

Ameren Transmission Company of Illinois's
Response to Neighbors United Data Request

In the Matter of the Application of Ameren Transmission Company of Illinois for Other Relief or, in the Alternative, a Certificate of Public Convenience and Necessity Authorizing it to Construct, Install, Own, Operate, Maintain and Otherwise Control and Manage a 345,000-volt Electric Transmission Line from Palmyra, Missouri, to the Iowa Border and an Associated Substation Near Kirksville, Missouri.
Data Request

Data Request No.: NU-A9 - Jennifer Hernandez

For the three 161 kV line segments with projected voltage violations under NERC Category C contingency conditions, answer the following questions:

Describe the nature (transmission and substation elements affected) and magnitude (in MVA) of the NERC violations under the Category C contingencies on each of the three 161 kV line segments.

RESPONSE

Prepared By: Dennis Kramer
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Date: October 10, 2015

The low voltage conditions that could result in the loss of both Ameren Missouri and Cooperative customer load in the northeastern Missouri area occur when two of the three existing 161 kV lines that supply that area are out of service during peak load conditions. This event could result in loss of customer load and would be a NERC Category C contingency condition.

During the development of the MVP portfolio, MISO (at that time named the Midwest ISO) performed a system analysis to identify facility overloads and resultant NERC contingency conditions that would be created by connecting additional wind generation resources to the existing 161 kV system in northeastern Missouri. MISO's analysis indicated that the Mark Twain Project was the best solution to address the overload conditions.

Describe the nature (transmission and substation elements affected) and magnitude (in MVA) of the NERC violations under the Category C contingencies on each of the three 161 kV line segments.

A NERC Category C contingency condition occurs when two of the existing 161 kV lines that supply the northeastern Missouri area are out of service during peak load conditions. This causes low voltage conditions that could result in the loss of up to approximately 300 MVA of customer load. The low voltage conditions are not caused by overloads on the 161 kV line segments and are not expressed as MVA.

The MISO analysis of the impact of connecting additional wind generation resources to the existing 161 kV system in northeastern Missouri identified facility overloads and the results of this analysis are contained in publically available MISO materials.