

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

AN ELECTRONIC EXAMINATION OF THE)	
APPLICATION OF THE FUEL ADJUSTMENT CLAUSE)	Case No.
OF BIG RIVERS ELECTRIC CORPORATION FROM)	2024-00141
NOVEMBER 1, 2022 THROUGH APRIL 30, 2023)	

Responses to Commission Staff's First Request for Information in Appendix B of the Commission's Order dated August 2, 2024

FILED: August 26, 2024

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

VERIFICATION

I, Christopher A. Warren, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

Christopher A. Warren

COMMONWEALTH OF KENTUCKY)
COUNTY OF DAVIESS)

SUBSCRIBED AND SWORN TO before me by Christopher A. Warren on this the 22nd day of August 2024.

Notary Public, Kentucky State at Large

Kentucky ID Number

My Commission Expires

October 31, 2024

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

VERIFICATION

I, Vicky L. Payne, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

Vicky L/Payne

COMMONWEALTH OF KENTUCKY)
COUNTY OF DAVIESS)

SUBSCRIBED AND SWORN TO before me by Vicky L. Payne on this the day of August, 2024.

Notary Public, Kentucky State at Large

Kentucky ID Number

My Commission Expires

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

VERIFICATION

I, Terry Wright, Jr., verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

Terry Wright Jr

Terry Wright, Jr.

COMMONWEALTH OF KENTUCKY)
COUNTY OF DAVIESS)

SUBSCRIBED AND SWORN TO before me by Terry Wright, Jr. on this the day of August 2024.

Notary Public, Kentucky State at Large

Kentucky ID Number

My Commission Expires

October 31, 2024

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

VERIFICATION

I, Jeffrey S. Brown, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

Jeffrey S. Brown

COMMONWEALTH OF KENTUCKY)
COUNTY OF DAVIESS)

25 SUBSCRIBED AND SWORN TO before me by Jeffrey S. Brown on this the day of August 2024.

Notary Public, Kentucky State at Large

Kentucky ID Number

My Commission Expires

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

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- 1 Item 1) For the period under review, provide the amount of coal
- 2 purchased in tons and the percentage of purchases that were spot versus
- 3 contract.

4

5 **Response**) Please see the schedules below.

For the Period from November 1, 2022 through April 30, 2023

Purchase Vendor	Fuel Type	Purchase Tonnage	Contract Type
Rhino/ Alliance (BRE-19-003A)	Coal	207,070.75	Contract
ACNR¹ (BRE-20-001A)	Coal	249,960.62	Contract
ACNR (BRE-22-001)	Coal	120,082.39	Contract
Alliance (BRE-22-002)	Coal _	102,362.00	Contract
Total Tonnage	=	679,475.76	=

For the Period from November 1, 2022 through April 30, 2023

Percentage Spot Purchase Tons	0.00%
Percentage Contract Purchase Tons	100.00%
Percentage Total Purchase Tons	100.00 %

6

¹ ACNR = American Consolidated Natural Resources, Inc.

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

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1
2
3 Witness) Vicky L. Payne
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AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

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1	Item 2)	For the period under review, list each coal purchase made under
2	a long-t	erm contract (one year or greater). For each purchase, list:
3	a.	Contract or purchase order number;
4	b.	Supplier's name;
5	<i>c</i> .	Location(s) of production facilities from which the coal is sourced;
6	d.	The method of delivery, (i.e., barge, truck, rail. other);
7	<i>e</i> .	The actual quantity received; and
8	f.	Price paid per ton.
9		
10	Respons	se) Please see the attached schedule.
11		
12		
13	Witness	Vicky L. Payne
14		

Rhino Energy LLC / Alliance Coal, LLC

A. CONTRACT NUMBER: BRE-19-003A

Alliance Coal, LLC

B. SUPPLIER'S NAME/ADDRESS: 1717 South Boulder, Suite 400

Tulsa, OK 74119

C. PRODUCTION FACILITY: River View Mine

D. METHOD OF DELIVERY: Barge

E. ACTUAL TONNAGE: Nov-Dec 2022 - 81,944 Tons

Jan-Apr 2023 - 125,127 Tons

F. PRICE PAID PER TON Nov-Dec 2022 - \$40.70 per Ton

Jan-Apr 2023 - \$41.67 per Ton

American Consolidated Natural Resources, Inc. ("ACNR")

A. CONTRACT NUMBER: BRE–20–001A

American Consolidated Natural Resources, Inc.

B. SUPPLIER'S NAME/ADDRESS: 46226 National Road

St. Clairsville, OH 43950

C. PRODUCTION FACILITY: Pride Mine

D. METHOD OF DELIVERY: Truck

E. ACTUAL TONNAGE: Nov-Dec 2022 - 65,211 Tons

Jan-Apr 2023 - 133,323 Tons

Nov-Dec 2022 – 15,895 Tons

Option 19,000 Tolls

Jan-Apr 2023 Option – 35,532 Tons

F. PRICE PAID PER TON Nov-Dec 2022 - \$43.70 per Ton

Jan-Apr 2023 - \$44.15 per Ton

Nov-Dec 2022 - \$44.35 per Ton

Option

ption

noo per ron

Jan-Apr 2023 Option

\$44.80 per Ton

American Consolidated Natural Resources, Inc. ("ACNR")

A. CONTRACT NUMBER: BRE–22-001

American Consolidated Natural Resources,

B. SUPPLIER'S NAME/ADDRESS: 46226 National Road

St. Clairsville, OH 43950

C. PRODUCTION FACILITY: Pride Mine

D. METHOD OF DELIVERY: Truck

E. ACTUAL TONNAGE: Nov-Dec 2022 - 24,366 Tons

Jan-Apr 2023 - 95,717 Tons

F. PRICE PAID PER TON Nov-Dec 2022 - \$45.75 per Ton

Jan-Apr 2023 - \$46.25 per Ton

Alliance Coal, LLC

A. CONTRACT NUMBER: BRE–22-002

Alliance Coal, LLC

B. SUPPLIER'S NAME/ADDRESS: 1717 South Boulder, Suite 400

Tulsa, OK 74119

C. PRODUCTION FACILITY: River View Mine

D. METHOD OF DELIVERY: Barge

E. ACTUAL TONNAGE: Nov-Dec 2022 - 21,744 Tons

Jan-Apr 2023 - 80,618 Tons

F. PRICE PAID PER TON Nov-Dec 2022 - \$42.00 per Ton

Jan-Apr 2023 - \$44.00 per Ton

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

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1	Item 3)	As of the last day of the review period:
2	a.	State the coal inventory level in tons and in number of days'
3		supply. Provide this information by generating station and in
4		the aggregate.
5	b .	Describe the criteria used to determine number of days' supply.
6	с.	State the target coal inventory level for each generating station,
7		and for the total system.
8	d.	If actual coal inventory exceeds the target inventory by ten days'
9		supply, state the reasons for the excess inventory.
10	<i>e</i> .	State whether any significant changes in the current coal
11		inventory target are expected within the next 12 months. If so,
12		state the expected change and the reasons for this change.
13		
14		
15		
16		

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1 Response)

- a. As of April 30, 2023, Big Rivers' generating stations individually, and in
- 3 the aggregate, had the inventory levels and days' supply shown in the table below.

		Number		Preceding
	Inventory	\mathbf{of}		6 Months
	Level	Days'	Duration	Burn
Location	$(Tons)^1$	Supply 2	(In Days)	(In Tons)
Wilson Station	804,494,75	202	143	571.242.43

4

5

b. Number of Days' Supply =

Current Inventory (Tons)		Dunation (In Dana)
Preceding 6 Months Burn (Tons)	X	Duration (In Days)

6

7

8

Footnotes to table in sub-part a. above -

- 1.- Wilson Station did not have any pet coke inventory in review period.
- **2.-** Number of days' supply is rounded to reflect whole days.

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

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1	c.	Big Rivers Electric Corporation's Target Supply is the following range
2	for each Sta	tion in days based on the projected annual fuel burn:
		Big Rivers Electric Corporation Coal Inventory Target Ranges
3		Wilson $30-60$ Days
4	d.	Actual coal inventory did exceed the target inventory by ten days' supply
5	during the	period under review. Big Rivers nominated maximum tonnage on all
6	contracts to	utilize full advantage of the lower pricing contracts while market prices
7	continue to	be much higher.
8	(1)	No significant changes expected in the current coal inventory targets
9		expected within the next 12 months.
10	(2)	Not Applicable.
11		
12		
13	Witness)	Vicky L. Payne
14		

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1	Item 4)	List each written coal supply solicitation issued during the
2	period u	inder review.
3	a.	For each solicitation, provide the date of the solicitation, the type of
4		solicitation (contract or spot), the quantities solicited, a general
5		description of the quality of coal solicited, the period over which
6		deliveries were requested, and the generating unit(s) for which the
7		$coal\ was\ intended.$
8	b .	For each solicitation, state the number of vendors to whom the
9		solicitation was sent, the number of vendors who responded, and the
10		selected vendor. Provide the bid tabulation sheet or corresponding
11		document that ranked the proposals. (This document should
12		identify all vendors who made offers.) State the reasons for each
13		selection. For each lowest-cost bid not selected, explain why the bid
14		was not selected.
15		
16		

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

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1	Response)
2	a. and b.
3	There were no written coal supply solicitations issued during the period under
4	review, i.e, November 1, 2022 through April 30, 2023.
5	
6	
7	Witness) Vicky L. Payne
8	

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

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1	Item 5)	List each oral coal supply solicitation issued during the period
2	under r	eview.
3	a.	For each solicitation, state why the solicitation was not written, the
4		date(s) of the solicitation, the quantities solicited, a general
5		description of the quality of coal solicited, the period over which
6		deliveries were requested, and the generating unit(s) for which the
7		$coal\ was\ intended.$
8	b .	For each solicitation, identify all vendors solicited and the vendor
9		selected. Provide the tabulation sheet or other document that ranks
10		the proposals. (This document should identify all vendors who
11		made offers.) State the reasons for each selection. For each lowest-
12		cost bid not selected, explain why the bid was not selected.
13		
14		

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1	Response)
2	a. and b.
3	There were no oral coal supply solicitations issued during the period under
4	review, i.e, November 1, 2022 through April 30, 2023.
5	
6	
7	Witness) Vicky L. Payne
8	

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

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1	Item 6) For the period under review, list each vendor from whom natural
2	gas was purchased for generation and the quantities and the nature of each
3	purchase (i.e., spot or contract).
4	
5	Response) Please see the listing on the following page for vendors from whom
6	natural gas was purchased for generation and the quantity and nature of each
7	purchase from November 1, 2022 through April 30, 2023.
8	Starting in July 2010, Big Rivers began purchasing natural gas under a North
9	American Energy Standard Board ("NAESB") base contract for sale and purchase of
10	natural gas. Actual purchases of gas are made using transaction confirmations that
11	are governed by the NAESB contract. Big Rivers also entered into a contract with
12	Texas Gas Transmission, LLC for the transportation and storage and borrowing of
13	gas to Big Rivers' delivery point. All of these contracts are on file with the Kentucky
14	Public Service Commission.
15	
16	

