

PJM RTEP - 2015 Project Proposal Window

Burma-Piney 115 kV Project

A Proposal to PJM Interconnection, Submitted August 4, 2015

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-2015 RTEP 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 “Burma-Piney 115 kV Project” (or, “the Project”) in western Pennsylvania.

The Project includes the following:

- Construct approximately 4.3 miles of new 115 kV line establishing a Burma-Piney 115 kV Circuit #2.
- Install a new 250 MVA, 138/115 kV transformer at Burma station located on the Burma #2 138 kV bus. Install a single 138 kV circuit breaker¹ for high side protection of the new transformer. The low side of the new transformer will directly serve the new 115 kV line to Piney.
- Extend the 115 kV bus at Piney station and terminate the new Burma-Piney 115 kV Circuit #2 into a new single 115 kV circuit breaker position.
- Remote-end relaying changes at Burma station for the new Burma-Piney 115 kV Circuit #2.
- Remote-end relaying changes at Piney station for the new Burma-Piney 115 kV Circuit #2.

¹ Please note: There was a typographical error in the *Executive Summary* submitted to PJM on July 20, 2015 that incorrectly identified this circuit breaker as 115 kV.

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

For the purpose of this proposal, Transource developed a Conceptual Route based on a desktop review of publicly available data. The Conceptual Route was used as the basis for the designs and estimates contained in this proposal. However, the Conceptual Route is not intended to represent a preferred, alternate or final route for purposes of the applicable siting, permitting and other regulatory approval processes.

A project study area map and conceptual one-line diagram for the Project are provided below. Please note that this proposal contains multiple graphics that are available in high-resolution format upon request.

[Redacted]

Figure 1. Project Study Area Map

[Redacted]

Figure 2. Conceptual One-Line Diagram

Attachment 1 of this Proposal includes the required analytical files as set forth in the *PJM RTEP – 2015 RTEP Proposal Window 1 Problem Statement & Requirements* document. Attachment 2 of this Proposal includes the required *2015 RTEP Proposal Window Template*.

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

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

2020 PJM N-1-1 AC Voltage Drop Results									
FG #	Bus #	Name	KV	Area	ContVolt	BaseVolt	Vdrop(%)	Contingency 1	Contingency 2
N2-VD41	200583	26PINEY	115	226	0.8815	0.9948	11.33	'B2-TIE-115-103'	'B3-PN-115-068'
N2-VD42	200584	26GRANDVW	115	226	0.8742	1.006	13.18	'B2-TIE-115-103'	'B3-PN-115-068'
N2-VD43	200585	26TITUSVIL	115	226	0.8986	1.0044	10.58	'B2-TIE-115-103'	'B3-PN-115-068'
N2-VD44	200587	26CLRK SUM	115	226	0.8648	1.0043	13.95	'B2-TIE-115-103'	'B3-PN-115-068'
N2-VD45	200633	26HAYNIE	115	226	0.874	0.9959	12.19	'B2-TIE-115-103'	'B3-PN-115-068'
N2-VD48	200583	26PINEY	115	226	0.8819	0.995	11.31	'B3-WP-138-033'	'B3-PN-115-068'
N2-VD49	200584	26GRANDVW	115	226	0.8745	1.0062	13.17	'B3-WP-138-033'	'B3-PN-115-068'
N2-VD50	200585	26TITUSVIL	115	226	0.8988	1.0045	10.57	'B3-WP-138-033'	'B3-PN-115-068'
N2-VD51	200587	26CLRK SUM	115	226	0.865	1.0044	13.94	'B3-WP-138-033'	'B3-PN-115-068'
N2-VD52	200633	26HAYNIE	115	226	0.8744	0.9961	12.17	'B3-WP-138-033'	'B3-PN-115-068'

Table 1. Addressed Contingencies Identified by PJM

The N-1-1 voltage drop issues that PJM identified occur when an outage of the existing Burma-Piney 115 kV circuit and/or Burma 138/115 kV transformer is followed by an outage of the Eclipse 115/34.5 kV #2 transformer, which removes the entire Eclipse 115 kV from service. The Project establishes a second tie between the Burma and Piney stations by building 4.3 miles of new 115 kV line and installing a second 138/115 kV transformer at Burma to serve the new line. With the addition of a Burma-Piney 115kV Circuit #2 the N-1-1 scenario is no longer a voltage drop issue.

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 projected to be placed in service no later than the second quarter of 2020.

