



# Transmission Expansion Advisory Committee DEOK Supplemental Project

August 10, 2021

# 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:** DEOK 2020-004

**Process Stage:** Needs Meeting 07-17-2020

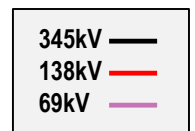
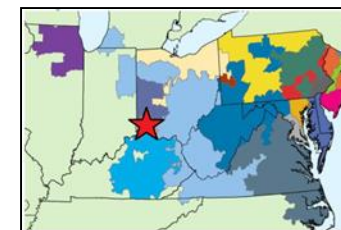
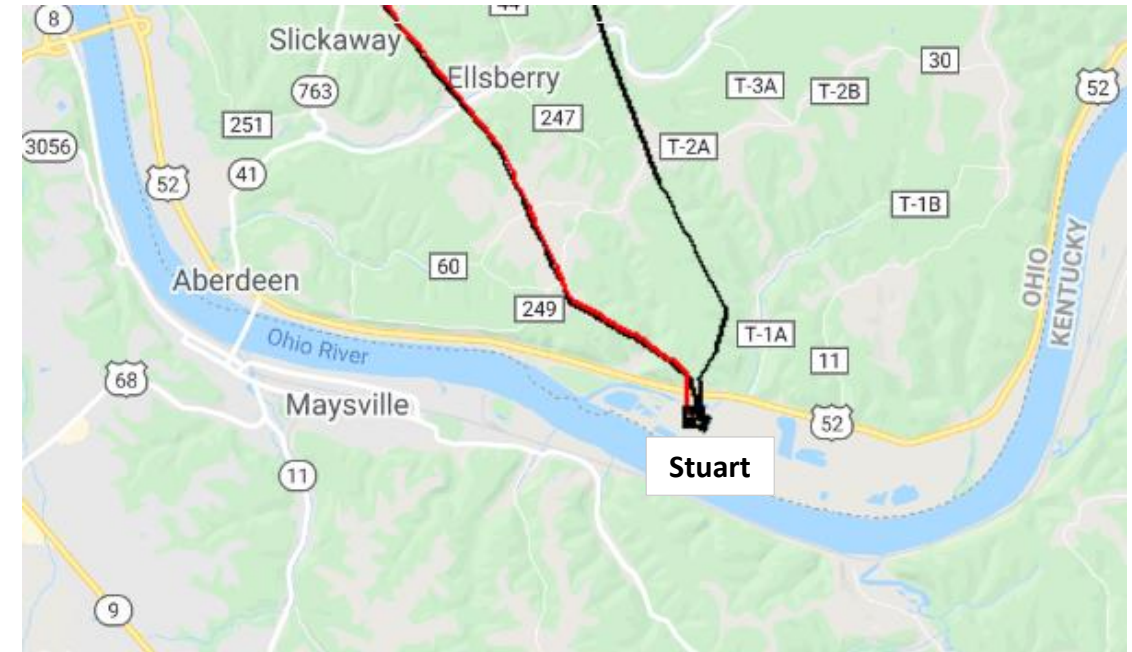
**Project Driver:** Equipment Condition, Performance and Risk, Operational Flexibility and Efficiency

**Specific Assumption Reference:**

Duke Energy Ohio & Kentucky Local Planning Assumptions slides 5-7

**Problem Statement:**

In the early 1960s Cincinnati Gas & Electric (Duke Energy), Columbus & Southern Ohio Electric (AEP) and Dayton Power & Light (AES) formed a joint venture to share the costs of building new power infrastructure. The construction of Stuart Station was one of the shared projects. In 2018 the joint venture was dissolved with the assets split among the companies. Duke Energy received the 138 kV section of the substation at Stuart. Going into service in the early 1970s, this section of the substation has a 345/138 kV transformer that is switch connected to a DP&L 345 kV bus, three 138 kV circuit breakers connected to a straight bus and a 138/69 kV transformer that is switch connected to an AEP feeder. Duke Energy needs to isolate, protect and control its section of the substation. The breakers are oil filled and obsolete.