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

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1

For the Period from November 1, 2022 through April 30, 2023				
Purchase Vendor	Fuel Type	MMBtu	Contract Type	
CIMA Energy, LTD	Natural Gas	256,915	Spot	
NRG Business Marketing, LLC	Natural Gas	32,907	Spot	
Eco-Energy Natural Gas	Natural Gas	710,067	Spot	
Tenaska Marketing Ventures	Natural Gas	440,796	Spot	
	-	1,440,685		
	=	· · · · · · · · · · · · · · · · · · ·		

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4 Witness) Vicky L. Payne

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AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

Responses to Commission Staff's First Request for Information in the Appendix of the Commission's Order dated August 2, 2024

1	Item 7) For the period under review, state whether there were any
2	$instances\ in\ which\ a\ natural\ gas\ generating\ unit\ could\ not\ be\ operated\ when$
3	it otherwise would have run due to pipeline constraints or natural gas being
4	unavailable.
5	
6	Response) There were no instances during the review period that Big Rivers' gas
7	generating units could not be operated when they otherwise would have run, due to
8	pipeline constraints or natural gas being unavailable.
9	
10	
11	Witness) Vicky L. Payne
12	

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

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		1148450 20, 2021
1	Item 8) S	tate whether there have been any changes to hedging activities
2	for coal or na	$tural\ gas\ purchases\ used\ for\ generation\ since\ the\ previous\ FAC$
3	review procee	eding. If so, describe the changes in detail.
4		
5	Response) B	ig Rivers does not engage in financial hedging activities regarding its
6	coal or natural	gas purchases used for generation. Big Rivers does, however, stagger
7	its purchases of	of coal to create a natural hedge on price volatility pursuant to Policy
8	No. 111 – Hedg	ge Policy. There have been no changes to these hedging activities since
9	the previous F	AC review.
10		
11		
12	Witness) V	icky L. Payne
13		

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

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1	Item 9) State whether BREC has audited any of its fuel or transportation					
2	contracts during the period under review. If so, for each audited contract:					
3	a.	Identify the contract;				
4	b.	Identify the auditor;				
5	<i>c</i> .	State the results of the audit; and				
6	d.	$Describe\ the\ actions\ that\ BREC\ took\ as\ a\ result\ of\ the\ audit.$				
7						
8	Response)	No audits were performed during the period under review.				
9						
10						
11	Witness)	Vicky L. Payne				
12						

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

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1	Item 10)	State whether BREC is currently involved in any litigation with
2	its current	or former fuel suppliers or transportation vendors.
3	a.	If so, for each litigation:
4	(2	l) Identify the supplier or vendor;
5	(2	2) Identify the contract involved;
6	(6	3) State the potential liability or recovery to BREC;
7	(4	4) List the issues presented; and
8	(6	5) Provide a copy of the complaint or other legal pleading that
9		initiated the litigation and any answers or counterclaims. If
10		a copy has previously been filed with the Commission, provide
l 1		the date on which it was filed and the case in which it was
12		filed.
13	b.	Identify and provide the current status of all litigation with
L 4		suppliers or vendors.
L 5		
16		

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

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- Response) Big Rivers, along with other Commission-regulated utilities, intervened in Civil Action No. 3:21-cv-0016-GVT, Foresight Coal Sales, LLC v. Kent Chandler, et al., for the limited purpose of seeking an order protecting from disclosure information that the utilities have filed with the Commission about coal bids submitted to the utilities and the utilities' evaluation of those bids. Otherwise, Big Rivers is not currently involved in any litigation with its current or former fuel suppliers or transportation vendors.
- 8 a. (1) (5)
- 9 Not applicable.
- 10 b.
- Not applicable.

12

13 Witness) Vicky L. Payne

14

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

Responses to Commission Staff's First Request for Information in the Appendix of the Commission's Order dated August 2, 2024

1	Item 11)	For the period under review, state whether there have been any
2	changes	to BREC's written policies and procedures regarding its fuel
3	procuren	nent.
4	a.	If yes:
5		(1) Describe the changes;
6		(2) Provide the written policies and procedures as changed;
7		(3) State the date(s) the changes were made; and
8		(4) Explain why the changes were made.
9	b .	If no, provide the date BREC's current fuel procurement policies
10		and procedures were last changed, provide the date when they
11		were last provided to the Commission, and identify the
12		proceeding in which they were provided. If any current fuel
13		procurement policies and procedures have not been provided to
14		the Commission, provide those fuel procurement policies and
15		procedures and explain why they were not previously provided.
16		

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

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$\frac{1}{2}$	Response)
3	a. During the review period (ie November 1, 2022 – April 30, 2023) there
4	were no changes to the fuel procurement policies and procedures. Three policies have
5	changed since the end of the review period.
6	(1)-(4).
7	Policy No. 105 - Energy Related Transaction Authority was revised on
8	February 16, 2024, to update the Chief Executive Officer ("CEO") authority limits to
9	reflect current market conditions.
10	Appendix A to Policy No. 105 – Energy Related Transaction Authority was
11	revised on November 29, 2023, to update the MISO per transaction limits for Vice
12	President of Energy Services to reflect current market conditions.
13	Policy No. 122 – Energy Related Transaction Credit Policy was revised on
14	February 16, 2024, to reflect the addition of the Chief Operating Officer ("COO") as a
15	fourth voting member to Big Rivers' Credit Committee.
16	Copies of these policies are attached to this response along with redlines
17	thereof showing the changes from the prior versions of these policies.

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

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1

- b. In the following table, Big Rivers lists other written policies and
- 3 procedures regarding fuel procurement, the date of their last changes, and the
- 4 proceedings in which Big Rivers provided them to the Commission.

5

	Big Rivers Electric Corporation Policies and Procedures for Fuel Procurement			
Number Name		Date Last Changed	Provided In	Date Provided
111	Hedge Policy	2021-12-17	Case No. 2022-00268	2022-09-30
120	Fuel Procurement and Procedures	2022-08-04	Case No. 2023-00013	2023-09-22
121	Solid Fuel Inventory	2022-08-18	Case No. 2023-00013	2023-09-22

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8 Witness) Vicky L. Payne

9



Policy Number: 105

Energy Related Transaction Authority Policy						
Original Effective Date	Original Effective Date 06/15/2007 Date Last Reviewed 0211/1611/20242 Approved by					
Original Approval				BOARD		
Date	06/15/2007	Date Last Revised	12 02/ <u>16</u> 17/20 <u>24</u> 21			

1. Policy Purpose

The purpose of this policy is to define the authority granted by the Big Rivers Electric Corporation ("Big Rivers") Board of Directors ("Board") to the President & Chief Executive Officer ("CEO") to execute, or to delegate authority to execute energy-related transactions. Furthermore, it sets forth clarity and empowerment among those with transaction authority and is designed to encourage communication among individuals with transaction authority and the Board.

2. Objective

The objective of Big Rivers' Energy Related Transaction Authority Policy is to define:

- · Who has authority to execute transactions,
- The commodities and products that can be transacted,
- The authorized lead-time and term for each transaction,
- The authorized maximum price and volume,
- Counterparty contract and credit requirements,
- The process for approving new commodities, products or locations,
- Big Rivers' intention regarding hedging and speculating,
- Other relevant factors associated with due diligence in authorizing transactions to be executed.

3. Procedural Requirements

The following defines the procedural requirements that apply to all commodities and products transacted pursuant to this policy.

Execution Authority

Execution Authority is outlined by commodity in the authority matrix sections found below. All column limits in these matrices are applied independently of one another for each authority level, in that no individual column limit may be exceeded without authorization, regardless of whether a transaction does not exceed another column limit for that same authority level. Limits for each level of authority are cumulative, and include all column limits up to and including that level. The authority granted in this policy should not violate any other policy limits.

The transaction limits apply to both purchases and sales.

This policy identifies Board-authorized levels for the CEO and explicitly gives the CEO the authority to delegate authority levels to Big Rivers' staff and ACES Power Marketing ("ACES"). The CEO has the authority to modify delegated authority levels (noted in Appendix A) at his sole discretion as long as the delegated authority does not exceed his own authority per this policy.



Policy Number: 105

Energy Related Transaction Authority Policy						
Original Effective Date	Original Effective Date 06/15/2007 Date Last Reviewed 0211/1611/20242 Approved by					
Original Approval				BOARD		
Date	06/15/2007	Date Last Revised	12 02/ <u>16</u> 17/20 <u>24</u> 21			

Contract Requirements

Transactions with counterparties shall only be permitted if Big Rivers has either:

- An active, valid, and executed agreement enabling such transaction activity with that counterparty,
- Long-form confirmations may be used as a valid agreement in lieu of a permanent agreement, when necessary if approved in writing by the Big Rivers CEO.

Credit Requirements

Credit limits for each counterparty shall not be intentionally exceeded. (Note: Since credit exposures are a function of not only positions transacted, but also a function of market pricing and volatility, credit exposure to counterparty may unintentionally exceed a credit limit purely due to changes in the forward market.)

Entering into unsecured transactions with a counterparty that has total credit exposure greater than or equal to its open line of credit and the total of any security currently provided will not be allowed unless approved in writing by the Big Rivers CEO.

Credit Sleeving

All sleeving transactions for credit purposes shall be approved by the CEO. (*Note: Sleeving is an arrangement where a more financially reputable entity acts as middleman for a smaller, undercapitalized entity in the purchase or sale of power.*)

Contract Sleeving

This policy does not prohibit Big Rivers from being positioned between another member or customer of ACES and an external counterparty in order to bridge a contract gap that exists. The sleeve must:

- Be only for physical power, transmission or natural gas, not transportation,
- Be only for terms of one month or less.

Contract sleeving on behalf of Big Rivers is approved when it is either the only or the most economical path to pursue at the discretion of ACES, with prompt after-the-fact notice to the Big Rivers CEO.

Transaction Communications

All communications for bilateral electric power transactions must be transacted via a recorded communication method. Examples include, but are not limited to, voice recorded communication, instant messaging, email or via an online broker account. Recorded communications must be maintained and controlled by personnel who are independent of the transaction function.



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Deal Capture

Power transactions executed by a Big Rivers employee must be promptly forwarded to ACES after the deal execution.

Speculation

Speculation refers to a purchase or sale transaction in which the intent was to realize a profit without an underlying long or short generation position. No speculative transaction activities shall be permitted, and no speculative transaction positions shall be initiated. Transactions will be permitted only for purposes of hedging and portfolio optimization.

Non-Standard Products

The Board must pre-approve any transaction that involves commodities or products not listed in this policy.

Transactions Requiring Board Approval

Transactions which meet any of the following criteria must be pre-approved by the Board prior to execution:

- The transaction is a new commodity or within the list of commodities not previously transacted by Big Rivers,
- The transaction is at a location in which no transactions are permitted,
- The transaction is for something other than: physical spot or forward electricity, natural gas, fuel
 oil, solid fuel, ancillary services, capacity, power transmission, financial transmission rights, gas
 transportation, gas imbalance and storage, solid fuel transportation, exchange transacted energy
 products, over-the-counter (OTC) financial energy transactions, OTC energy options, federal SO2
 or NOx emission allowances, renewable energy credits or a unit outage insurance product.

