

Transmission Expansion Advisory Committee Dayton Supplemental Projects

July 7th, 2026

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-2025-001

Process Stage: Solution Meeting 7/7/2026

Previously Presented: Need Meeting 2/04/2025, Solution Meeting 04/01/2025

Project Driver: Customer Request

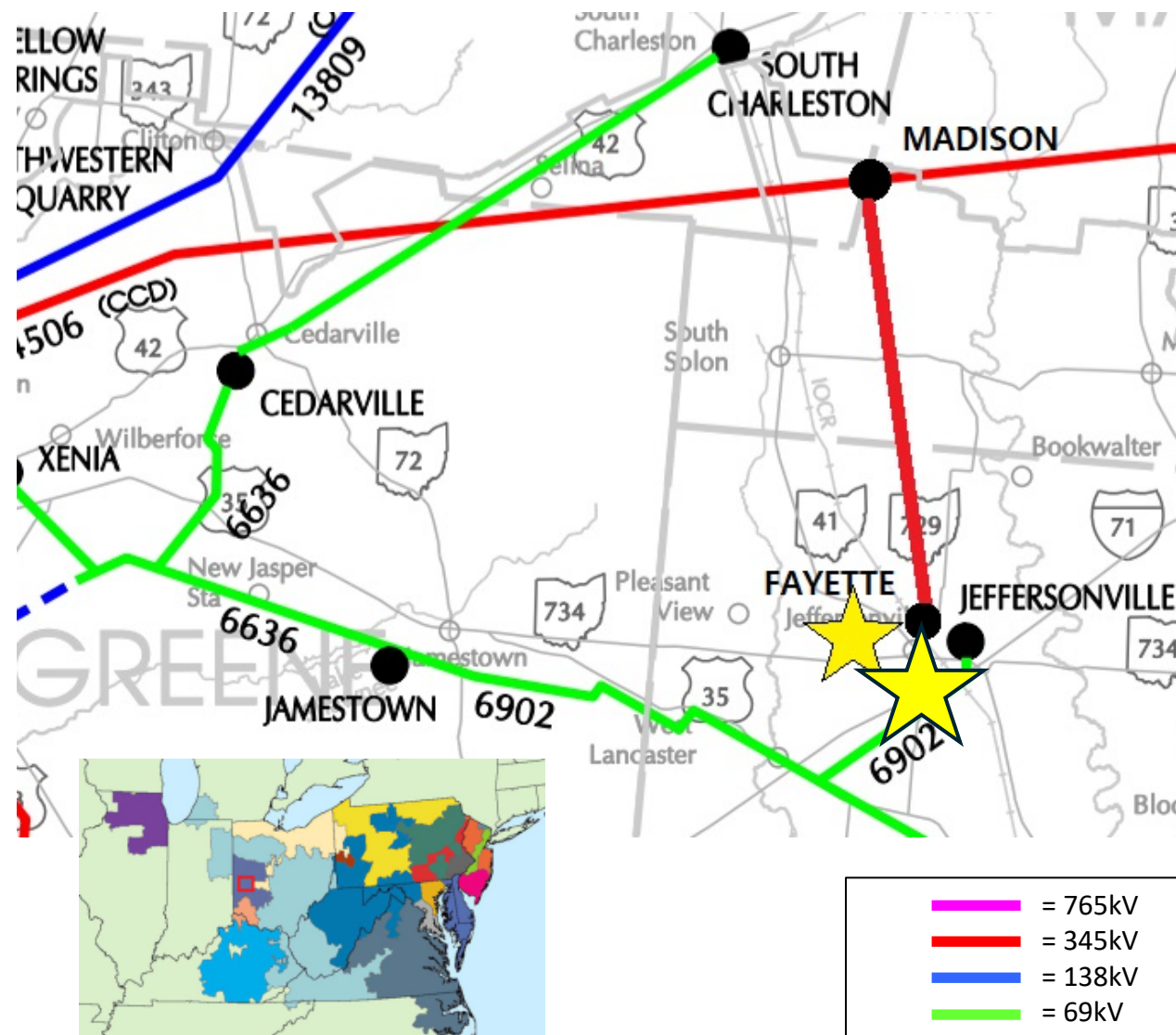
Specific Assumption Reference: Dayton Local Plan Assumptions (Slide 5)

