

PJM RTEP-2016 RTEP Proposal Window #2

Russ 345/138 kV Station Project

A Proposal to PJM Interconnection August 15, 2016

Submitted by

Transource® Energy, LLC

1 Riverside Plaza, Columbus, Ohio 43215-2372





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A. Executive Summary

Transource® Energy, LLC (Transource) is pleased to provide the following proposal to PJM in response to the *PJM RTEP-2016 RTEP Proposal Window #2 Problem Statement & Requirements Document*. Transource was specifically formed as a joint venture between subsidiaries of American Electric Power Company (AEP) and Great Plains Energy Incorporated (GPE) to participate in competitive processes for transmission development and to provide benefits to transmission customers through the planning, construction, and ownership of high quality, low cost transmission infrastructure. Transource is located at 1 Riverside Plaza in Columbus, Ohio.

A.1. General Description of Proposed Project

Transource proposes to build the “Russ 345/138 kV Station Project” (or, “the Project”) in Lynchburg, Ohio. The Project will establish a new 345/138 kV Station with a single transformer. In addition, as part of this proposal we will be installing a second 345/138 kV transformer at the existing Foster Station (DEOK). Russ Station will tap the existing Clinton – Stuart 345 kV line about 10.8 miles south of Clinton Station, the Hillsboro – Warren 138 kV line, and the Hillsboro – Hutchings 138 kV line.

Transource has completed the necessary preliminary project development work to determine project constructability, preliminary cost estimates, and a conceptual project schedule. Experienced AEP engineering, siting, permitting, project management, and construction personnel were the primary resources for this work.

A.2. Reliability Problem(s) Proposed to Resolve

The Project addresses the planning criteria violation(s) listed below:

PJM Generation Deliverability Violations										
FG #	Fr Bus	Name	To Bus	Name	CKT	KVs	Areas	FN AC %	Cont Label	Cont Type
897	248009	06CLIFTY	250057	08M.FORT	1	138/138	206/212	102.96	'AEP_P7-1_#632'	tower
905	342661	4SPUR-KENT-R	324267	4KENTON	1	138/138	320/363	101.7	'EKPC_P7-1_SPUR 345 DBL'	tower
906	342664	4SPURLOCK	342661	4SPUR-KENT-R	1	138/138	320/320	101.69	'EKPC_P7-1_SPUR 345 DBL'	tower
907	250138	08NICKEL	250122	08WARRN1	1	138/138	212/212	101.35	'DEO&K P7-1 CIRCUI56098.4515FOSTERGARVER'	tower
1137	248009	06CLIFTY	250057	08M.FORT	1	138/138	206/212	102.09	'AEP_P4_#1760_05JEFR50 765'	breaker
PJM N-1-1 Violations										
FG #	Fr Bus	Fr Name	To Bus	To Name	CKT	KVs	Areas	AC Ld(%)	Contingency 1	Contingency 2
N2-T6	249574	08TDHNTR	250109	08TODM17	1	345/138	212/212	107.51	'DEO&K P1-* P2-1 TODHUNTER 345/138 TB15'	'DEO&K P1-* P2-1 TODHUNTER 345/138 TB16'
N2-T7	249574	08TDHNTR	250108	08TODM16	1	345/138	212/212	100.24	'DEO&K P1-* P2-1 TODHUNTER 345/138 TB15'	'DEO&K P1-* P2-1 TODHUNTER 345/138 TB17'
N2-T8	249574	08TDHNTR	250109	08TODM17	1	345/138	212/212	106.69	'DEO&K P1-* P2-1 TODHUNTER 345/138 TB16'	'DEO&K P1-* P2-1 TODHUNTER 345/138 TB15'
N2-T9	249574	08TDHNTR	250107	08TODM15	1	345/138	212/212	105.19	'DEO&K P1-* P2-1 TODHUNTER 345/138 TB16'	'DEO&K P1-* P2-1 TODHUNTER 345/138 TB17'

Table 1. Addressed Contingencies Identified by PJM

The generation deliverability thermal overloads on Clifty Creek – Miami Fort, Spurlock – Kenton, and Nickel – Warren are all alleviated with this project by providing additional 345 kV sources to the 138 kV system in the area. In addition, the N-1-1 thermal overloads on the Todd Hunter 345/138 kV transformers and the Port Union – Eprovi 138 kV lines are alleviated with this project.

Furthermore, Transource performed analysis of existing and new contingencies that the Project may create and found no planning criteria violations.

A.3. Overall Schedule Duration

The Project is expected to be placed in service 42 months after execution of the PJM Designated Entity Agreement (DEA). Assuming the DEA is executed by January 1, 2017, Transource could place the Project in-service July 2020.

A.4. Overview of Cost Estimate

The estimated capital cost of the Project is approximately \$17,297,940 (in 2016 dollars). This estimated cost includes all Project components, including work that PJM may consider as upgrades. Please refer to Section E of this proposal for details on the project cost.

A.5. Designated Entity Statement of Intent

Transource seeks to be considered the Designated Entity for the Project described within this Proposal to design, construct, own, operate, and maintain the facilities and assets, subject to determination regarding components deemed upgrades by PJM.

A.6. Designated Entity Status/Pre-Qualification

Transource 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 Transource in a letter dated July 7, 2013. As required annually, Transource has reviewed this information and determined that no updates are required.

B. Company Evaluation Information

Transource Energy, LLC is located at 1 Riverside Plaza in Columbus, Ohio. Specific contact information is provided below.

