

Transmission Expansion Advisory Committee: AEP Supplemental Projects

October 6, 2026

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

AEP Transmission Zone M-3 Process Muskingum River - Kammer 345 kV Line Section

Need Number: AEP-2026-OH041

Process Stage: Need Meeting 10/06/2026

Project Driver: Equipment Condition/Performance/Risk

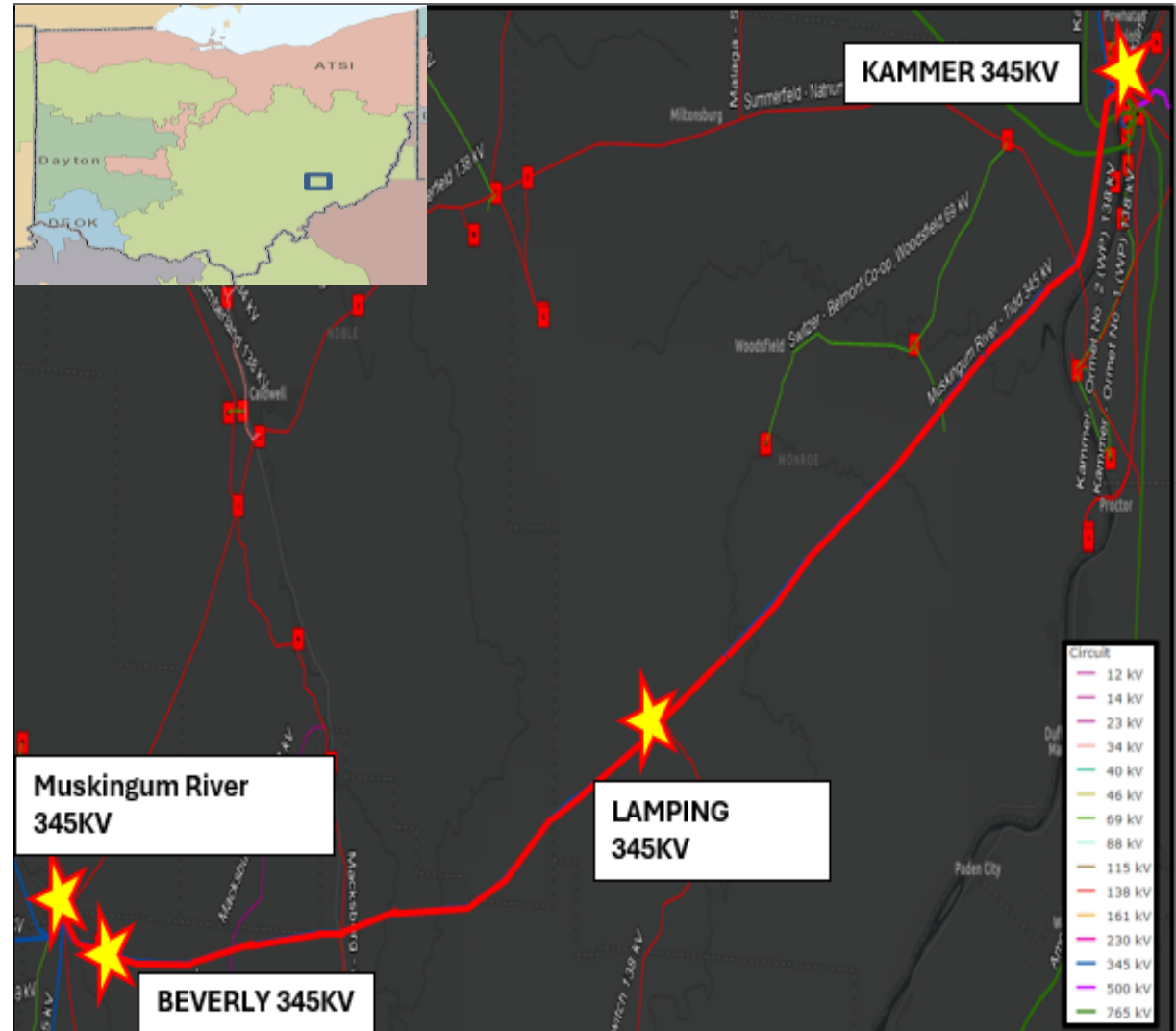
Specific Assumption References:

AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions Slide 13)

Problem Statement:

Muskingum River - Kammer 345 kV Line (54 miles):

- Original Install: 1957
- Circuit Segments:
 - Beverly - Muskingum River 345 kV: ~1.9 miles
 - Lamping - Muskingum River 345 kV: ~26.9 miles
 - Lamping - Kammer 345kV: ~25.6 miles
 - Beverly - Str. 209 345 kV (Beverly-Holloway): ~50 miles
- Outage Info: 3 Permanent outages since 2020 on Beverly-Holloway 345 kV section, totaling approximately 1,400 hours of outage time due to failed conductors and weather
- Structures: 207 lattice steel structures installed in 1957, 2 steel poles installed in 2019



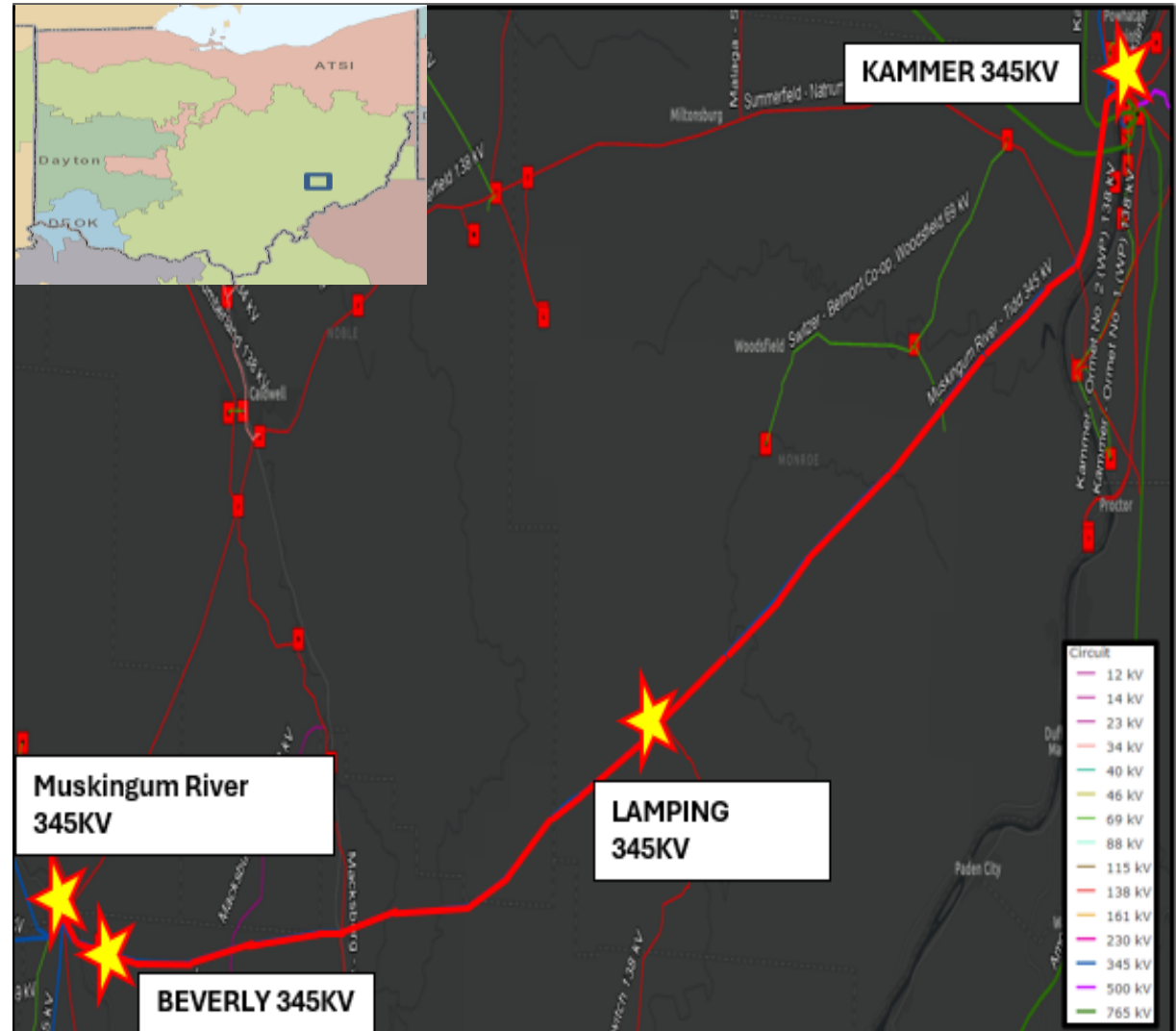


Need Number: AEP-2026-OH041

Problem Statement: Continued from previous slide...

- Conductor: 1414 KCM ACSR/PE 62/19 (1.75" ACSR/PE) 80% of the 54 mile section, 795 KCM ACSR 45/7 (Tern/ACSR) 20% of 54 mile section; both sections of original 1957 vintage
 - Paper Expanded Conductor bring concerns of core corrosion driven by water absorption within the paper surrounding the core. These conductors are non standard, not supported by vendors and have history of failures. AEP previously presented needs AEP-2023-IM013, AEP-2023-IM015 & AEP-2023-OH072 in the 5/9/23 TEAC highlighting the issues found with Paper Expanded conductor.
- Total of 72 open conditions on the line sections associated with corroded and broken hardware/insulators and broken conductor strands.