Problem Statement:

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

Requested In Service Date	Total Requested New Load
9/2026	35 MW
9/2028	480 MW
1/2031	1.5 GW

Model: 2024 RTEP Series, 2029 Summer Case



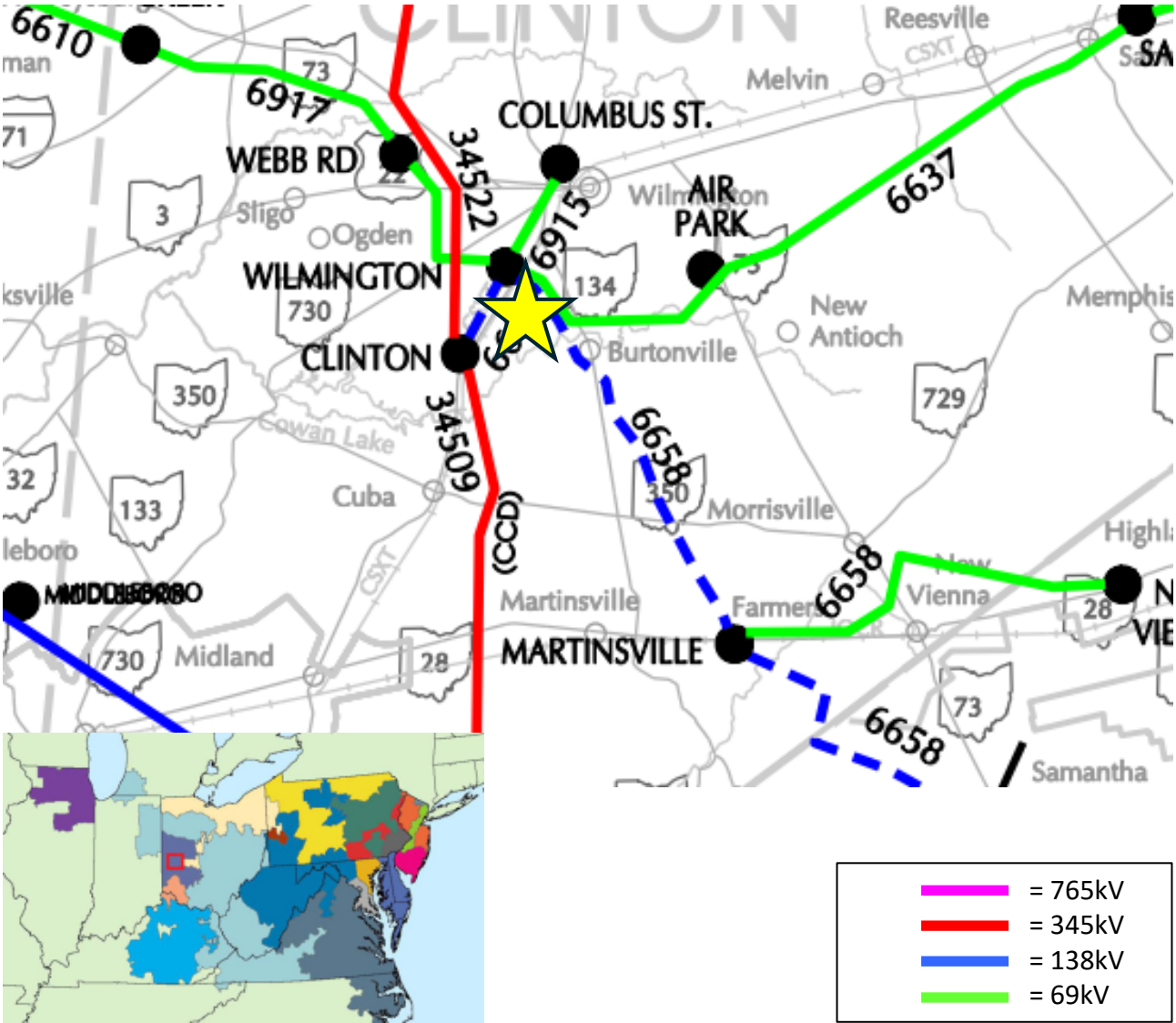
Need Number: Dayton-2025-002
Process Stage: Solution Meeting 7/7/2026
Previously Presented: Need Meeting 2/04/2025, Solution Meeting 04/01/2025
Project Driver: Customer Request
Specific Assumption Reference: Dayton Local Plan Assumptions (Slide 5)