Examples of new instruments would include the use of derivatives with different risk characteristics or the use of derivatives to implement different business strategies or goals. New instruments or locations would also include those instruments or locations that may be transacted on a "one-off" basis, which would be implementation of a derivative instrument or entry into a commodity market that, despite the anticipation of being transacted just once, would still fit the definition of a new instrument or location.

The purpose of defining a process for such transactions as noted above is to ensure that the exposures associated with them are thoroughly reviewed and understood by the Board and appropriate transaction controls are in place. The Board must approve the use of such transactions prior to execution using the process defined below:



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- a) Transaction Proposal The proposal is the responsibility of the person or business group proposing the transaction. The proposal should address the business need, risks, transaction controls, valuation methodology, accounting methodology, operations workflow/ methodology, and assessment of legal and regulatory issues.
- b) Board Review The Board will perform a review of the benefits and risks of the proposed transaction. The Board will assess the proposed transaction and make a determination whether to add the proposed transaction to the approved list.
- c) Approval (Pilot Program) The Board may approve limited use of the proposed transaction to ensure that proper controls are in place to monitor the activity. The Board may approve the proposed transaction without instituting a Pilot Program if the proposed transaction is going to be used once (one off), where it would not be prudent to test it in a shorter time frame or smaller quantity due to constraints such as liquidity or length of term of product. The Board will use more scrutiny in approval of one-off transactions.



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4. Bilateral Energy, Capacity and Transmission Purchases and Sales Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for energy, capacity and transmission transactions.

Purchases		Per Transaction Limits (up to)				Aggregate Limits (up to)	
Title	Product	Term	Lead Time	MW Size	Max. \$	Total Volume	Total \$
Board	Energy, Capacity and Transmission	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
CEO	Energy	≤2 Years	≤3 Years	≤ 400	≤ \$150/MWh	7,008,000 MWh	\$350.4 million
	Capacity	≤3 Years	≤4 Years	≤ 100	≤\$6/kW- MoCONE	1200 MW- Year	\$86.4 million
	Transmission	≤2 Years	≤3 Years	≤ 100	Tariff	200 MW- Year	Tariff

Sales		Per Transaction Limits (up to)				Aggregate Limits (up to)	
Title	Product	Term	Lead Time	MW Size	Min. \$	Total Volume	Total \$
Board	Energy, Capacity and Transmission	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
	Energy	≤ 2 Years	≤3 Years	≤ 400	No Limit	11,100,000 MWh	No Limit
CEO	Capacity	≤2 Years	≤3 Years	≤ 500	No Limit	1500 MW- Year	No Limit
	Transmission	≤2 Years	≤3 Years	≤ 100*	No Limit	300 MW- Year	No Limit

^{*}Lesser of 100 MW or rights to transmission capacity owned by Big Rivers.

Energy, Capacity and Transmission Authority Matrix Explanations

- Transaction limits represent the MW volume per hour and dollars/MWH for each transaction executed.
- Aggregate Limits represent the sum total MWH volume and dollars for all physical and financial forward transactions, excluding options.



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- Lead time represents the time period from the date the transaction is executed to the start of the transaction
- Authorized products include energy both forwards and options, transmission and capacity, including both physical and financial derivatives. Options may only be entered into by the Big Rivers CEO or his designee.
- Authority for PJM and MISO products is defined in the authority matrices below.

Delivery Locations

Transactions at delivery locations outside the eastern interconnect are not permitted, unless approved by the CEO. Transaction at delivery locations that are normal to the daily course of business for Big Rivers, to the extent transmission is available, are authorized as follows:

Unrestricted Delivery Locations

- SERC Reliability Region
- MISO
- PJM
- RFC Reliability Region
- SPF

Transaction at any other delivery locations within the eastern interconnection shall be restricted as follows:

Restricted Delivery Locations

Other eastern interconnection locations only with approval by the Big Rivers CEO.

Firmness of Energy

The product firmness of all transactions must be provided for in an executed agreement between Big Rivers and the appropriate counterparty. Sales commitments must never be more firm than the supply source, including the purchase side of back-to-back sales, swaps, sleeves or spreads unless the Big Rivers CEO gives explicit written authority to sell power that is more firm than the supply source. Energy purchased as firm liquidated damages may be resold as such.

Transmission Firmness and Volume

Transmission purchases need to be of equal firmness and volume to the energy component that such transmission purchase is associated with, unless pre-approved otherwise by the Big Rivers CEO. (Note: Purchasing small percentages of additional transmission to cover transmission losses is permitted.) In addition, transmission may be reserved but not utilized if an energy schedule is not confirmed prior to



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scheduling deadlines outside of Big Rivers' or ACES's control. When this occurs it is not considered a violation of this policy.



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5. MISO Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for MISO products.

		MISO Per Transaction Limits (up to)					
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh		
Board	All MISO Products	No Limit	No Limit	No Max	No Max		
	Generation Awards						
	Demand Awards	As Required by MISO	1 Operating Day	No Max	MISO Price Cap		
	Ancillary Service Awards						
CEO	Capacity	≤3 Years	≤3 Years	500			
	Financial Transmission Rights	≤4 Years	≤4 Years	425	\$20		
	Virtual Transaction Awards	As Required by	1 Operating	No Max	MISO Price Cap		
	Imports/Exports	MISO	Day	111111	wildo i nee cap		

MISO Authority Matrix Explanations

- Virtual transaction award limits are per each bid/offer nodal point. Virtual purchase awards and virtual sales awards are monitored separately.
- Imports and exports are per location and are monitored separately.
- Generation Award Limits are per generating unit.
- Demand Award Limits are per each load nodal point.
- Limits for Ancillary Service Awards apply to the Regulation and Operating (Spinning and Supplemental) Reserve Market only.
- Capacity limits apply to capacity transacted via the MISO Capacity Auction for each generating unit and excludes the capacity required for Big Rivers' native load.
- Only Financial Transmission Rights that are bought and sold via the annual and monthly auctions
 or in the secondary market are monitored per the limits above. Participation in the Annual
 Allocation of financial transmission rights is not considered a transaction subject to this Policy.
- Delivery lead time represents the time period between trade execution and start of flow.

Note that all MISO day-ahead transactions, such as price-sensitive offers and bids for importing and exporting from MISO, are financially firm. Hence an exception from the firmness of power for



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adjustments to these day ahead transactions intraday is acceptable due to the fact that these adjustments are hourly and non-firm.

6. PJM Transaction Authority (Non-Bilateral)

The following outlines transaction limits, definitions, and procedural requirements for PJM products.

		PJM Per Transaction Limits (up to)					
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh		
Board	All PJM Products	No Limit	No Limit	No Max	No Max		
	Generation Awards						
	Demand Awards	Not Presently	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted		
	Ancillary Service Awards	Transacted					
CEO	Capacity						
	Financial Transmission Rights	≤4 Years	≤4 Years	425	\$20		
	Virtual Transaction Awards	As Required by PJM	1 Operating	No Max	PJM Price Cap		
	Imports/Exports	1 31/1	Day		r sivi r nee Cap		

PJM Authority Matrix Explanations

- Virtual transaction award limits are per each bid/offer nodal point. Incremental purchase awards and decremental sales awards are monitored separately.
- Imports and exports are per location and are each monitored separately.
- Only financial transmission rights that are bought and sold via the annual and monthly auctions or
 in the secondary market are monitored per the limits above. Participation in the Annual
 Allocation of financial transmission rights is not considered a transaction subject to this Policy.

Note that PJM RTO day-ahead transactions, such as price-sensitive offers and bids for importing and exporting from PJM are financially firm. Hence an exception from the firmness of power for adjustments to these day ahead transactions intraday is acceptable due to the fact that these adjustments are hourly and non-firm.



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7. Natural/Synthetic Gas and Transportation Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for natural/synthetic gas (Gas) and transportation transactions.

		Per Transaction Limits (up to)				Aggregate Limits (up to)	
Title	Product	Term	m Lead Time Physical Volume per \$/ Day Mcf Mcf		Total Physical Volume Mcf	Total \$	
Board	Gas Products	No Limit	No Limit	No Max.	No Max.	No Max.	No Max.
CEO	Physical	> 1 Year ≤ 2 Years	≤2 Years	150,000	\$15	5 million	\$75
		≤1 Year		No Max.	No Max.		million

Gas Authority Matrix Explanations

- Transaction limits represent the physical Mcf volume per day and dollars/Mcf for each transaction executed.
- Aggregate limits represent the total physical Mcf volume and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.
- The dollar limits are based upon commodity gas only and do not include transportation, however, the term, lead time, and volume limits do apply to transportation.
- Gas products include physical gas, as well as transportation, imbalance and storage. The above authority matrix applies to both exchange transacted and OTC derivative products.

Gas Firmness

The product firmness of all transactions must be provided for in an executed agreement between Big Rivers and the appropriate counterparty. Sales commitments of Gas must never be more firm than the Gas supply source unless pre-approved by the Big Rivers CEO.

Transportation Firmness and Volume

Transportation purchases need to be of equal firmness and volume to the Gas component that such transportation purchase is associated with, unless pre-approved otherwise by the Big Rivers CEO.



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Delivery Locations

Gas transactions may only be executed at the following locations:

• Pipelines and hubs that serve Big Rivers' gas powered generation unit(s).

Physical Gas transactions may only be executed at other locations upon approval of the Big Rivers CEO and such transactions must support the hedging needs of Big Rivers.



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8. Renewable Energy Credits Trading Authority

The following outlines transaction limits, definitions, and procedural requirements for renewable energy credit transactions.

		Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Total Volume MWh	\$/ MWH	Total Volume MWh	Total \$
Board of Directors	Renewable Energy Credits	No Limit	No Limit	No Max.	No Max.	No Max.	No Max.
CEO	Renewable Energy Credits	≤3 Years	≤4 Years	400,000	\$15	800,000	\$12 Million

Renewable Energy Credits Trading Authority Matrix Explanations

- The authority matrix above addresses authority for Renewable Energy Credits (RECs).
- Transaction Limits represent the total MWh volume and dollars/MWH for each REC transaction executed.
- Aggregate Limits represent the sum total MWh volume and dollars for all forward transactions.
- Term limits only apply to forward transactions, not spot transactions.
- Lead time represents the time period between trade execution and delivery of the RECs. Lead time limits only apply to forward transactions and not to spot transactions.



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9. Fuel Oil Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for physical fuel oil transactions.

Fuel oil hedging will be conducted to hedge price risk associated with fuel oil used for plant start-up or to hedge potential fuel oil or diesel fuel price risk contained within solid fuel contracts.

		Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term	Term Lead Time Physical - Volume Gallons \$/Gallon		Total Physical - Volume Gallons	Total \$	
Board	Physical Fuel Oil	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Fuel Oil	> 1 Year ≤ 3 Years ≤ 1 Year	≤ 2 Years	1,000,000 No Max	\$6 No Max	6,000,000	\$36 million

Fuel Oil Authority Matrix Explanations

- $\bullet \quad \text{Transaction limits represent the total gallons and dollars/gallon for each transaction executed.} \\$
- Aggregate limits represent the sum total gallon volume and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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10. Solid Fuel Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for solid fuel transactions.