AEP Transmission Zone M-3 Process Muskingum River - Kammer 345 kV Line Section



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



AEP Transmission Zone M-3 Process Muskingum River 345kV Customer Delivery

Need Number: AEP-2025-OH015

Process Stage: Solution Meeting 10/06/2026

Previously Presented: Need Meeting 08/05/2025

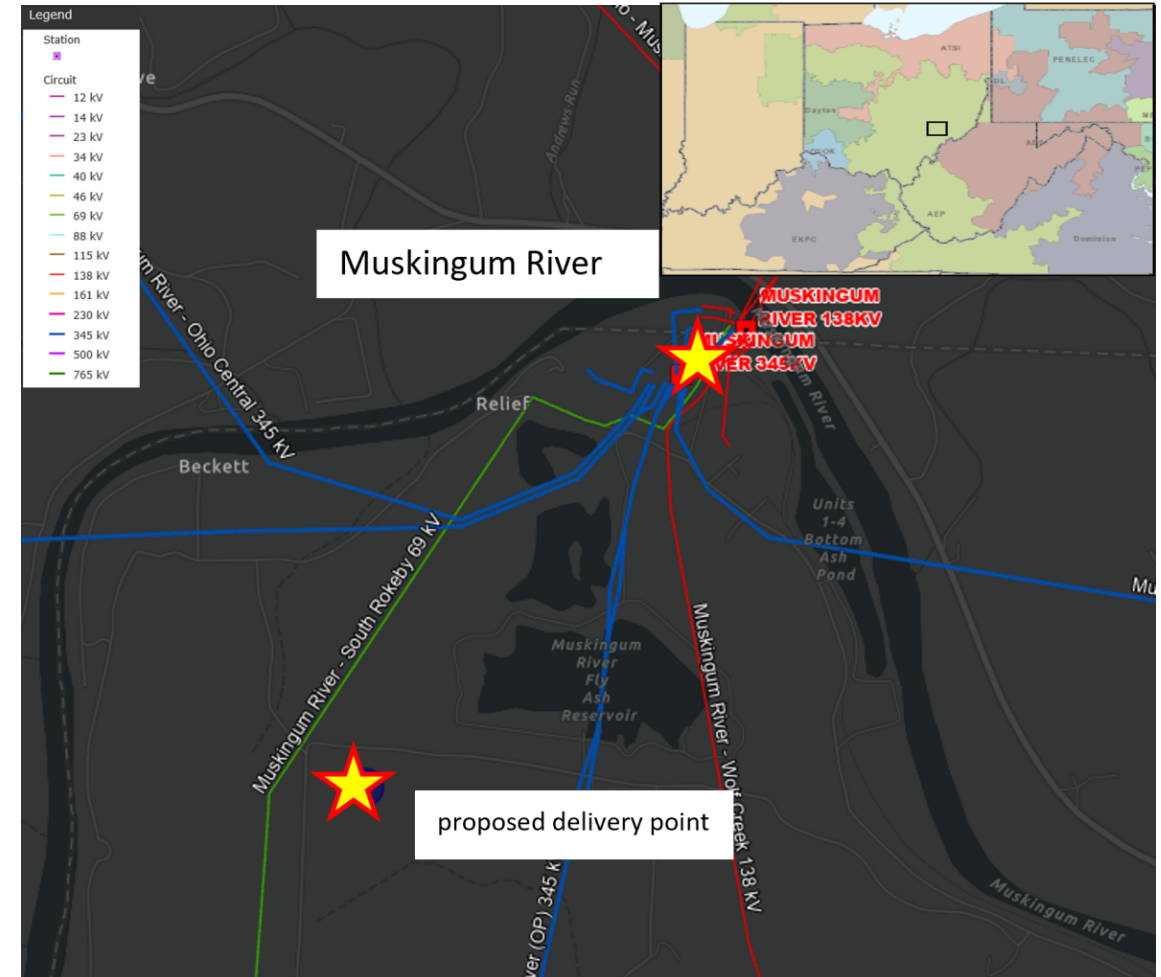
Project Driver: Customer Service

Specific Assumption References:

AEP Connection Requirements for the AEP Transmission System (AEP Assumptions Slide 12)

Problem Statement:

A Customer has requested 345 kV transmission service at a site near AEP's existing Muskingum station in Waterford, OH. Total demand to be served at the delivery point will be 1200MW. Customer requested in-service date of 11/1/2028.





AEP Transmission Zone M-3 Process Muskingum River 345kV Customer Delivery

Need number(s): AEP-2025-OH015

Process Stage: Solution Meeting 10/06/2026

Proposed Solution:

Muskingum River 345 kV

- Install 2 - 345 kV 4000A 63kA circuit breakers and metering at Muskingum River 345kV station.
- Estimated Cost: \$5.579 M

Muskingum River - Customer 345 kV

- Construct a greenfield ~1.78-mile 345 kV double circuit radial line to the customer station. The line will be designed for 2-bundle 954 ACSR Cardinal with (2) OPGW.
- Estimated Cost: \$14.995 M

Ratings MVA (SN/SE/WN/WE):

Muskingum River 345 kV

Muskingum River - Customer 345 kV

- Before Proposed Solution: N/A
- After Proposed Solution: 1402/1947/1772/2185

Alternatives Considered:

Tapping some of the 345kV lines in the area was evaluated, however considering the availability of 345kV breaker positions at Muskingum River, it was deemed as more cost effective to come directly out of the substation. Alternative cost: \$50M

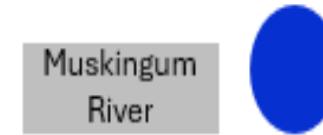
Transmission Cost Estimate: \$20.574 M

Projected In-Service: 11/01/2028

Project Status: Scoping

Model: 2030 RTEP

Existing:



Proposed:



Legend	
500 kV	
345 kV	
138 kV	
69 kV	
34.5 kV	
23 kV	
New	
Related	

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

09/25/2026 – V1 – Original version posted to pjm.com