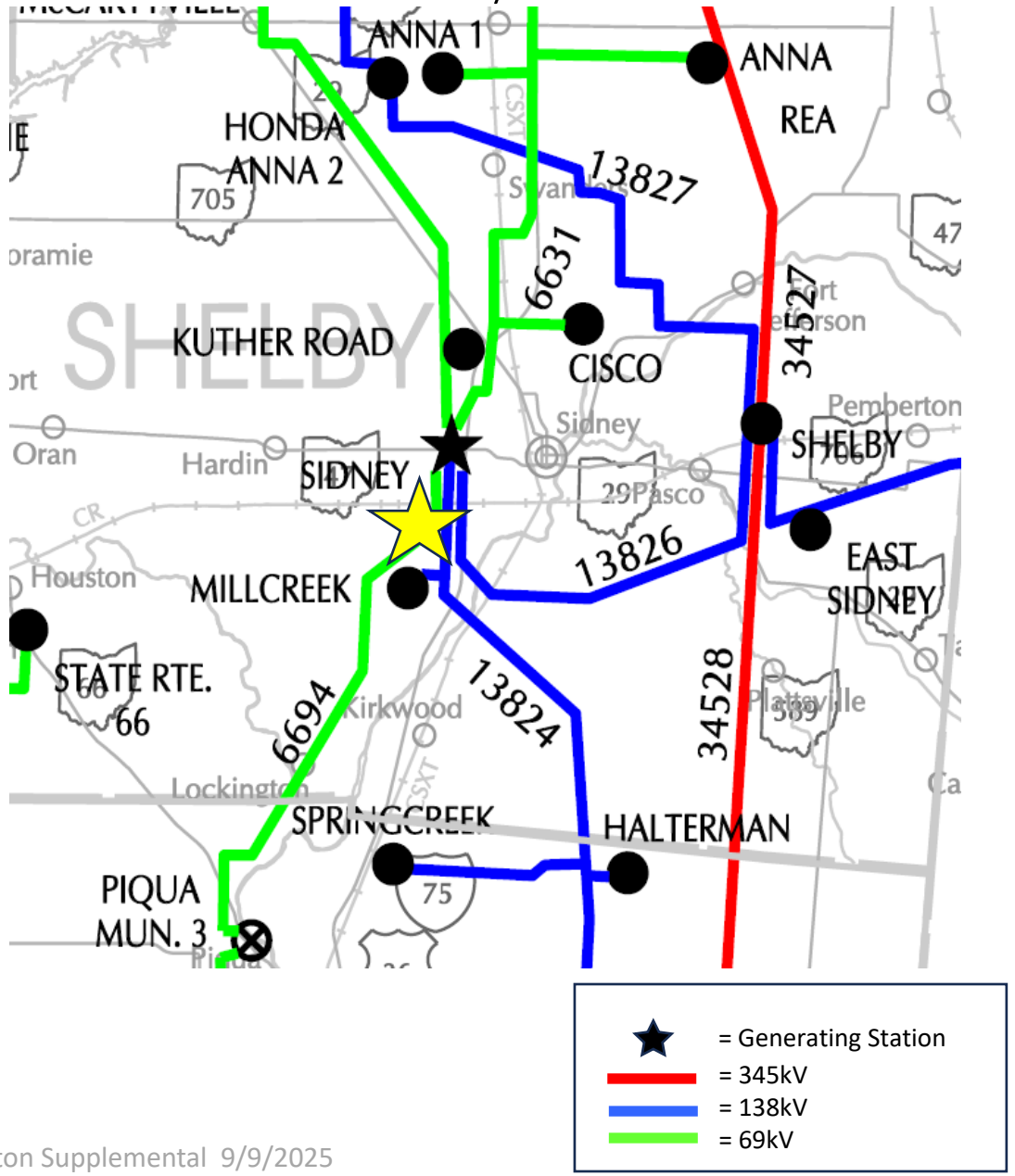
Project Driver: Customer Request

Specific Assumption Reference: Dayton Local Plan Assumptions

Problem Statement:

