

Sub Regional RTEP Committee: Western DEOK Supplemental Projects

January 20, 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



DEOK Transmission Zone M-3 Process Miami Fort – Clifty Creek

Need Number: DEOK-2023-001

Process Stage: Needs Meeting 01/20/2023

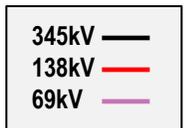
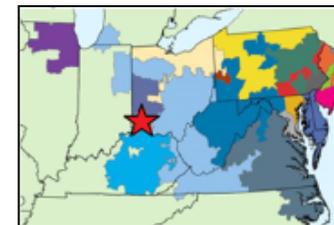
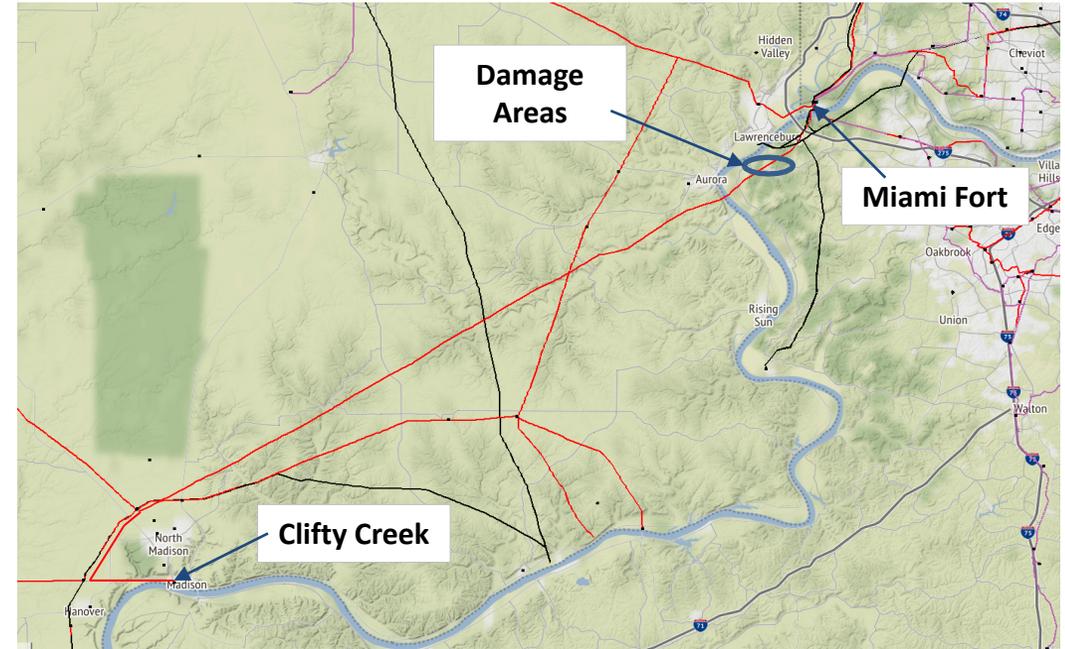
Project Driver: Equipment condition, performance and risk

Specific Assumption Reference:

Duke Energy Ohio & Kentucky Local Planning Assumptions slides 6-7

Problem Statement:

The 138 kV feeder from Miami Fort (Duke Energy) – Clifty Creek (OVEC) is 93 years old, 47 miles long, and constructed of single circuit lattice towers with 336 ACSR conductor. Near Petersburg, Kentucky a 2000 ft section of static failed dropping onto the B phase conductor. The breaker at Clifty Creek opened due to the fault. The protection at Miami Fort failed to operate which caused B phase to see 900 Amps. The line is rated at 542 Amps. After fifteen minutes, nine miles west of the initial static failure, a B phase conductor failed falling to the ground. Flexing of the towers snapped two statics. 3700 ft of line is damaged at this location. An analysis of the failed conductor was performed. Visual inspection found extensive corrosion and pitting on the outer conductor. Rust was noted to various degrees on the steel core. Tensile testing on the core showed breaking strength approximately 26% lower than the ASTM requirement. Zinc coating was found to have an area density 15% lower than the required minimum. We believe these test results to be indicative of the condition of the remaining line.



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

1/6/2022 – V1 – Original version posted to pjm.com

1/20/2022 – V2 – Slide #3, corrected typo “Preformed” to “Performed”