A.4. Overview of Cost Estimate and Cost Containment

The preliminary estimated capital cost of the Project is approximately \$11.4 million. This estimated cost includes all components of the Project, including components that PJM may consider as upgrades.

Transource offers a cost containment mechanism for the Project that provides financial incentive to deliver the Project at or below its estimated project cost. Total estimated project cost is \$11.4 million (in 2015 dollars), of which \$7.4 million is estimated to be designated to Transource. Under the cost containment mechanism for this Project:

- (a) Transource would be entitled to recover its FERC-approved return on equity plus incentives on the costs it incurs for the Project up to its estimated project cost of \$7.4 million (plus an escalation of the estimated project cost of 3 percent per year to account for inflation, until the project is placed in service), for the components of the Project designated to Transource.
- (b) Transource would forego any return on equity incentives approved by FERC (including the RTO participation adder) for the project cost portion that exceeds the estimated Transource -designated project cost of \$7.4 million. For purposes of this incentive rate waiver, Transource will escalate the estimated project cost at 3 percent per year, to account for inflation, until the project is placed in service.
- (c) In addition, in order to provide certainty to the customer rates, Transource commits to an actual equity content of no greater than 50 percent for the Project, once permanent financing is in place. This assumes that the capital market conditions remain normal and provides for the ability to finance these transmission projects with the proposed capital structure.

A.5. Designated Entity Statement of Intent

Transource seeks to be considered the Designated Entity for the project described within this Proposal, 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

B.1. Technical and Engineering Qualifications

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.

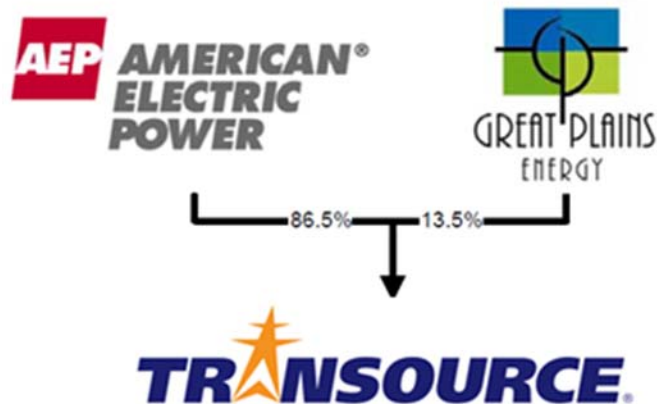


Figure 3. Summary of Transource Ownership Structure

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.

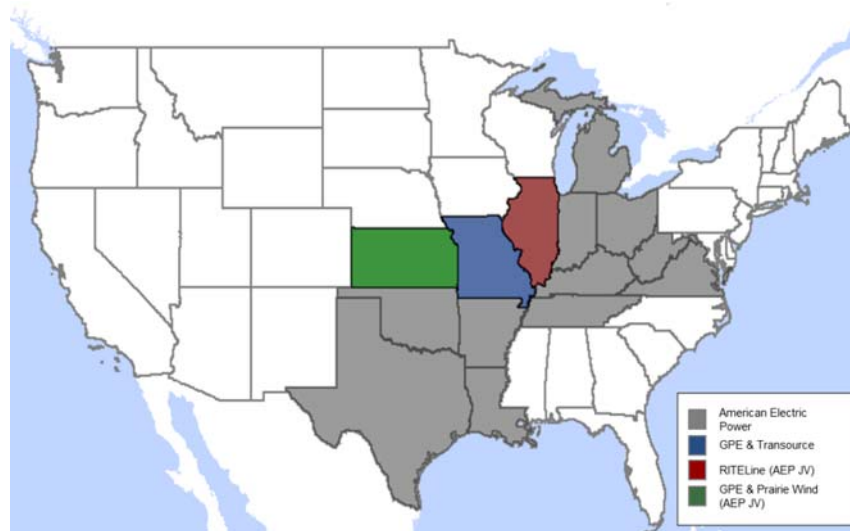


Figure 4. Combined Transmission Presence

B.2. Transource Contacts

Primary Contact	Joshua D. Burkholder Director, Asset Strategy	Transource 1 Riverside Plaza Columbus, Ohio 43215-2372
Secondary Contact	Takis Laios Manager, Transmission Asset Strategy	Transource 1 Riverside Plaza Columbus, Ohio 43215-2372

B.3. Transource Qualifications

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.

C. PROPOSED PROJECT CONSTRUCTABILITY INFORMATION

[Section Redacted]



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