Product	Term		87 - 1		Total	
	101111	Lead Time	Volume Tons	\$/MMBtu	Volume Tons	Total \$
Physical Solid Fuel	No Limit	No Limit	No Max	No Max	No Max	No Max
Physical Solid Fuel	> 3 Months ≤ 3 Years	≤2 Years	2,500,000	\$6.00	4 million	\$240 million
		> 3 Months		Physical Solid Fuel No Limit No Limit No Max > 3 Months ≤ 3 Years ≤ 2 Years $\leq 2.500,000$	Physical Solid Fuel No Limit No Limit No Max No Max > 3 Months ≤ 3 Years ≤ 2 Years $\leq 2.500,000$ \$6.00	Physical Solid Fuel No Limit No Limit No Max No Max No Max No Max Physical Solid Fuel $\begin{array}{c cccc} & & & & & & & & & & & & & & & & & $

Solid Fuel Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards.
- Per transaction limits represent the total quantity in tons and dollars/MMBtu for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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11. Transportation Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for transportation transactions.

		Per Transaction Limits (up to)				Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$	
Board	Barge, Rail or Truck Transportation	No Limit	No Limit	No Max	No Max	No Max	No Max	
CEO	Barge, Rail or Truck	> 1 Year ≤ 3 Years	≤2 Years	3 million	\$25	6 million	\$150	
	Transportation	≤1 Year		No Max	No Max	V	million	

Transportation Authority Matrix Explanations

- Authorized products include barge, rail and truck transportation transactions.
- Per transaction limits represent the total quantity in tons and dollars/ton for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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12. Emission Allowances Transaction Authority*

The following outlines transaction limits, definitions, and procedural requirements for emissions transactions.

			Per Transaction Limits (up to)				Aggregate Limits (up to)	
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$	
Board	Federal SO ₂ and NOx Emission Allowances	No Limit	No Limit	No Max	No Max	No Max	No Max	
	Federal SO ₂ Emission	> 1 Year ≤ 2 Years		5,000	\$500	20,000	\$10	
CEO	Allowances	≤1 Year	< 2 Years	No Max	No Max		million	
CEO	Federal NOx Emission	> 1 Year ≤ 2 Years	≥ ∠ rears	2,500	\$2,500	12,500	\$30	
	Allowances	≤1 Year		No Max	No Max		million	

Emission Allowance Authority Matrix Explanations

- The authority matrix above represents authority for SO2 and NOx emission allowances.
- Per transaction limits represent the total quantity in tons and dollars/ton for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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13. Limestone Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for limestone reagent transactions.

		Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board	Physical Limestone Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Limestone	> 3 Months ≤ 3 Years	≤2 Years	750,000	\$30	1.50	\$30
	Reagent		≤ 3 Months		No Max	million	million

Limestone Reagent Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards
- Per transaction limits represent the total quantity in tons and dollars for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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14. Bulk Lime and Lime Hydrate Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for bulk lime and lime hydrate reagent transactions.

		Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board	Physical Lime Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Lime	> 3 Months ≤ 3 Years	≤2 Years	750,000	\$200	750,000	\$150
	Reagent	\leq 3 Months		No Max	No Max		million

Bulk Lime and Lime Hydrate Reagent Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards
- Per transaction limits represent the total quantity in tons and dollars for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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15. MATS Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for MATS reagent transactions.

		Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board	MATS Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	MATS Reagent	> 3 Months ≤ 3 Years	≤2 Years	25,000	\$4,000	25,000	\$100 million
		\leq 3 Months		No Max	No Max		

MATS Reagent Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards
- Per transaction limits represent the total quantity in tons and dollars for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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16. Acknowledgements

Clear Authority and Staff and ACES Authority Delegations

Where authority is further downward delegated, it must be approved by written signature of the next authority level up prior to any execution. In no case will the delegation of authority to Big Rivers' staff or ACES exceed that of the Big Rivers CEO.

Violations and Sanctions

Violations of this Authority Policy must not occur. Any person covered by this policy who becomes aware of a violation of the Authority Policy has an affirmative duty to report the violation to their immediate supervisor and to the Director Strategic Planning and Risk Management who in turn shall inform the Big Rivers CEO. However, if it is believed that the Big Rivers CEO is involved, then the Big Rivers Chairman of the Board shall be notified. The responsible party (ies) will be sanctioned according to Big Rivers Risk Management Sanctions Policy (for Big Rivers Employees only, ACES employees are governed by the ACES Power Marketing Trading Sanctions Policy).

Policy Effective

This Transaction Authority Policy is in effect upon the Board's approval and shall remain in effect until a revised policy has been approved by the Board.

Responsibility

It shall be the responsibility of the Board, the CEO, the Big Rivers-IRMC and the ACES-IRMC to ensure compliance with this policy.

Number	Date	Notes	Approved by
		Replaced Risk Management Policy for Power	Board
		Supply	
Original	06/15/2007	Trading Authority Policy w/o matrices	Board
Rev 1	10/16/2009	Name change to Energy Related Transaction	Board
		Authority Policy with matrices	
Rev 2	11/19/2010	MISO Transaction Authority added	Board
Rev 3	12/17/2010	Updated Solid Fuel Transaction Authority	Board
Rev 4	03/18/2011	Added limestone and lime, general cleanup	Board
Rev 5	02/21/2012	Made revisions to account for retirement of	Board
		Senior VP Energy Services	



Rev 15

Rev 16

12/17/21

02/16/24

conditions

market conditions

Original Effective Date

BOARD POLICY

Policy Number: 105

Approved by

<u>0211/1611/20242</u>

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Original App Date	roval	06/15/2007	Date Last Revised	12 02/ <u>16</u> 17/20 <u>24</u> 21	BOARD
Rev 6	02/14/20	Officer. Governm Manager Manager changed	VP Production to Chie Changed Vice Presider nental Relations and En ment to Director Enterp ment/Strategic Planning Aggregate Planning Re	nt of terprise Risk rise Risk . Under MISO,	
Rev 7	03/21/20	014 Add date	e last reviewed line and y with Appendix	correct section 4 B	oard
Rev 8	08/15/20	014 Remove	reference to Chief Oper	rating Officer B	oard
Rev 9	02/20/20	updated	MATS reagents transaction transaction authority for ad transmission and lim	r bilateral electric	oard
Rev 10	02/23/20	purchase transmiss inclusive bulk by b	anges to clarify transact is and sales for energy, sion. Changes impleme of transportation for it parge, rail and truck. Up a amounts for various line	capacity and nted to be ems shipped in odated transaction	oard
Rev 11	12/16/20	Eliminate capacity transaction	anges to clarify languaged daily limits for both and transmission purchons and natural/synthetiation transactions.	bilateral energy, ases and sales	oard
Rev 12	8/16/20	19 Added R authority	enewable Energy Credi	its trading B	oard
Rev 13	08/21/20		ion Changes	_	oard
Rev 14	11/20/20	authority	capacity purchase trans limits and revised unit sion transactions		oard

Update authority limits to reflect current market

Update CEO authority limits to reflect current

Energy Related Transaction Authority Policy

Date Last Reviewed

06/15/2007

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Board

Board



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1. Policy Purpose

The purpose of this policy is to define the authority granted by the Big Rivers Electric Corporation ("Big Rivers") Board of Directors ("Board") to the President & Chief Executive Officer ("CEO") to execute, or to delegate authority to execute energy-related transactions. Furthermore, it sets forth clarity and empowerment among those with transaction authority and is designed to encourage communication among individuals with transaction authority and the Board.

2. Objective

The objective of Big Rivers' Energy Related Transaction Authority Policy is to define:

- Who has authority to execute transactions,
- The commodities and products that can be transacted,
- The authorized lead-time and term for each transaction,
- The authorized maximum price and volume,
- Counterparty contract and credit requirements,
- The process for approving new commodities, products or locations,
- Big Rivers' intention regarding hedging and speculating,
- Other relevant factors associated with due diligence in authorizing transactions to be executed.

3. Procedural Requirements

The following defines the procedural requirements that apply to all commodities and products transacted pursuant to this policy.

Execution Authority

Execution Authority is outlined by commodity in the authority matrix sections found below. All column limits in these matrices are applied independently of one another for each authority level, in that no individual column limit may be exceeded without authorization, regardless of whether a transaction does not exceed another column limit for that same authority level. Limits for each level of authority are cumulative, and include all column limits up to and including that level. The authority granted in this policy should not violate any other policy limits.

The transaction limits apply to both purchases and sales.

This policy identifies Board-authorized levels for the CEO and explicitly gives the CEO the authority to delegate authority levels to Big Rivers' staff and ACES Power Marketing ("ACES"). The CEO has the authority to modify delegated authority levels (noted in Appendix A) at his sole discretion as long as the delegated authority does not exceed his own authority per this policy.



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Contract Requirements

Transactions with counterparties shall only be permitted if Big Rivers has either:

- An active, valid, and executed agreement enabling such transaction activity with that counterparty,
- Long-form confirmations may be used as a valid agreement in lieu of a permanent agreement, when necessary if approved in writing by the Big Rivers CEO.

Credit Requirements

Credit limits for each counterparty shall not be intentionally exceeded. (Note: Since credit exposures are a function of not only positions transacted, but also a function of market pricing and volatility, credit exposure to counterparty may unintentionally exceed a credit limit purely due to changes in the forward market.)

Entering into unsecured transactions with a counterparty that has total credit exposure greater than or equal to its open line of credit and the total of any security currently provided will not be allowed unless approved in writing by the Big Rivers CEO.

Credit Sleeving

All sleeving transactions for credit purposes shall be approved by the CEO. (*Note: Sleeving is an arrangement where a more financially reputable entity acts as middleman for a smaller, undercapitalized entity in the purchase or sale of power.*)

Contract Sleeving

This policy does not prohibit Big Rivers from being positioned between another member or customer of ACES and an external counterparty in order to bridge a contract gap that exists. The sleeve must:

- Be only for physical power, transmission or natural gas, not transportation,
- Be only for terms of one month or less.

Contract sleeving on behalf of Big Rivers is approved when it is either the only or the most economical path to pursue at the discretion of ACES, with prompt after-the-fact notice to the Big Rivers CEO.

Transaction Communications

All communications for bilateral electric power transactions must be transacted via a recorded communication method. Examples include, but are not limited to, voice recorded communication, instant messaging, email or via an online broker account. Recorded communications must be maintained and controlled by personnel who are independent of the transaction function.



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Deal Capture

Power transactions executed by a Big Rivers employee must be promptly forwarded to ACES after the deal execution.

Speculation

Speculation refers to a purchase or sale transaction in which the intent was to realize a profit without an underlying long or short generation position. No speculative transaction activities shall be permitted, and no speculative transaction positions shall be initiated. Transactions will be permitted only for purposes of hedging and portfolio optimization.

Non-Standard Products

The Board must pre-approve any transaction that involves commodities or products not listed in this policy.