- AES Ohio has a customer request for service in the vicinity of its Sidney substation.
- Total MW load requests, associated timelines, & load totals

Requested In Service Date	Total Requested New Load
1/2028	35 MW
4/2028	100 MW
9/2028	175 MW
1/2029	250 MW
4/2029	325 MW
6/2029	400 MW



Dayton Transmission Zone M-3 Process

Need Number: Dayton-2025-005

Previously Presented: Need Meeting 7/08/2025

Process Stage: Solution Meeting, 9/9/2025

Project Driver: Customer Request

Specific Assumption Reference: Dayton Local Plan Assumptions

Solution:

➢ **Phase 1**

- Expand the existing 138kV substation "Millcreek" near the customer site with a breaker-and-a-half configuration and cut into existing 138kV circuit 13826 Sidney to Shelby.
- Extend two 138kV feeds from Millcreek substation to the customer.
- Install two 61.2 MVAR capacitor banks at the Millcreek substation.
- Perform remote end work at Sidney, Creekside, Millcreek, and Shelby, including a 69kV reroute of the Sidney–Piqua line.

Estimated Cost: $40.5M, ISD: 12/2027

➢ **Phase 2**

- New ~8-mile double circuit 138kV line from existing Shelby substation to the Millcreek 138kV substation.
- Expand the existing Shelby substation to accommodate the new 138 kV lines.

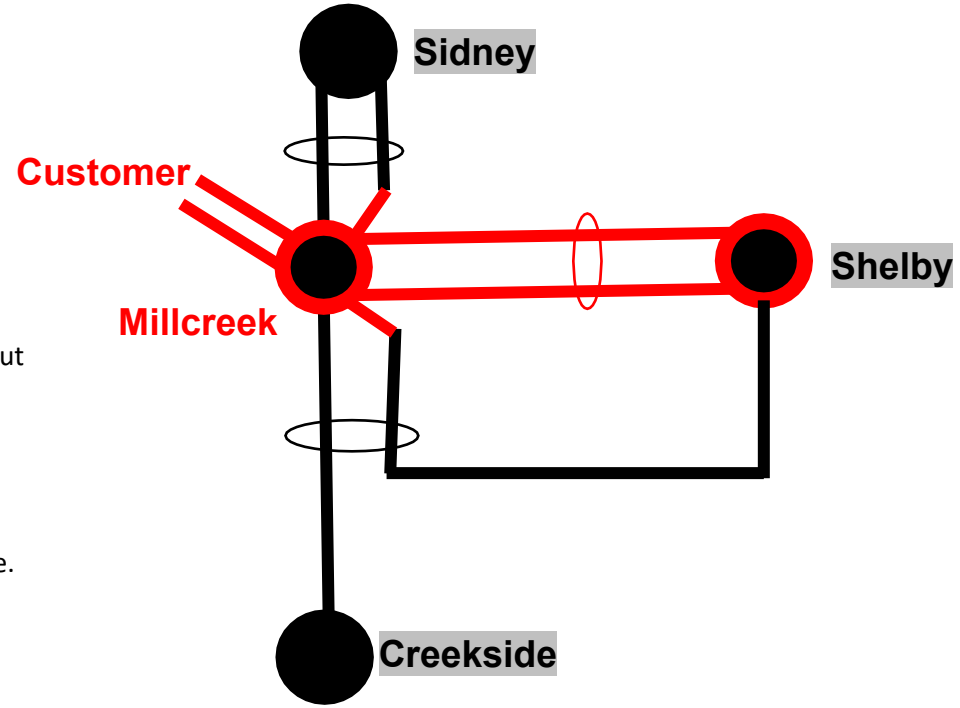
Estimated Cost: $29.1M, ISD: 6/2029

➢ **Total Estimated Transmission Cost :** $69.6M

➢ **Projected In-Service:** 6/2029

➢ **Project Status:** Conceptual

Model: 2024 RTEP Series



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

8/29/2025 – V1