Problem Statement:

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

Requested In Service Date	Total Requested New Load
1/2028	35 MW
4/2028	100 MW
1/2029	300 MW
1/2030	500 MW

Model: 2024 RTEP Series, 2029 Summer Case



Need Number: Dayton-2025-001, Dayton-2025-002 - UPDATE

Process Stage: Solution Meeting 7/7/2026

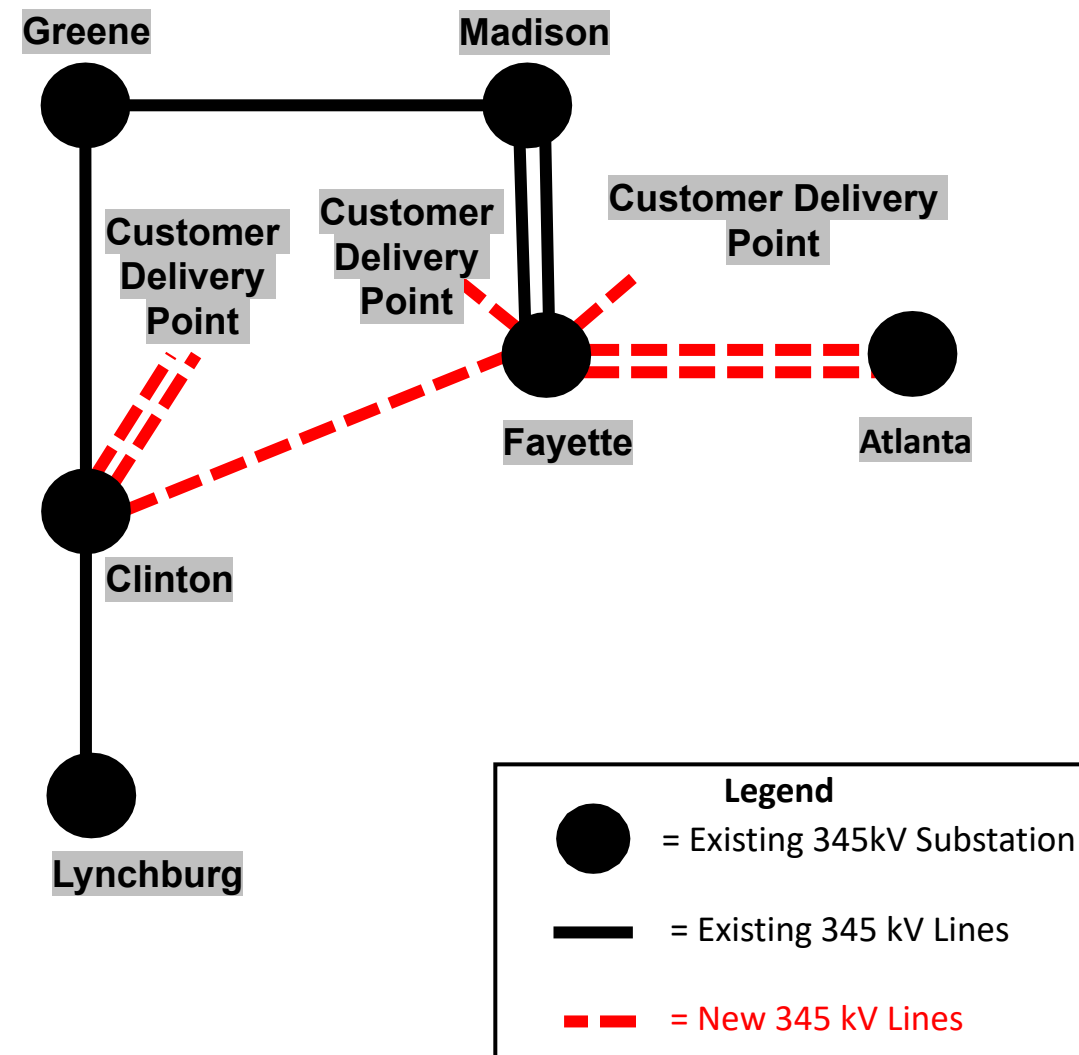
Previously Presented: Need Meeting 2/04/2025, Solution Meeting 04/01/2025