Transactions Requiring Board Approval

Transactions which meet any of the following criteria must be pre-approved by the Board prior to execution:

- The transaction is a new commodity or within the list of commodities not previously transacted by Big Rivers,
- The transaction is at a location in which no transactions are permitted,
- The transaction is for something other than: physical spot or forward electricity, natural gas, fuel oil, solid fuel, ancillary services, capacity, power transmission, financial transmission rights, gas transportation, gas imbalance and storage, solid fuel transportation, exchange transacted energy products, over-the-counter (OTC) financial energy transactions, OTC energy options, federal SO2 or NOx emission allowances, renewable energy credits or a unit outage insurance product.

Examples of new instruments would include the use of derivatives with different risk characteristics or the use of derivatives to implement different business strategies or goals. New instruments or locations would also include those instruments or locations that may be transacted on a "one-off" basis, which would be implementation of a derivative instrument or entry into a commodity market that, despite the anticipation of being transacted just once, would still fit the definition of a new instrument or location.

The purpose of defining a process for such transactions as noted above is to ensure that the exposures associated with them are thoroughly reviewed and understood by the Board and appropriate transaction controls are in place. The Board must approve the use of such transactions prior to execution using the process defined below:



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- a) Transaction Proposal The proposal is the responsibility of the person or business group proposing the transaction. The proposal should address the business need, risks, transaction controls, valuation methodology, accounting methodology, operations workflow/ methodology, and assessment of legal and regulatory issues.
- b) Board Review The Board will perform a review of the benefits and risks of the proposed transaction. The Board will assess the proposed transaction and make a determination whether to add the proposed transaction to the approved list.
- c) Approval (Pilot Program) The Board may approve limited use of the proposed transaction to ensure that proper controls are in place to monitor the activity. The Board may approve the proposed transaction without instituting a Pilot Program if the proposed transaction is going to be used once (one off), where it would not be prudent to test it in a shorter time frame or smaller quantity due to constraints such as liquidity or length of term of product. The Board will use more scrutiny in approval of one-off transactions.



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4. Bilateral Energy, Capacity and Transmission Purchases and Sales Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for energy, capacity and transmission transactions.

	Purchases	Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term	Lead Time	MW Size	Max. \$	Total Volume	Total \$
Board	Energy, Capacity and Transmission	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
	Energy	≤2 Years	≤ 3 Years	≤ 400	≤ \$150/MWh	7,008,000 MWh	\$350.4 million
CEO	Capacity	≤3 Years	≤4 Years	≤ 100	CONE	1200 MW- Year	\$86.4 million
	Transmission	≤2 Years	≤ 3 Years	≤ 100	Tariff	200 MW- Year	Tariff

	Sales	Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term	Lead Time	MW Size	Min. \$	Total Volume	Total \$
Board	Energy, Capacity and Transmission	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
	Energy	≤2 Years	≤3 Years	≤ 400	No Limit	11,100,000 MWh	No Limit
CEO	Capacity	≤2 Years	≤3 Years	≤ 500	No Limit	1500 MW- Year	No Limit
	Transmission	≤2 Years	≤3 Years	≤ 100*	No Limit	300 MW- Year	No Limit

^{*}Lesser of 100 MW or rights to transmission capacity owned by Big Rivers.

Energy, Capacity and Transmission Authority Matrix Explanations

- Transaction limits represent the MW volume per hour and dollars/MWH for each transaction executed.
- Aggregate Limits represent the sum total MWH volume and dollars for all physical and financial forward transactions, excluding options.
- Lead time represents the time period from the date the transaction is executed to the start of the transaction.



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- Authorized products include energy both forwards and options, transmission and capacity, including both physical and financial derivatives. Options may only be entered into by the Big Rivers CEO or his designee.
- Authority for PJM and MISO products is defined in the authority matrices below.

Delivery Locations

Transactions at delivery locations outside the eastern interconnect are not permitted, unless approved by the CEO. Transaction at delivery locations that are normal to the daily course of business for Big Rivers, to the extent transmission is available, are authorized as follows:

Unrestricted Delivery Locations

- SERC Reliability Region
- MISO
- PJM
- RFC Reliability Region
- SPF

Transaction at any other delivery locations within the eastern interconnection shall be restricted as follows:

Restricted Delivery Locations

Other eastern interconnection locations only with approval by the Big Rivers CEO.

Firmness of Energy

The product firmness of all transactions must be provided for in an executed agreement between Big Rivers and the appropriate counterparty. Sales commitments must never be more firm than the supply source, including the purchase side of back-to-back sales, swaps, sleeves or spreads unless the Big Rivers CEO gives explicit written authority to sell power that is more firm than the supply source. Energy purchased as firm liquidated damages may be resold as such.

Transmission Firmness and Volume

Transmission purchases need to be of equal firmness and volume to the energy component that such transmission purchase is associated with, unless pre-approved otherwise by the Big Rivers CEO. (Note: Purchasing small percentages of additional transmission to cover transmission losses is permitted.) In addition, transmission may be reserved but not utilized if an energy schedule is not confirmed prior to scheduling deadlines outside of Big Rivers' or ACES's control. When this occurs it is not considered a violation of this policy.



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5. MISO Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for MISO products.

		MISO Per Transaction Limits (up to)						
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh			
Board	All MISO Products	No Limit	No Limit	No Max	No Max			
	Generation Awards				MISO Price Cap			
	Demand Awards	As Required by MISO	1 Operating Day	No Max				
	Ancillary Service Awards							
CEO	Capacity	≤3 Years	≤3 Years	500				
	Financial Transmission Rights	≤4 Years	≤4 Years	425	\$20			
	Virtual Transaction Awards	As Required by	1 Operating	No Max	MISO Price Cap			
	Imports/Exports	MISO	Day		miss Thee cup			

MISO Authority Matrix Explanations

- Virtual transaction award limits are per each bid/offer nodal point. Virtual purchase awards and virtual sales awards are monitored separately.
- Imports and exports are per location and are monitored separately.
- Generation Award Limits are per generating unit.
- Demand Award Limits are per each load nodal point.
- Limits for Ancillary Service Awards apply to the Regulation and Operating (Spinning and Supplemental) Reserve Market only.
- Capacity limits apply to capacity transacted via the MISO Capacity Auction for each generating unit and excludes the capacity required for Big Rivers' native load.
- Only Financial Transmission Rights that are bought and sold via the annual and monthly auctions or in the secondary market are monitored per the limits above. Participation in the Annual Allocation of financial transmission rights is not considered a transaction subject to this Policy.
- Delivery lead time represents the time period between trade execution and start of flow.

Note that all MISO day-ahead transactions, such as price-sensitive offers and bids for importing and exporting from MISO, are financially firm. Hence an exception from the firmness of power for adjustments to these day ahead transactions intraday is acceptable due to the fact that these adjustments are hourly and non-firm.



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6. PJM Transaction Authority (Non-Bilateral)

The following outlines transaction limits, definitions, and procedural requirements for PJM products.

		PJM Per Transaction Limits (up to)						
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh			
Board	All PJM Products	No Limit	No Limit	No Max	No Max			
	Generation Awards				Not Presently Transacted			
	Demand Awards	Not Presently	Not Presently Transacted	Not Presently Transacted				
	Ancillary Service Awards	Transacted						
CEO	Capacity							
	Financial Transmission Rights	≤4 Years	≤ 4 Years	425	\$20			
	Virtual Transaction Awards	As Required by PJM	1 Operating	No Max	PJM Price Cap			
	Imports/Exports	1 3171	Day		1 sivi i nee cap			

PJM Authority Matrix Explanations

- Virtual transaction award limits are per each bid/offer nodal point. Incremental purchase awards and decremental sales awards are monitored separately.
- Imports and exports are per location and are each monitored separately.
- Only financial transmission rights that are bought and sold via the annual and monthly auctions or in the secondary market are monitored per the limits above. Participation in the Annual Allocation of financial transmission rights is not considered a transaction subject to this Policy.

Note that PJM RTO day-ahead transactions, such as price-sensitive offers and bids for importing and exporting from PJM are financially firm. Hence an exception from the firmness of power for adjustments to these day ahead transactions intraday is acceptable due to the fact that these adjustments are hourly and non-firm.



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7. Natural/Synthetic Gas and Transportation Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for natural/synthetic gas (Gas) and transportation transactions.

			Per Transac (up	Aggregate Limits (up to)				
Title	Product	Term	Term Lead Time Physical Volume per Day Mcf				Total \$	
Board	Gas Products	No Limit	No Limit	No Max.	No Max.	No Max.	No Max.	
CEO	Physical	> 1 Year ≤ 2 Years	≤2 Years	150,000	\$15	5 million	\$75	
		≤1 Year		No Max.	No Max.		million	

Gas Authority Matrix Explanations

- Transaction limits represent the physical Mcf volume per day and dollars/Mcf for each transaction executed.
- Aggregate limits represent the total physical Mcf volume and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.
- The dollar limits are based upon commodity gas only and do not include transportation, however, the term, lead time, and volume limits do apply to transportation.
- Gas products include physical gas, as well as transportation, imbalance and storage. The above authority matrix applies to both exchange transacted and OTC derivative products.

Gas Firmness

The product firmness of all transactions must be provided for in an executed agreement between Big Rivers and the appropriate counterparty. Sales commitments of Gas must never be more firm than the Gas supply source unless pre-approved by the Big Rivers CEO.

Transportation Firmness and Volume

Transportation purchases need to be of equal firmness and volume to the Gas component that such transportation purchase is associated with, unless pre-approved otherwise by the Big Rivers CEO.

Delivery Locations



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Gas transactions may only be executed at the following locations:

• Pipelines and hubs that serve Big Rivers' gas powered generation unit(s).

Physical Gas transactions may only be executed at other locations upon approval of the Big Rivers CEO and such transactions must support the hedging needs of Big Rivers.



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8. Renewable Energy Credits Trading Authority

The following outlines transaction limits, definitions, and procedural requirements for renewable energy credit transactions.

		Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term Lead Volume MWH			Total Volume MWh	Total \$	
Board of Directors	Renewable Energy Credits	No Limit	No Limit	No Max.	No Max.	No Max.	No Max.
CEO	Renewable Energy Credits		≤4 Years	400,000	\$15	800,000	\$12 Million

Renewable Energy Credits Trading Authority Matrix Explanations

- The authority matrix above addresses authority for Renewable Energy Credits (RECs).
- Transaction Limits represent the total MWh volume and dollars/MWH for each REC transaction executed.
- Aggregate Limits represent the sum total MWh volume and dollars for all forward transactions.
- Term limits only apply to forward transactions, not spot transactions.
- Lead time represents the time period between trade execution and delivery of the RECs. Lead time limits only apply to forward transactions and not to spot transactions.



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9. Fuel Oil Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for physical fuel oil transactions.

Fuel oil hedging will be conducted to hedge price risk associated with fuel oil used for plant start-up or to hedge potential fuel oil or diesel fuel price risk contained within solid fuel contracts.