**Need Number:** DEOK 2020-004

**Process Stage:** Solutions Meeting 08-10-2021

**Previously Presented:** Needs Meeting 07-17-2020

**Project Driver:** Equipment Condition, Performance and Risk, Operational Flexibility and Efficiency

**Specific Assumption Reference:**

Duke Energy Ohio & Kentucky Local Planning Assumptions slides 5-7

**Proposed Solution:**

Install a 345 kV breaker between the AES bus and the 345/138 kV transformer. Replace the three oil filled 138 kV breakers. Reconfigure the 138 kV bus into a three position ring. Terminate in the three positions the 345/138 kV transformer, the 138 kV feeder from Brown substation, and the 138/69 kV transformer. Install a 69 kV breaker connecting the 138/69 kV transformer to the AEP feeder. Build a new control building to house protection, controls and communications equipment. Install fencing to separate Duke Energy facilities from AES facilities.

**Estimated Transmission Cost:** \$9.4M

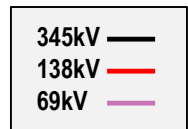
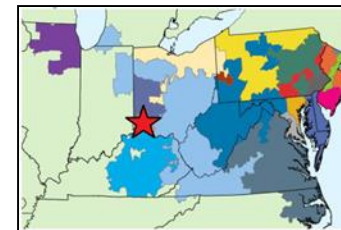
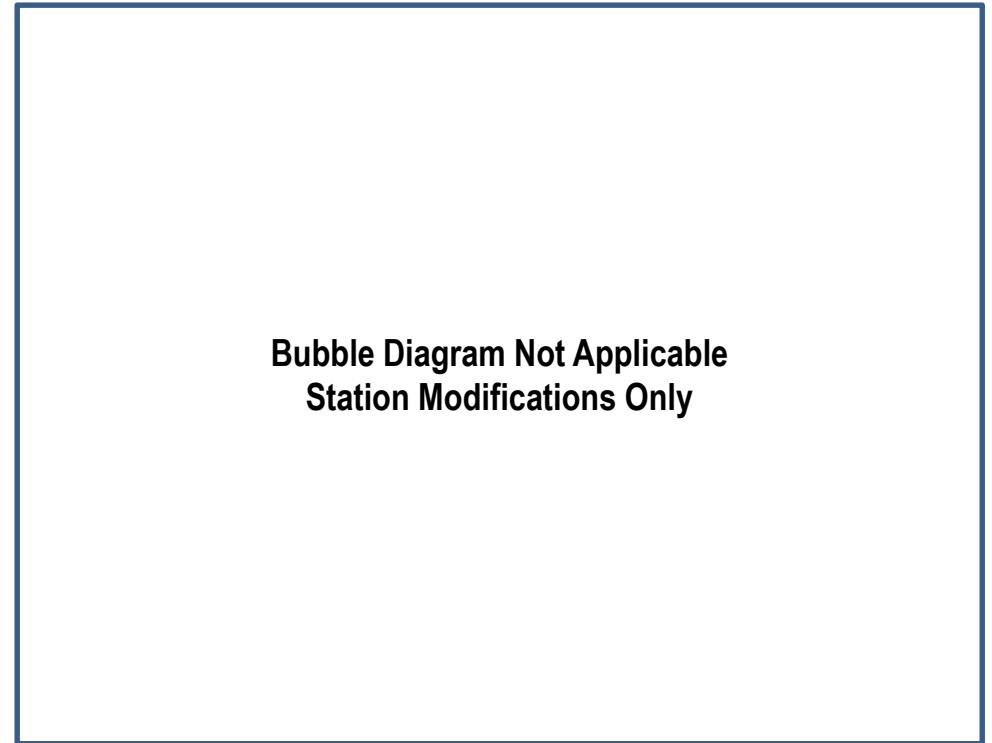
**Ancillary Benefits:** Operational options for switching, provides more options to deal with non-standard operating conditions, improves system's ability to absorb and recover from and interruption of service.

**Alternatives Considered:** None

**Projected In-Service Date:** 06-01-2023

**Project Status:** Scoping

**Model:** 2020 RTEP Summer



# 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

7/30/2021– V1 – Original version posted to pjm.com