Project Driver: Customer Service

Specific Assumption Reference: Dayton Local Plan Assumptions

Selected Solution:

- **Fayette Substation:** Expand the Fayette 345 kV substation to breaker-and-a-half arrangement to accommodate the additional 345 kV lines and the customer feeds. Projected ISD: 10/30/2026 and a 300-MVAR capacitor (two steps of 150 MVAR) **Projected ISD: 1/1/2030 Estimated Cost : \$48M \$ 51.9M**
- **Atlanta Substation:** Reconfigure the Atlanta 345kV substation into a breaker-and-a-half arrangement to accommodate the 2 additional 345 kV lines. **Projected ISD: ~~9/1/2030~~ 04/13/2029 Estimated Cost : ~~\$36-M~~ \$ 24.3M**
- **Atlanta – Fayette 1 & 2:** Construct an ~ 25-mile 345 kV double circuit line from Atlanta substation to Fayette substation. The line is projected to be built with 2-1024.5 ACAR conductor and strung with OPGW for communications. New expected ratings, Fayette 345kV – Atlanta 345kV **SN: 1263 MVA, SE: 1561 MVA WN: 1750 MVA WE: 1954. Projected ISD: ~~10/30/2026~~ 04/13/2029 Estimated Cost : \$ ~~192-M~~ \$ 220.7M**
- **Customer Service Lines from Fayette 1-4:** Establish four ~0.5-mile 345 kV feed to the customer substations from AES's Fayette substation. These lines will be built with 2-1024.5 ACAR conductor and strung with OPGW for communications. **Projected ISD: ~~9/1/2030~~ 09/15/2026 Estimated Cost : \$9 M**
- **Clinton Substation:** Expand the Clinton 345 kV substation to accommodate the additional 345 kV line, 2 customer feeds, one 300-MVAR capacitor (two steps of 150 MVAR) **Projected ISD: ~~1/2028~~ 12/31/2028** and a new ~~250-MVAR Static VAR Compensator~~ one 150-MVAR STATCOM, **Projected ISD: 12/1/2030 Estimated Cost : ~~\$75-M~~ \$ 65.4M.**
- **Clinton - Fayette:** Construct an ~ 27-mile 345 kV single circuit from Clinton substation to Fayette substation. These lines will be built with 2-1024.5 ACAR conductor and strung with OPGW for communications. New expected ratings, Fayette 345kV – Clinton 345kV **SN: 1263 MVA, SE: 1561 MVA WN: 1750 MVA WE: 1954. Projected ISD: ~~12/1/2031~~ 01/18/2030 Estimated Cost : \$ ~~100M~~ \$ 187 M**



- **Customer Service Lines from Clinton 1 & 2:** Establish two ~2-mile 345 kV single circuit feeds to the customer substation from AES's Clinton substation. These lines will be built with 2-1024.5 ACAR conductor and strung with OPGW for communications.
Projected ISD: ~~1/30/2028~~ 12/31/2028 **Estimated Cost :** \$ 20 M
- Relocating the existing Clinton – Lynchburg 345 kV transmission Line. **Projected ISD:** 4/30/2028 **Estimated Cost :** \$ 3.2 M
- Relocating the existing Clinton – Greene 345 kV transmission Line. **Projected ISD:** 4/30/2028 **Estimated Cost :** \$ 8.3M

