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September 29, 2023

VIA ELECTRONIC Mail to PSCED@ky.gov

Ms. Linda C. Bridwell
Executive Director
Public Service Commission
211 Sower Boulevard, P.O. Box 615
Frankfort, Kentucky 40602-0615

RECEIVED

SEP 29 2023

PUBLIC SERVICE
COMMISSION

Re: *In the Matter of: Application of Big Rivers Electric Corporation for Authority to Transfer Functional Control of its Transmission System to Midwest Independent Transmission System Operator, Inc. - Case No. 2010-00043*

Dear Ms. Bridwell:

Finding No. 2 of the Public Service Commission's November 1, 2010, Order in the above-styled matter requires Big Rivers Electric Corporation to "file a report by September 30 of each year describing its current evaluation of available options for complying with NERC's contingency reserve requirement and its review of the short-term and long-term costs and benefits of continued membership in Midwest ISO." On September 28, 2018, Big Rivers filed a motion to be relieved of the obligation to file such annual reports. On September 30, 2022, Big Rivers filed a motion to convert the case to electronic filing. As the motions are still pending, Big Rivers is filing its next annual report with this letter, via electronic mail.

I certify that on this date a copy of this letter and all its attachments were served on each party of record in the above -styled matter by electronic mail or first-class mail.

Ms. Linda C. Bridwell
September 29, 2023
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Please feel free to contact me should you have any questions regarding this filing.

Sincerely,

/s/ Senthia Santana

Senthia Santana
Associate Attorney
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cc: Service List

BIG RIVERS ELECTRIC CORPORATION
APPLICATION OF BIG RIVERS ELECTRIC CORPORATION
TO TRANSFER FUNCTIONAL CONTROL
OF ITS TRANSMISSION SYSTEM TO
MIDWEST INDEPENDENT TRANSMISSION SYSTEM OPERATOR, INC.
CASE NO. 2010-00043

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Big Rivers Electric Corporation
Midcontinent Independent System Operator, Inc.
Annual Cost/Benefit Update
for Kentucky Public Service Commission
per Finding No. 2 of Commission’s November 1, 2010 Order
Case No. 2010-00043
Prepared September 29, 2023

Background

Big Rivers Electric Corporation (“Big Rivers”) joined the Midcontinent Independent System Operator, Inc. (“MISO”) on December 1, 2010, to meet the mandated Contingency Reserve requirements of the North American Electric Reliability Corporation (“NERC”) as approved by the Federal Energy Regulatory Commission. In 2009, Big Rivers commissioned Charles River Associates (“CRA”) to conduct an economic assessment of the options available to Big Rivers for the supply of Contingency Reserve. The CRA Analysis was completed in 2010 and concluded that Big Rivers had no viable options at the time for meeting its Contingency Reserve requirement other than with a stand-alone self-supply plan or by joining MISO. Based on CRA's analysis, joining MISO was estimated to be at least \$32 million less costly to Big Rivers than stand-alone self-supply over the five-year period from 2011 to 2015. Big Rivers was approved by MISO for membership in December 2009 and, following approval by the Kentucky Public Service Commission, fully integrated into MISO on December 1, 2010.

Today’s Options

Big Rivers believes that the options for meeting its Contingency Reserve requirement largely remain the same as those described in the 2010 analysis performed by CRA and as described in Big Rivers’ update to the Commission in September 2022. In addition to joining MISO, CRA analyzed Big Rivers’ potential participation in PJM Interconnection LLC (“PJM”), the Regional Transmission Organization (“RTO”) that coordinates the movement of wholesale

electricity across 13 states in the mid-Atlantic region of the United States. The same challenges to joining PJM in 2010 also exist today. The most significant and costly challenge is that Big Rivers does not have any direct interconnections with PJM. Big Rivers is directly interconnected with Louisville Gas and Electric Company (“LG&E/KU”) and while LG&E/KU’s parent company, PP&L Corporation, is a member of PJM, LG&E/KU is not a member of PJM. While East Kentucky Power Corporation (“East Kentucky”) is a member of PJM, Big Rivers is not interconnected with East Kentucky’s system. Accordingly, there has been no change in the status of available options to Big Rivers for possible participation in PJM.

In addition to evaluating PJM as an alternative option, the CRA analysis also evaluated a stand-alone self-supply plan. To meet its NERC requirements on a stand-alone basis, Big Rivers would require a 417 MW of Contingency Reserve based on the loss of its largest single generating unit, the D.B. Wilson Unit 1. The cost of securing this level of reserves continues to be prohibitive and the stand-alone solution remains more expensive than maintaining MISO membership.

Big Rivers, like many MISO members, has experienced increased market participation costs. With large initiatives underway at MISO, like the Long-Range Transmission Plan, estimated at \$30 billion for the second of five anticipated project tranches, market design modifications to a seasonal capacity construct, and proposed adoption of a reliability-based demand curve, as well as broader industry shifts to a changing resource fleet, Big Rivers does not expect costs to decrease in the near future. In fact, during its recent board of directors meetings, MISO projected an annual budget increase of nearly 10% for budget year 2024, driven primarily by a nearly 15% increase in base operating expenses, and signaled a similar year-over-year increase would be likely for the

foreseeable future.¹ While costs likely are to increase, Big Rivers is closely monitoring costs and the value it receives from MISO membership.

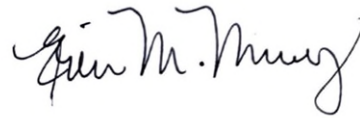
Since the 2022 MISO Annual Report, Big Rivers has taken actionable steps to leverage its MISO membership by adding a senior-staff level position dedicated to actively participating in MISO stakeholder proceedings and the Transmission Owners' Committee, ensuring executive-level engagement at MISO, and informing Big Rivers' strategic plan. Big Rivers actively is engaging in all MISO forums related to resource adequacy matters, including generator interconnection queue reforms, market operations, and transmission planning, many of which address policy issues and tariff rules which could impact the calculation of reserves and the costs related to providing or replacing those reserve requirements. Big Rivers is particularly monitoring generator interconnection queue matters, as queue study delays historically have adversely impacted Big Rivers' ability to develop new resources.

Exploring and preserving options, whether that includes maintaining MISO membership or meeting NERC Contingency Reserve requirements using a different option, is essential to Big Rivers' ability to generate value to its Member-Owners. Big Rivers performs such evaluations on a regular basis. At this time, in a period of profound uncertainty and industry transformation, Big Rivers is committed to fully leveraging its position as a MISO transmission owner while also exploring all viable options for creating and enhancing value for its Member-Owners.

¹ See "2024 Preliminary Budget" presented to the Audit and Finance Committee of the Board of Directors (Sept. 13, 2023); <https://cdn.misoenergy.org/20230913%20Audit%20and%20Finance%20Committee%20of%20the%20BOD%20Item%2008%20Proposed%202024%20Operating%20and%20Project%20Investment%20Budget630162.pdf>

Conclusion

Maintaining MISO membership continues to be the most cost-effective option to meet Big Rivers' NERC-mandated Contingency Reserve requirement at this time. Big Rivers will continue to leverage its MISO membership while continuing to explore options for cost effectively meeting its contingency reserve obligations.



Erin M. Murphy
Vice President Federal & RTO Regulatory Affairs
Big Rivers Electric Corporation

September 29, 2023