			Per Transaction Limits (up to)				Aggregate Limits (up to)		
Title	Product	Term	Term Lead Volume \$/Gallon				Total \$		
Board	Physical Fuel Oil	No Limit	No Limit	No Max	No Max	No Max	No Max		
CEO	Physical Fuel Oil	> 1 Year ≤ 3 Years ≤ 1 Year	≤2 Years	1,000,000 No Max	\$6 No Max	6,000,000	\$36 million		

Fuel Oil Authority Matrix Explanations

- Transaction limits represent the total gallons and dollars/gallon for each transaction executed.
- Aggregate limits represent the sum total gallon volume and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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10. Solid Fuel Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for solid fuel transactions.

		Per Transaction Limits (up to)				Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Volume Tons	\$/MMBtu	Total Volume Tons	Total \$	
Board	Physical Solid Fuel	No Limit	No Limit	No Max	No Max	No Max	No Max	
CEO	Physical Solid Fuel	> 3 Months ≤ 3 Years	≤2 Years	2,500,000	\$6.00	4 million	\$240 million	
		\leq 3 Months		200,000	No Max		IIIIIIOII	

Solid Fuel Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards.
- Per transaction limits represent the total quantity in tons and dollars/MMBtu for each transaction executed
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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11. Transportation Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for transportation transactions.

		Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board	Barge, Rail or Truck Transportation	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Barge, Rail or Truck	> 1 Year ≤ 3 Years	< 2 Years	3 million	\$25	6 million	\$150
020	Transportation	≤1 Year	≥ 2 rears	No Max	No Max		million

Transportation Authority Matrix Explanations

- Authorized products include barge, rail and truck transportation transactions.
- Per transaction limits represent the total quantity in tons and dollars/ton for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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12. Emission Allowances Transaction Authority*

The following outlines transaction limits, definitions, and procedural requirements for emissions transactions.

			Per Transac (up	Aggregate Limits (up to)			
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board	Federal SO ₂ and NOx Emission Allowances	No Limit	No Limit	No Max	No Max	No Max	No Max
	Federal SO ₂ Emission	> 1 Year ≤ 2 Years		5,000	\$500	20,000	\$10
CEO	Allowances	≤1 Year	< 2 Vagra	No Max	No Max		million
CEO	Federal NOx Emission	> 1 Year ≤ 2 Years	≤2 Years —	2,500	\$2,500	12,500	\$30
	Allowances	≤ 1 Year		No Max	No Max		million

Emission Allowance Authority Matrix Explanations

- The authority matrix above represents authority for SO2 and NOx emission allowances.
- Per transaction limits represent the total quantity in tons and dollars/ton for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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13. Limestone Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for limestone reagent transactions.

			Per Transae (up		te Limits to)		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board	Physical Limestone Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Limestone	> 3 Months ≤ 3 Years	≤2 Years	750,000	\$30	1.50	\$30
	Reagent	≤ 3 Months		No Max	No Max	million	million

Limestone Reagent Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards
- Per transaction limits represent the total quantity in tons and dollars for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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14. Bulk Lime and Lime Hydrate Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for bulk lime and lime hydrate reagent transactions.

	Per Transaction Limits (up to)			te Limits to)			
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board	Physical Lime Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Lime	> 3 Months ≤ 3 Years	≤2 Years	750,000	\$200	750,000	\$150
	Reagent	≤ 3 Months		No Max	No Max		million

Bulk Lime and Lime Hydrate Reagent Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards.
- Per transaction limits represent the total quantity in tons and dollars for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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15. MATS Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements for MATS reagent transactions.

			Per Transae (up		te Limits to)		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Board	MATS Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	MATS Reagent	> 3 Months ≤ 3 Years	≤2 Years	25,000	\$4,000	25,000	\$100 million
		≤ 3 Months		No Max	No Max		HIHHON

MATS Reagent Authority Matrix Explanations

- Authorized products include physical spot and forward transactions and options on physical forwards.
- Per transaction limits represent the total quantity in tons and dollars for each transaction executed.
- Aggregate limits represent the sum total quantity in tons and dollars for all forward transactions.
- Lead time represents the time period from the date a transaction is executed to the start of the transaction.



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16. Acknowledgements

Clear Authority and Staff and ACES Authority Delegations

Where authority is further downward delegated, it must be approved by written signature of the next authority level up prior to any execution. In no case will the delegation of authority to Big Rivers' staff or ACES exceed that of the Big Rivers CEO.

Violations and Sanctions

Violations of this Authority Policy must not occur. Any person covered by this policy who becomes aware of a violation of the Authority Policy has an affirmative duty to report the violation to their immediate supervisor and to the Director Strategic Planning and Risk Management who in turn shall inform the Big Rivers CEO. However, if it is believed that the Big Rivers CEO is involved, then the Big Rivers Chairman of the Board shall be notified. The responsible party (ies) will be sanctioned according to Big Rivers Risk Management Sanctions Policy (for Big Rivers Employees only, ACES employees are governed by the ACES Power Marketing Trading Sanctions Policy).

Policy Effective

This Transaction Authority Policy is in effect upon the Board's approval and shall remain in effect until a revised policy has been approved by the Board.

Responsibility

It shall be the responsibility of the Board, the CEO, the Big Rivers-IRMC and the ACES-IRMC to ensure compliance with this policy.

Number	Date	Notes	Approved by
		Replaced Risk Management Policy for Power	Board
		Supply	
Original	06/15/2007	Trading Authority Policy w/o matrices	Board
Rev 1	10/16/2009	Name change to Energy Related Transaction	Board
		Authority Policy with matrices	
Rev 2	11/19/2010	MISO Transaction Authority added	Board
Rev 3	12/17/2010	Updated Solid Fuel Transaction Authority	Board
Rev 4	03/18/2011	Added limestone and lime, general cleanup	Board
Rev 5	02/21/2012	Made revisions to account for retirement of	Board
		Senior VP Energy Services	



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Rev 6	02/14/2013	Changed VP Production to Chief Operating Officer. Changed Vice President of Governmental Relations and Enterprise Risk Management to Director Enterprise Risk Management/Strategic Planning. Under MISO, changed Aggregate Planning Resource Credits to Zonal Resource Credits.	
Rev 7	03/21/2014	Add date last reviewed line and correct section 4 to comply with Appendix	Board
Rev 8	08/15/2014	Remove reference to Chief Operating Officer	Board
Rev 9	02/20/2015	Added MATS reagents transaction authority; updated transaction authority for bilateral electric power and transmission and lime reagent; general clean up.	Board
Rev 10	02/23/2016	Made changes to clarify transaction authority for purchases and sales for energy, capacity and transmission. Changes implemented to be inclusive of transportation for items shipped in bulk by barge, rail and truck. Updated transaction authority amounts for various lime and MATS reagents.	Board
Rev 11	12/16/2016	Made changes to clarify language for speculation. Eliminated daily limits for both bilateral energy, capacity and transmission purchases and sales transactions and natural/synthetic gas and transportation transactions.	Board
Rev 12	8/16/2019	Added Renewable Energy Credits trading authority	Board
Rev 13	08/21/2020	Punctuation Changes	Board
Rev 14	11/20/2020	Updated capacity purchase transaction trading authority limits and revised units for capacity and transmission transactions	Board
Rev 15	12/17/21	Update authority limits to reflect current market conditions	Board
Rev 16	02/16/24	Update CEO authority limits to reflect current market conditions	Board



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Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority						
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1. Purpose

The purpose of this appendix is to define the authority granted by the Big Rivers CEO ("CEO") to Big Rivers' staff and ACES to execute energy-related transactions.

2. Objective

The objective of this appendix is to extend authority within Policy 105 to Big Rivers' internal staff and ACES.

3. Procedural Requirements

As an appendix to Policy 105, all requirements and criteria stated within Policy 105 apply to this appendix.

Delegation of authority regarding Contract Requirements

The CEO delegates his authority to use a long form confirmation as a valid agreement in lieu of a master agreement when necessary to the VP Energy Services, the Director of Resources and Forecasting, Senior Power Portfolio Optimization Analyst, and Manager Power Marketing and Member Relations.



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4. Bilateral Energy and Capacity Purchases Transaction Authority

The following outlines Big Rivers' staff and ACES bilateral transaction limits for energy and capacity transactions.

Purchases		Per Transaction Limits (up to)				Aggregate Limits	
Title	Product	Term	Lead Time	MW Size	Min. \$/ MWH	Total Volume MWH	Total \$
VD Enorgy Sourioga	Energy	≤1 Year	≤2 Years	<u>< 2</u> 00	No Limit	1,752,000	\$87,600,000
VP Energy Services	Capacity	≤1 Year	≤1 Year	<u>< 100</u>	No Limit	878,400	\$2,400,000
Director Resources & Forecasting	Energy	≤3 Months	≤1 Year	<u>< 100</u>	No Limit	220,800	\$11,100,000
Senior Power Portfolio Optimization Analyst or Manager Power Marketing & Member Relations	Energy	≤1 Week	≤ 1 Month	<u>< 2</u> 00	No Limit	33,600	\$1,680,000
ACES	Energy	≤ 1 Day*	≤1 Week	<u>< 200</u>	No Limit	9,600	\$480,000



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5. Bilateral Energy and Capacity Sales Transaction Authority

The following outlines Big Rivers' staff and ACES bilateral transaction limits for energy and capacity transactions.

Sales		Per Transaction Limits (up to)				Aggregate Limits	
Title	Product	Term	Lead Time	MW Size	Min. \$/ MWH	Total Volume MWH	Total \$
VD Coopey Souriess	Energy	≤1 Year	≤2 Years	<u><</u> 200	No Limit	3,508,800	No Limit
VP Energy Services	Capacity	≤1 Year	≤1 Year	<u>< 2</u> 00	No Limit	1,756,800	No Limit
Director Resources &	Energy	≤3 Months	≤1 Year	<u>< 2</u> 00	No Limit	1,756,800	No Limit
Forecasting	Capacity	≤3 Months	≤1 Year	<u><</u> 200	No Limit	1,756800	No Limit
Senior Power Portfolio Optimization Analyst or Manager Power Marketing & Member Relations	Energy	≤1 Week	≤ 1 Month	<u><</u> 200	No Limit	148,800	No Limit
ACES	Energy	≤ 1 Day*	≤1 Week	<u><</u> 200	No Limit	33,600	No Limit

^{*} \leq 1 Day will be a transaction that runs through hour ending 24 of the following business day, as such this would encompass all weekends and holidays for trading so long as the lead time and aggregate limits are followed.

Delegation of authority regarding Firmness of Power

The CEO delegates his authority to sell power that is more firm than the supply source to the VP Energy Services.



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<u>Delegation of authority regarding Restricted Delivery Locations</u>
The CEO delegates his authority to execute transactions at other Eastern interconnection locations to the VP Energy Services.



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6. MISO Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for MISO products.