Total Estimated Transmission Cost : ~~\$480 M~~ \$589.8 M

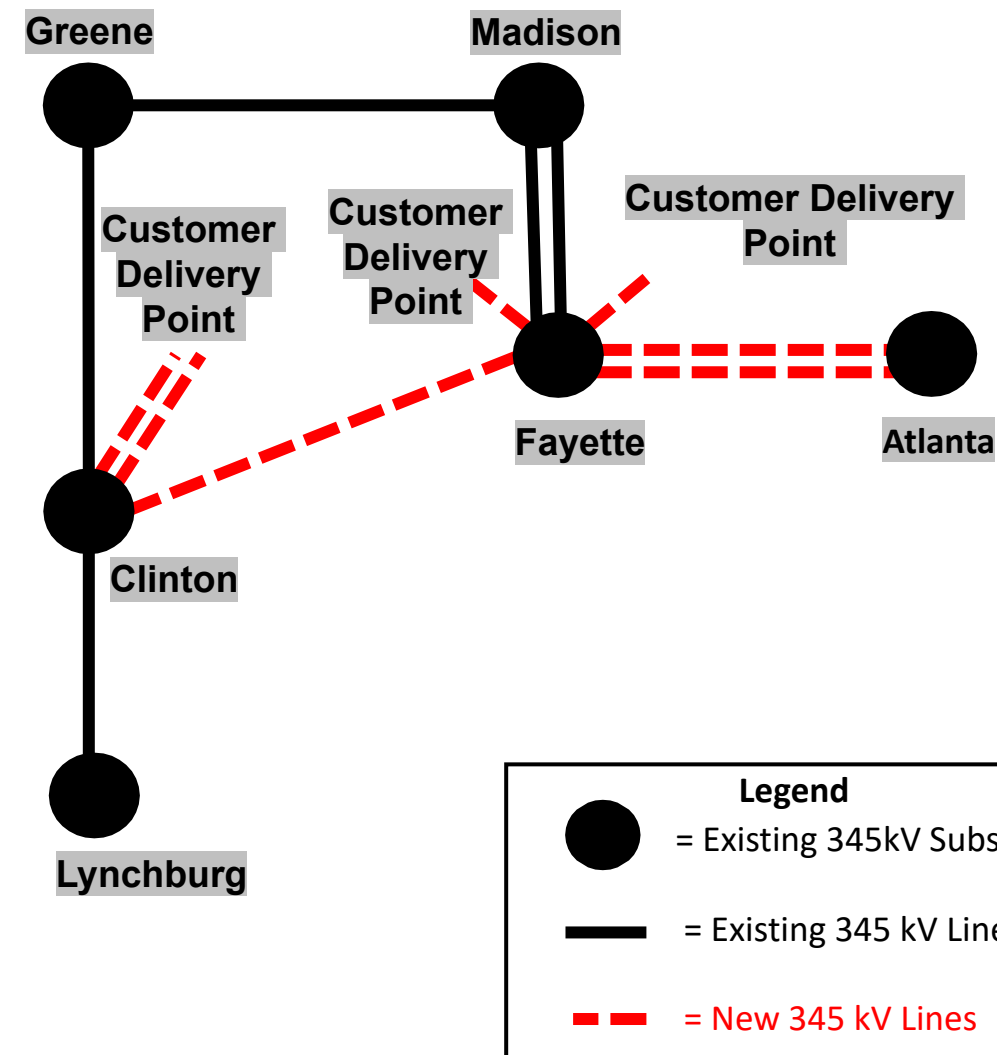
Projected In-Service: 01/2031

Project Status: ~~Conceptual~~ Engineering

Alternatives Considered:

- **Alternative 1:** Adding a second circuit between Clinton and Fayette, was not selected because adding a Static VAR Compensator at Clinton is more cost effective.
- **Alternative 2:** A single circuit from Atlanta to Fayette, was not selected because it would require significant reactive support at both Clinton and Fayette and causes overloads on the nearby AEP system.
- **Alternative 3:** Adding a Static VAR Compensator at Fayette, was not selected since it would require significantly more reactive support than at Clinton.