B.1. Transource Contacts

Primary Contact	Robert Cundiff Manager, Transource Business Development	Transource Energy, LLC 1 Riverside Plaza Columbus, Ohio 43215-2372 Telephone: 614-716-2076 Email Address: rjcundiff@aep.com
Secondary Contact	Takis Laios Manager, Transmission Asset Strategy	Transource Energy, LLC 1 Riverside Plaza Columbus, Ohio 43215-2372 Telephone: 614-716-3462 Email Address: tlaios@aep.com

B.2. Transource Qualifications

Transource 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 Transource in a letter dated July 7, 2013. As required annually, Transource has reviewed this information and determined that no updates are required.

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

B.3. Overview of Transource Energy

Transource was formed to pursue the development of competitive transmission projects in marketplaces initiated by the implementation of FERC Order No. 1000. AEP owns 86.5 percent of Transource, and GPE owns 13.5 percent. The combined strengths of AEP and GPE in engineering, project management, procurement, project development, construction, operation and maintenance will result in effective and efficient delivery of transmission solutions that benefit transmission customers.

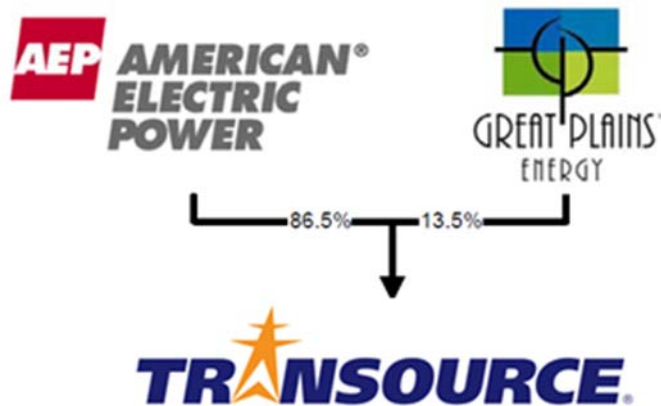


Figure 1. Summary of Transource Ownership Structure

Transource is currently developing two Southwest Power Pool (SPP) approved transmission projects in the state of Missouri through its subsidiary Transource Missouri LLC (Transource Missouri). The Iatan-Nashua 345 kV Transmission Project was recently placed into service, and the Sibley-Nebraska City 345 kV Transmission Project is currently under construction. Transource received approval from the Federal Energy Regulatory Commission (FERC) of a formula rate and certain incentives for Transource Missouri in FERC Docket No. ER12-2554. Transource Missouri also received approval from the Missouri Public Service Commission of a settlement filed in File No. EA-2013-0098 for a line Certificate of Convenience and Necessity to finance, construct, own, operate and maintain these projects.

In addition to these two projects in Missouri, Transource was recently awarded PJM’s largest-ever market efficiency project on the Pennsylvania-Maryland border in the eastern portion of PJM. Transource is also developing the Thorofare Creek Area Project in central West Virginia as part of PJM’s 2014 Regional Transmission Expansion Plan.

The figure below provides a snapshot of the states in which Transource’s owners, AEP and GPE, currently own or are developing transmission assets.

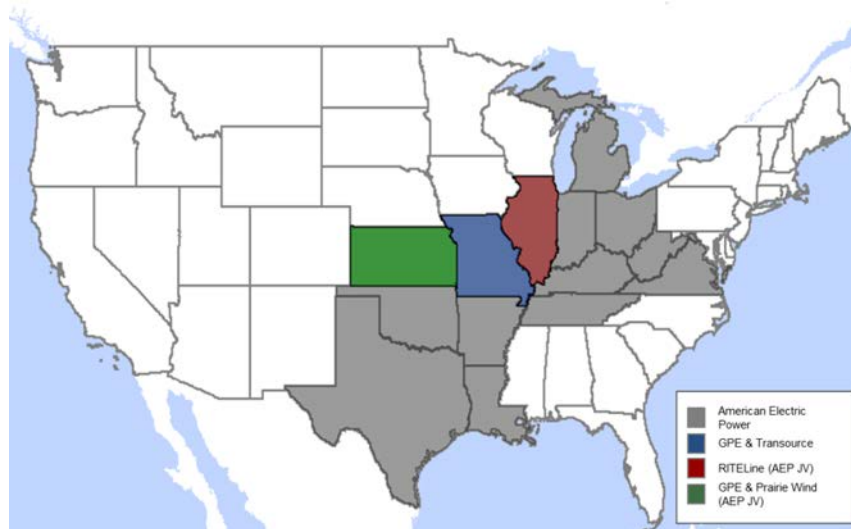


Figure 2. Combined Transmission Presence

C. Proposed Project Constructability Information

[REDACTED]

D. Analytical Assessment

[REDACTED]

E. Cost

[REDACTED]

F. Schedule

[REDACTED]

G. Operations/Maintenance

G.1. Operational Plan

Transource is flexible regarding Project operations that can be provided using one of the following approaches:

- Transource can operate the new facilities directly using the capabilities of the AEP Transmission Operations (TOps) organization.
- Transource can work with the incumbent transmission owner to facilitate their operations of the new facilities.

The TOps organization operates from a state-of-the-art System Control Center (SCC) located in New Albany, Ohio. AEP TOps also operates five Transmission Operations Centers that coordinate transmission switch orders and interface with field personnel. The SCC and Transmission Operations Centers are staffed with NERC and PJM-Certified operators.

Operator tools include a State Estimator covering AEP's 11-state transmission system, real-time contingency analysis, and visualization and situational awareness tools. TOps has a back-up control center that can be staffed and fully functional within one hour from declaration of an emergency. TOps completes approximately 18,000 switching jobs totaling over 200,000 switching steps with an accuracy rate exceeding 99.99 percent annually.

G.2. Maintenance Plan

[REDACTED]



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