		MISO Per Transaction Limits (up to)				
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh	
	Generation Awards	A D 11	1.0 4	425		
	Demand Awards	As Required by	1 Operating	1750	MISO Price Cap	
	Ancillary Service Awards	MISO	Day	425		
VP Energy Services	Capacity	≤2 Years	≤ 2Years	425	CONE\$150/MW -day	
	Financial Transmission Rights	≤ 1 Year	≤ 1 Year	425	\$20/MWh	
	Virtual Transaction Awards	As Required by	1 Operating	No Max	MICO Dries Com	
	Imports/Exports	MISO	Day	No Max	MISO Price Cap	
	Generation Awards		1.0	425		
	Demand Awards	As Required by	1 Operating	1700	MISO Price Cap	
Director	Ancillary Service Awards	MISO	Day	425	1	
Resources &	Capacity	< 1 Year	< 1Year	425	CONE	
Forecasting	Financial Transmission Rights	< 6 months	< 6 months	425	\$12/MWh	
	Virtual Transaction Awards	As Required by	1 Operating	400		
	Imports/Exports	MISO	Day	500	MISO Price Cap	
Manager Power Marketing & Member Relations	Capacity	≤1 Year	≤1Year	425	CONE	
Senior Power	Generation Awards	As Required by	1 Operating	425		
Portfolio	Demand Awards	MISO	Day	1675	MISO Price Cap	
Optimization	Ancillary Service Awards	MISO	Day	425		
Analyst or	Financial Transmission Rights	< 6 Months	< 6 Months	425	\$10/MWh	
Manager	Virtual Transaction Awards			400		
Power Marketing & Member Relations	Imports/Exports	As Required by MISO	1 Operating Day	450	MISO Price Cap	
Energy Services Analyst	Demand Award	As Required by MISO	1 Operating Day	1675	MISO Price Cap	
	Generation Awards	As Required by	1 Operating	425		
	Demand Awards	MISO	Day	1650	MISO Price Cap	
ACES	Ancillary Service Awards	MISO	Day	425		
ACES	Financial Transmission Rights	≤ 6 Months	≤ 6 Months	425	\$10/MWh	
	Virtual Transaction Awards	As Required by	1 Operating	400	MICO D : C	
	Imports/Exports	MISO	Day	400	MISO Price Cap	



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7. PJM Transaction Authority (Non-Bilateral)

The following outlines Big Rivers' staff and ACES transaction limits for PJM products.

		PJM Per Transaction Limits (up to)			
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh
VP Energy	Generation Awards Demand Awards Ancillary Service Awards Capacity	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
Services	Financial Transmission Rights	≤ 1 Year	≤1 Year	210	\$20
	Virtual Transaction Awards Imports/Exports	As Required by PJM	1 Operating Day	No Max No Max	PJM Price Cap
Director Resources &	Generation Awards Demand Awards Ancillary Service Awards Capacity	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
Forecasting	Financial Transmission Rights	≤ 1 Year	≤ 3 months	105	\$12
	Virtual Transaction Awards	As Required by PJM	1 Operating Day	400	PJM Price Cap
Senior Power Portfolio Optimization Analyst or	Imports/Exports Generation Awards Demand Awards Ancillary Service Awards Capacity	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
Manager Power	Financial Transmission Rights	Not Authorized	Not Authorized	Not Authorized	Not Authorized
Marketing & Member Relations	Virtual Transaction Awards Imports/Exports	As Required by PJM	1 Operating Day	400 450	PJM Price Cap
	Generation Awards Demand Awards Ancillary Service Awards Capacity	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
ACES	Financial Transmission Rights	Not Authorized	Not Authorized	Not Authorized	Not Authorized
	Virtual Transaction Awards Imports/Exports	As Required by PJM	1 Operating Day	400 400	PJM Price Cap



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8. SPP Transaction Authority

(SPP transaction authority is granted here for the purpose of fulfilling the Nebraska Contracts approved by Big Rivers Board of Directors on December 20, 2013.)

The following outlines Big Rivers' staff and ACES transaction limits for SPP products.

		SPP Per Transaction Limits (up to)			
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh
	Generation Awards	As Required by SPP	1 Operating	30	SPP Price
	Demand Awards	As required by 511	Day	110	Cap
	Virtual Transaction Awards	Not Presently	Not	Not	Not Presently
VP Energy Services	Ancillary Service Awards	Transacted	Presently Transacted	Presently Transacted	Transacted
	Imports/Exports	As Required by SPP	1 Operating Day	No Max	SPP Price Cap
	Transmission Congestion Rights	≤ 1 Year	≤1 Year	80	\$20/MWh
	Generation Awards	- As Required by SPP	1 Operating	30	SPP Price
	Demand Awards	As Required by SPP	Day	110	Cap
	Virtual Transaction Awards	Not Presently	Not	Not Pr	Not Presently
Director Resources &	Ancillary Service Awards	Transacted	Presently Transacted	Presently Transacted	Transacted
Forecasting	Imports/Exports	As Required by SPP	1 Operating Day	110	SPP Price Cap
	Transmission Congestion Rights	≤ 6 months	≤ 6 months	80	\$12/MWh
Senior Power	Generation Awards	A a D a guina d lav. CDD	1 Operating	30	SPP Price
Portfolio	Demand Awards	As Required by SPP	Day	110	Cap
Optimization	Virtual Transaction Awards	Not Presently	Not Presently Transacted	Not Precently	Not Presently
Analyst or Manager	Ancillary Service Awards	Transacted		Presently Transacted	Transacted
Power Marketing &	Imports/Exports	As Required by SPP	1 Operating Day	110	SPP Price Cap
Member Relations	Transmission Congestion Rights	< 6 Months	< 6 Months	80	\$10/MWh
	Generation Awards		None		
	Demand Award	As Required by SPP	1 Operating Day	110	SPP Price Cap
Energy	Virtual Transaction Awards	Not Presently	Not	Not	Not Presently
Services Analyst	Ancillary Service Awards	Transacted	Presently Transacted	Presently Transacted	Transacted
Anaryst	Imports/Exports	As Required by SPP	1 Operating Day	110	SPP Price Cap
	Transmission Congestion Rights	None			



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	Generation Awards	A - Power d by CPP 1 Operating 30		SPP Price	
	Demand Awards	As Required by SPP	Day	110	Cap
	Virtual Transaction Awards	Not Descently	Not	Not	Not Descently
ACES	Ancillary Service Awards	Not Presently Transacted	Presently Transacted	Presently Transacted	Not Presently Transacted
	Imports/Exports	As Required by SPP	1 Operating Day	110	SPP Price Cap
	Transmission Congestion Rights	≤ 6 Months	≤ 6 Months	80	\$10/MWh

SPP Authority Matrix Explanations

- Generation Award Limits are per generating unit.
- Demand Award Limits are per each load location.
- Only Transmission Congestion Rights (TCRs) that are bought and sold via the annual and monthly auctions are monitored per the limits above. Participation in the Annual Allocation of TCRs is not considered a transaction subject to this Policy.
- Delivery lead time represents the time period between trade execution and start of flow.
- Transaction Limits represent the MW volume per hour and dollars/MWh for each transaction executed.
- Bilateral Settlement Schedules are not monitored. Bilateral power trades are monitored per the limits identified in the Bilateral Energy, Capacity and Transmission Purchases and Sales Transaction Authority Matrix.



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9. Natural/Synthetic Gas and Transportation Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for natural/synthetic gas (Gas) and transportation transactions.

		Per Transaction Limits (up to)				Aggregate Limits (up to)	
Title	Product	Term	Lead Time	Physical mmBTU Volume per Day	\$/mmBT U	Total Physical Volume mmBT U	Total \$
Chief	Dl	> 1 Month <u><</u> 1 Year	< 1 V	144,000	\$12	3.6	\$43.2 million
Operating Officer	Physical	≤ 1 Month	≤ 1 Year	No Max	No Max	million	
Manager	Dissert	> 1 Week ≤ 1 Month	≤1 Year	144,000	\$12	2.9	\$34.8
Fuels Procurement	Physical ≤ 1	≤ 1 Week	≤ 1 Month	No Max.	No Max.	million	million
ACEC	Physical*	< 1 W1-	< 1 W1-	144,000	\$12	1 million	\$12.1 million
ACES	Pipeline Payback	≤ 1 Week	≤ 1 Week	144,000	\$12	1 million	\$12.1 million

^{*}Excludes purchases for pipeline payback. Purchases for pipeline payback are addressed separately in the row below.

Delegation of authority regarding Gas Firmness

The CEO delegates his authority to sell gas that is more firm than the supply source and/or is excess to the Chief Operating Officer.

Delegation of authority regarding Transportation Firmness and Volume

The CEO delegates his authority to execute transportation purchases not of equal firmness and volume to the gas component that such transportation purchase is associated with to the Chief Operating Officer.



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10. Renewable Energy Credits Trading Authority

The following outlines transaction limits, definitions, and procedural requirements for renewable energy credit transactions.

				ction Limits to)	Aggı	regate Limits (up to)	
Title	Product	Term	Lead Time	Total Volume MWh	\$/ MWH	Total Volume MWh	Total \$
VP Energy Services	Renewable Energy Credits	≤2 Years	≤3Years	200,000	\$10	400,000	\$4 Million
Director Resources & Forecasting	Renewable Energy Credits	<1 Year	<18 Months	100,000	\$5	200,000	\$1 Million
ACES	Renewable Energy Credits	As Directed	As Directed	As Directed	As Directed	As Directed	As Directed

Renewable Energy Credits Trading Authority Matrix Explanations

- The authority matrix above addresses authority for Renewable Energy Credits (REC's).
- Transaction Limits represent the total MWh volume and dollars/MWH for each REC transaction executed.
- Aggregate Limits represent the sum total MWh volume and dollars for all forward transactions.
- Term limits only apply to forward transactions, not spot transactions.
- Lead time represents the time period between trade execution and delivery of the REC's. Lead time limits only apply to forward transactions and not to spot transactions.



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11. Fuel Oil Transaction Authority

The following outlines Big Rivers' staff transaction limits for fuel oil transactions.

		Per Transaction Limits (up to)				Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Physical Volume Gallons	\$/Gallon	Total Volume Gallons	Total \$	
Chief Operating	Physical Fuel	> 1 Month <u><</u> 1 Year	< 1 Vanr	750,000	\$6	4,000,000	\$24	
Officer	Oil	$\leq 1 \text{ Month}$ $\leq 1 \text{ Year}$	<u> </u>	No Max	No Max	4,000,000	Million	
Manager	Physical Fuel	> 1 Week <u><</u> 1 Month	≤ 1 Year	500,000	\$6	1,000,000	\$6	
Fuels Procurement Oil	Oil	≤ 1 Week	≤ 1 Month	No Max	No Max	1,000,000	million	



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12. Solid Fuel Transaction Authority

The following outlines Big Rivers' staff transaction limits for solid fuel.

		Per Transaction Limits (up to)				Aggregate Limits (up to)	
Title	Product	Term	Lead Time	Volume Tons	\$/MMBtu	Total Volume Tons	Total \$
Chief	Physical	> 3 Months ≤ 1 Year	< 1 Year	500,000	\$2.50	1.0 million	\$60 million
Officer	Operating Solid Fuel	≤ 3 Months	≤ 1 Year	100,000	\$2.85		
Manager	Physical	> 3 Months ≤ 6 Months	~ 1 W	250,000	\$2.50	500,000	\$30 million
	Solid Fuel	≤ 3 Months	≤ 1 Year	50,000	\$2.85	500,000	



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13. Transportation Transaction Authority

The following outlines Big Rivers' staff transaction limits for transportation transactions.