Model: 2024 RTEP Series, 2029 Summer Case



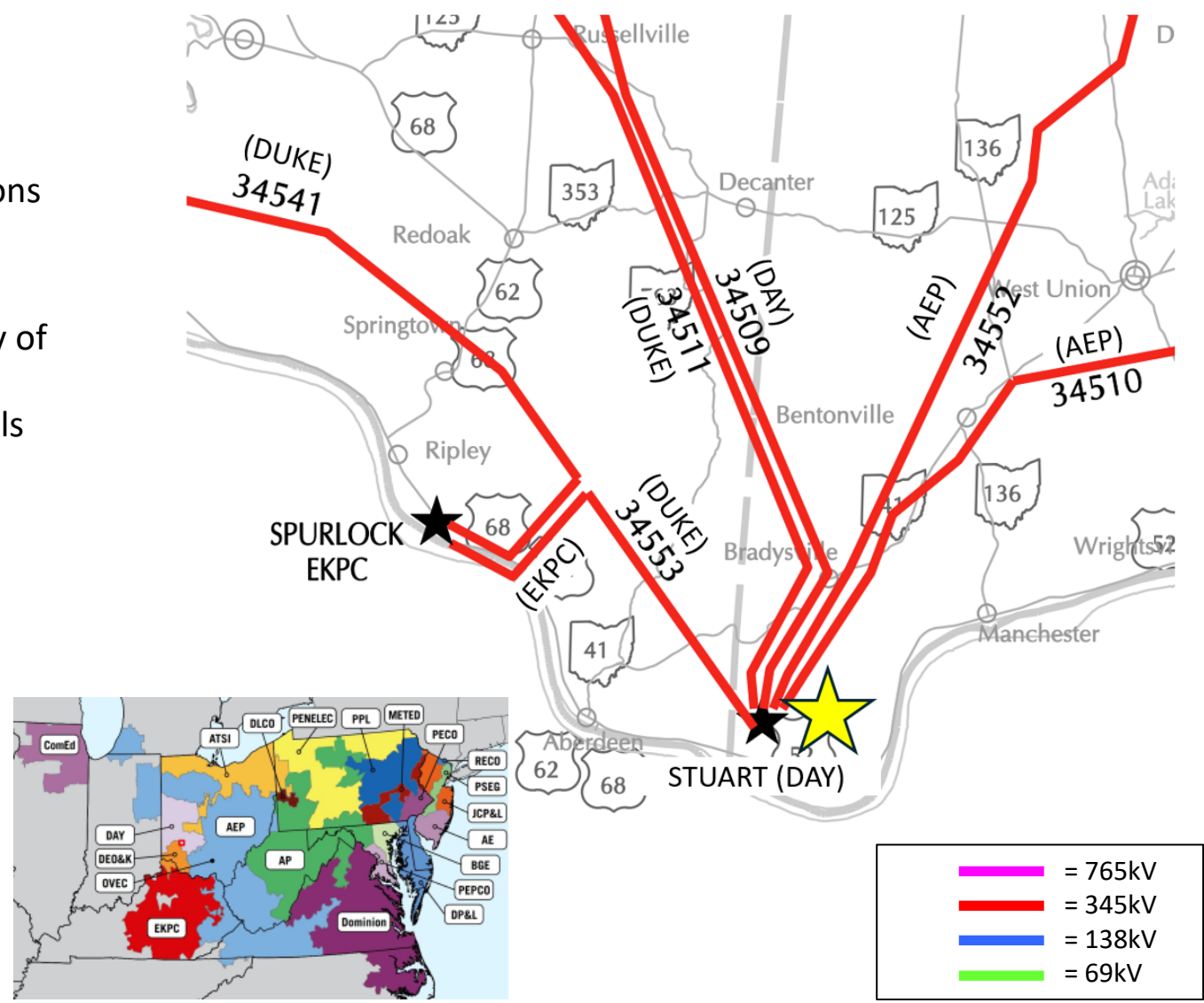
Need Number: Dayton-2026-001
Process Stage: Solution Meeting 7/7/2026
Previously Presented: Need Meeting, 2/3/2026
Project Driver: Customer Request
Specific Assumption Reference: Dayton Local Plan Assumptions

