

**PJM RTEP-2016 RTEP Proposal Window #1**

**Carson-Rogers Road 500 kV Project**

**A Proposal to PJM Interconnection, Submitted April 1, 2016**

Submitted by

**Transource® Energy, LLC**

**1 Riverside Plaza, Columbus, Ohio 43215-2372**







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*Carson-Rogers Road 500 kV Project*

## 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 #1 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 “Carson-Rogers Road 500 kV Circuit #2 Project” (or, “the Project”) in southern Virginia. The Project will establish a 28.5 mile 500 kV single circuit transmission line from the existing Carson Station to the existing Rogers Road Station. There are no greenfield substation facilities to be constructed as part of this proposal.

Transource has completed the necessary preliminary project development work to determine project constructability, preliminary cost estimates, and a construction 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:

FG	Fr Bt	Name	To Bt	Name	Ck	KV	Area	Rati	FN DC	FN AC	Cont Lab	Cont Typ	FN ACID	Limiting Equipment	End of Life Facili
102	314940	ROGERS RD	314902	0CARSON	1	500/500	345/345	3219	105.83	102.91	LN 51T	single	AC	Conductor Limiting	Long Term (>10 years)

Table 1. Addressed Contingencies Identified by PJM

The generation deliverability thermal overload on the Carson-Rogers Road 500 kV circuit occurs for the loss of the Carson-Rawlings 500 kV line. The Project adds a second Carson-Rogers Road 500 kV line in parallel with the existing line, eliminating the overload.

The Project has the added benefit of allowing the existing Carson-Rogers Road 500 kV line to be retired and removed when it reaches its end-of-life limit without causing additional planning criteria violations. 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 overall schedule duration is expected to 42 months after award by PJM. Assuming a project award date of January 1, 2017, Transource could place the project in-service June 2020. Please refer to Section F of this proposal for more details on the proposed schedule.

### **A.4. Overview of Cost Estimate and Cost Commitment**

The estimated capital cost of the Project is approximately \$70,548,000 in 2016 dollars. This estimated cost includes all components of the Project, including work that PJM may consider as upgrades. Please refer to Section E of this proposal for details on the project cost [REDACTED].

### **A.5. Designated Entity Statement of Intent**

Transource seeks to be considered the Designated Entity for the project described within this Proposal to engineer, design, construct, own, operate, and maintain 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 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.

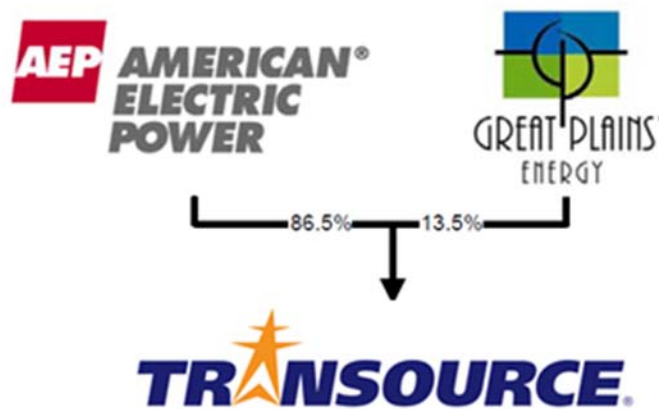


Figure 1. Summary of Transource Ownership Structure

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. In addition, Transource Missouri 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.

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

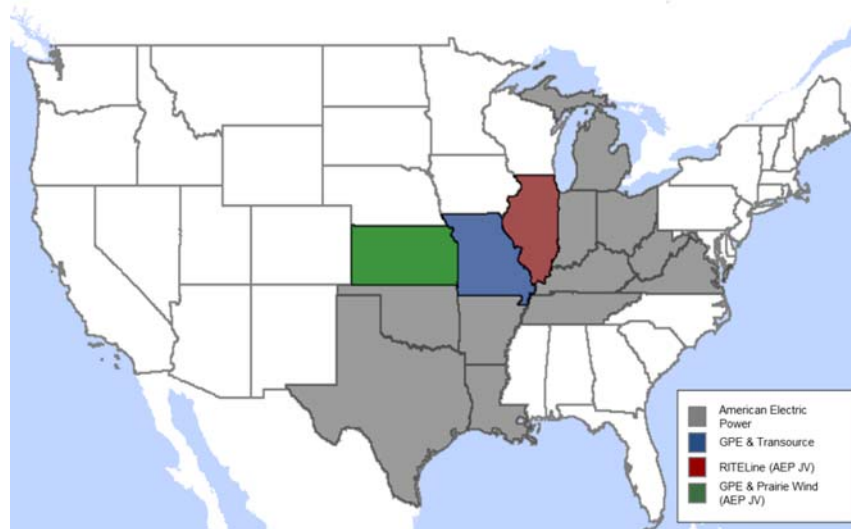


Figure 2. Combined Transmission Presence

## C. Proposed Project Constructability Information

[REDACTED]

## D. Analytical Assessment

[REDACTED]



## E. Cost

[REDACTED]

## F. Schedule

The project schedule shown below is a conceptual schedule for the Project. It shows that the project can be completed in approximately 42 months after award from PJM. Assuming a project award date of January 1, 2017, Transource could place the project in-service June 2020.

[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

Upon placing the Project into service, Transource will maintain the new facilities by using AEP resources or by utilizing an experienced contract partner to provide the maintenance, switching, first responder, and emergency restoration services for the proposed facilities. AEP has experienced transmission line support resources located near Roanoke, Virginia that can readily provide the necessary services. In addition, AEP has numerous contract resources that have a physical presence in the region, a reputation for performing quality work, and the ability to respond expediently to operational issues should that need arise.



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