PJM RTEP – 2017 Window 1

Maddox Creek – Southwest Lima 345 kV Line

A proposal to PJM Interconnection, Submitted August 25, 2017

Submitted by

American Electric Power "AEP" Transmission

1 Riverside Plaza, Columbus, Ohio 43215-2372

A. Executive Summary

American Electric Power ("AEP") submits this proposal (the "Project") to PJM Interconnection, LLC ("PJM") in response to the *PJM RTEP 2017 Project Proposal Window 1*. AEP seeks to be considered the Designated Entity for the project described within this Proposal. As the Designated Entity AEP is proposing to construct, own, operate and maintain the proposed 345 kV lines and associated station assets. The Project should be considered as a whole.

AEP submits the "Maddox Creek – Southwest Lima 345 kV Line" proposal to address overloads identified during the 2022 winter generator deliverability analysis on the Maddox Creek – East Lima 345 kV Circuit 1 under NERC Category P1-2 contingency conditions.

AEP proposes to establish a new Maddox Creek – Southwest Lima 345 kV circuit by constructing a greenfield single circuit 345 kV line, approximately 28.5 miles long, between Maddox Creek and Southwest Lima stations near Lima, OH. In addition, installation of two 345 kV circuit breakers (CBs) at Maddox Creek and one 345 kV CB at Southwest Lima stations is proposed. AEP also proposes to rebuild the RP Mone to Maddox Creek 345 kV line (9.3 miles) using Bundled 2-954 ACSS Cardinal conductors. Total project cost is estimated to be $111,637,875 (in 2017 dollars) with an in-service date of December 1, 2022.

The project proposes to address following overloads identified by PJM:

Flow Gate Number	Study Type	Overloaded Branch	Rating (MVA)	AC Overload %	Contingency Definition
GD-W92	Winter Gen Deliv	Maddox Creek – East Lima 345 kV #1	1286	103.23	AEP_P1-2_#7441 Loss of Marysville – Sorenson 765 kV #1

Table 1: Addressed Contingencies Identified by PJM

The generation deliverability overload on the Maddox Creek – East Lima 345 kV line occurs for the loss of the Marysville – Sorenson 765 kV line. The Project creates a new 345 kV path between Maddox Creek and Southwest Lima, providing an additional parallel path to the 765 kV line that causes the overload when outaged. The additional parallel path results in higher West to East flows on the RP Mone to Maddox Creek circuit, resulting in an additional overload in the winter generator deliverability analysis. Rebuilding that circuit alleviates that overload. The greenfield portion of the Project will require very limited facility outages as it involves mostly in the clear construction. The rebuild of the RP Mone to Maddox Creek 345 kV line will require the existing line to be outaged during construction.

B. Company Evaluation Information

AEP is located at 1 Riverside Plaza in Columbus, Ohio. Specific contact information is provided below:

Primary Contact	Kamran Ali Director, Transmission Planning	AEP 1 Riverside Plaza Columbus, Ohio 43215-2372 Telephone: 614-933-2122 Email Address: kali@aep.com
Secondary Contact	Takis Laios Manager, Transmission Asset Strategy	AEP 1 Riverside Plaza Columbus, Ohio 43215-2372 Telephone: 614-716-3462 Email Address: tlaios@aep.com

AEP has been pre-qualified to be a Designated Entity for transmission projects in PJM under section 1.5.8 (a) of the PJM Operating Agreement. The pre-qualification information is contained in the document submitted to PJM on April 29, 2013, entitled Pre-Qualification Application of American Electric Power and Certain Affiliates. This document is on record with PJM and posted on the PJM website, with PJM pre-qualification ID of 13-05. PJM confirmed the pre-qualified status of AEP in a letter dated July 7, 2013. As required annually, AEP has reviewed this information and an Addendum to this posted document was submitted to PJM on September 30, 2016. PJM reaffirmed the pre-qualified status of AEP in a letter dated October 27, 2016.

AEP will bring to bear their talents, resources, and capabilities to execute the Project. These capabilities are detailed in AEP's prequalification submittal to PJM.

C. Proposed Project Constructability Information

Redacted.

D. Analytical Assessment

Redacted.

E. Cost

Redacted.

F. Schedule

Redacted.

G. Operations/Maintenance

Redacted.