Problem Statement:

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

Requested In Service Date	Total Requested New Load
11/2028	100 MW
07/2029	400 MW
10/2030	700 MW
10/2031	1100 MW
03/2032	1300 MW

Model: 2024 RTEP Series, 2029 Summer Case



Need Number: Dayton-2026-001

Process Stage: Solution Meeting 7/7/2026

Previously Presented: Need Meeting, 2/3/2026

Project Driver: Customer Request

Specific Assumption Reference: Dayton Local Plan Assumptions

Solution:

- Extend two 345kV feeds (~2-miles each) from the existing Stuart 345 kV substation to the customer. **Estimated Cost: \$22.2 M**
- Expand Stuart Substation to accommodate the new 345 kV feeds to the customer. **Estimated Cost: \$29.5 M**

Transmission Line	SN	SE	WN	WE
Stuart – Customer Line 1	1263	1561	1750	1954
Stuart – Customer Line 2	1263	1561	1750	1954

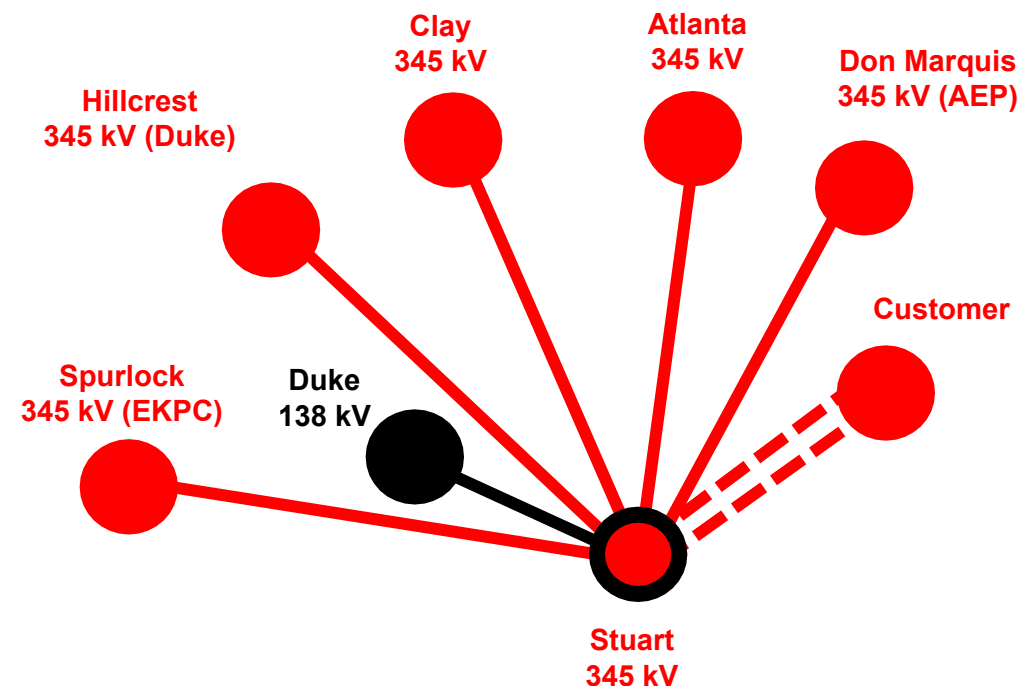
Estimated Cost: \$51.7M

Project In-Service Date: 11/01/2028

Alternatives: N/A

Project Status: Conceptual

Model: 2024 RTEP Series, 2029 Summer Case



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

6/26/2026 – V1 Original version posted to pjm.com