		-	Per Transa (up	Aggregate Limits (up to)			
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief	Barge, Rail or	> 3 Months < 1 Years	1 Voor	1 million	\$25	- 2 million	\$50 million
Officer	Operating Truck Officer Transportation	≤3 Months	≤ 1 Year	No Max	No Max		
Manager Fuels	Barge, Rail or	> 1 Month ≤ 6 Months	≤1 Year	500,000	\$25	1 '11'	\$25
Procurement Truck Transportation	≤ 1 Month	≤ 1 Month	No Max	No Max	1 million	million	



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14. Emission Allowance Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for emission allowance transactions.

		Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief	Federal SO2 Emission Allowances	≤1 Year	/ 1 Voor	2,500	\$300	10,000	\$3 million
Administrative Federal NOx Officer Emission ≤1 Year Allowances	≤ 1 Year 1,2	1,250	\$2,000	5,000	\$10 million		
ACES	Federal SO2 Emission Allowances	As directed	As directed	As directed	As directed	As	As
ACES	Federal NOx Emission Allowances	As directed		As directed	As directed	directed	directed



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15. Limestone Reagent Transaction Authority

The following outlines Big Rivers' staff transaction limits for limestone reagent transactions.

		Per Transaction Limits (up to)			88 8		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	Physical Limestone Reagent	≤1 Year	≤1 Year	187,500	\$18	375,000	\$6.75 million
Manager Fuels Procurement	Physical Limestone Reagent	≤ 3 Months	≤1 Year	93,750	\$18	187,500	\$3.375 million



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16. Bulk Lime and Lime Hydrate Reagent Transaction Authority

The following outlines Big Rivers' staff transaction limits for bulk lime and lime hydrate reagent transactions.

		Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	Physical Lime Reagent	≤1 Year	≤1 Year	250,000	\$200	250,000	\$50 million
Manager Fuels Procurement	Physical Lime Reagent	≤3 Months	≤1 Year	62,500	\$200	62,500	\$12.5 million



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17. MATS Reagent Transaction Authority

The following outlines Big Rivers' staff transaction limits for MATS reagent transactions.

		Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	MATS Reagent	≤ 1 Year	≤1 Year	8,500	\$4,000	8,500	\$ 34 million
Manager Fuels Procurement	MATS Reagent	≤3 Months	≤1 Year	3,000	\$4,000	3,000	\$ 12 million



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18. Acknowledgements

Violations and Sanctions

Violations of this Authority Policy must not occur. Any person covered by this policy who becomes aware of a violation of the Authority Policy has an affirmative duty to report the violation to the department head in which the violation occurred and to the General Counsel who in turn shall inform the Big Rivers CEO. However, if it is believed that the Big Rivers CEO is involved then the Big Rivers Chairman of the Board shall be notified. The responsible party(ies) will be sanctioned according to Big Rivers Risk Management Sanctions Policy (for Big Rivers Employees only, ACES employees are governed by the ACES Power Marketing Trading Sanctions Policy).

Appendix Effective

This Transaction Authority Appendix is in effect upon the CEO's approval and shall remain in effect until a replacement appendix has been approved by the CEO.

Responsibility

It shall be the responsibility of the CEO, VP Energy Services, Chief Operating Officer and the Big Rivers-IRMC and the ACES-IRMC to ensure compliance with this policy.



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Revisions

Big River	s Policy 105/A	ppendix A Revision Record	
Number	Date	Notes	Approved by
Rev. 0	11-04-2009	Energy Related Trans	Mark Bailey
Rev. 1	11-22-2010	MISO and other misc. updates	Mark Bailey
Rev. 2	01-04-2011	Updated Solid Fuel Transaction Authority	Mark Bailey
Rev, 3	03-18-2011	Added Limestone and Lime, general cleanup	Mark Bailey
Rev. 4	12-05-2011	Update Bi-Lateral and Emission limits, add authority for PJM FTRs, add VP of Production	Mark Bailey
Rev. 5	05-07-2012	Remove Senior VP Energy Services from document due to retirement/elimination of role	Mark Bailey
Rev. 6	07-12-2012	Change Director of Power Portfolio Optimization to Managing Director Energy Services	Mark Bailey
Rev. 7	02-01-2013	Updated MISO capacity and Natural Gas limits, changed VP Production to Chief Operating Officer, changed Managing Director Energy Services to VP Energy Services, added Manager Power Supply & Market Operations, changed Power Scheduling Analyst to Power Portfolio Optimization Analyst and added Energy Services Analyst	Mark Bailey
Rev. 8	12-18-2013	Updated aggregate limits for VP Energy Services, increased offer price caps for capacity, updated VP Energy Services gas authorization to ensure ability to execute standard Texas Gas contracts, changed Power Portfolio Optimization Analyst title to reflect Senior status, replaced Manager Power Supply & Market Operations with Director Power Supply & Market Operations	Mark Bailey
Rev. 9	07-21-2014	Allocate authority previously held by Chief Operating Officer to VP Energy Services and VP Production	Robert W. Berry



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Rev. 10	04-05-2016	Updated table under Section 4 to reflect new bilateral sales limits and deleted purchase authority, combined transaction authority for transportation, added to lime to be bulk lime and lime hydrate, and added MATS reagent limits.	Robert W. Berry
Rev. 11	04-15-2016	Added a footnote to the table in Section 4 to clearly define Big Rivers' interpretation for ACES pertaining to ≤ 1 Day.	Robert W. Berry
Rev. 12	12-21-2016	Updated to reflect changes in Policy 105 adopted by the Board on December 16, 2016.	Robert W. Berry
Rev. 13	12-18-2017	Added SPP matrix to convey CEO's authority granted by Board resolution to Big Rivers' staff and ACES to conduct daily transactions for the Nebraska contracts.	Robert W. Berry
Rev. 14	10-31-2019	Added renewable energy credits trading authority added to Policy 105 adopted by the Board on August 16, 2019. Added bilateral energy and capacity purchases transaction authority & modified limits on sales. Removed Director Power Supply & Market Operations. Added Manager Marketing & Member Relations to authority matrix.	Robert W. Berry
Rev. 15	03-17-20	Changed authority for as transactions to Executive VP Operations. Also, changed title of VP Production to Executive VP Operations throughout appendix.	Robert W. Berry
Rev. 16	04-12-21	Changed title of Executive VP Operations to VP Production throughout appendix.	Robert W. Berry
Rev. 17	12-17-21	Change of titles; update authority limits to reflect current market conditions; grammatical fixes	Robert W. Berry
Rev. 18	05-26-22	Change titles; update authority limits to reflect current market conditions along with usage limits for gas conversion; change gas unit of measure from mcf to mmbtu	Robert W. Berry
Rev. 19	08-04-22	Change titles; update MISO per transaction authority limits to reflect how MISO market operates	Robert W. Berry



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Appendix A to Policy 105 - Energy Related Transaction Authority					
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Rev. 20	11-29-23	Increase MISO per transaction limits for VP	<u>CEO</u>
		of Energy Services to reflect current market	
		conditions	

CEO Signature:	Approved by CEO	
Annroval Date:	CEO Signature:	
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1. Purpose

The purpose of this appendix is to define the authority granted by the Big Rivers CEO ("CEO") to Big Rivers' staff and ACES to execute energy-related transactions.

2. Objective

The objective of this appendix is to extend authority within Policy 105 to Big Rivers' internal staff and ACES.

3. Procedural Requirements

As an appendix to Policy 105, all requirements and criteria stated within Policy 105 apply to this appendix.

Delegation of authority regarding Contract Requirements

The CEO delegates his authority to use a long form confirmation as a valid agreement in lieu of a master agreement when necessary to the VP Energy Services, the Director of Resources and Forecasting, Senior Power Portfolio Optimization Analyst, and Manager Power Marketing and Member Relations.



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4. Bilateral Energy and Capacity Purchases Transaction Authority

The following outlines Big Rivers' staff and ACES bilateral transaction limits for energy and capacity transactions.

Purchases		Per Transaction Limits (up to)				Aggregate Limits	
Title	Product	Term	Lead Time	MW Size	Min. \$/ MWH	Total Volume MWH	Total \$
VD Enorgy Somiogo	Energy	≤1 Year	≤2 Years	<u><</u> 200	No Limit	1,752,000	\$87,600,000
VP Energy Services	Capacity	≤ 1 Year	≤1 Year	<u>< 100</u>	No Limit	878,400	\$2,400,000
Director Resources & Forecasting	Energy	≤3 Months	≤1 Year	<u>< 100</u>	No Limit	220,800	\$11,100,000
Senior Power Portfolio Optimization Analyst or Manager Power Marketing & Member Relations	Energy	≤1 Week	≤ 1 Month	<u><</u> 200	No Limit	33,600	\$1,680,000
ACES	Energy	≤1 Day*	≤1 Week	<u>< 2</u> 00	No Limit	9,600	\$480,000



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5. Bilateral Energy and Capacity Sales Transaction Authority

The following outlines Big Rivers' staff and ACES bilateral transaction limits for energy and capacity transactions.

Sales		Per Transaction Limits (up to)				Aggregate Limits	
Title	Product	Term	Lead Time	MW Size	Min. \$/ MWH	Total Volume MWH	Total \$
VD Engagy Sourious	Energy	≤1 Year	≤2 Years	<u><</u> 200	No Limit	3,508,800	No Limit
VP Energy Services	Capacity	≤1 Year	≤1 Year	<u><</u> 200	No Limit	1,756,800	No Limit
Director Resources & Forecasting	Energy	≤3 Months	≤1 Year	<u>< 200</u>	No Limit	1,756,800	No Limit
	Capacity	≤3 Months	≤1 Year	<u><</u> 200	No Limit	1,756800	No Limit
Senior Power Portfolio Optimization Analyst or Manager Power Marketing & Member Relations	Energy	≤1 Week	≤ 1 Month	<u><</u> 200	No Limit	148,800	No Limit
ACES	Energy	≤ 1 Day*	≤1 Week	<u>< 200</u>	No Limit	33,600	No Limit

 $^{* \}le 1$ Day will be a transaction that runs through hour ending 24 of the following business day, as such this would encompass all weekends and holidays for trading so long as the lead time and aggregate limits are followed.

Delegation of authority regarding Firmness of Power

The CEO delegates his authority to sell power that is more firm than the supply source to the VP Energy Services.



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<u>Delegation of authority regarding Restricted Delivery Locations</u>

The CEO delegates his authority to execute transactions at other Eastern interconnection locations to the VP Energy Services.



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6. MISO Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for MISO products.

		MISO Per Transaction Limits (up to)				
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh	
	Generation Awards Demand Awards Ancillary Service Awards	As Required by MISO	1 Operating Day	425 1750 425	MISO Price Cap	
VP Energy	Capacity	< 2 Years	< 2Years	425	CONE	
Services	Financial Transmission Rights	≤ 1 Year	≤ 1 Year	425	\$20/MWh	
	Virtual Transaction Awards Imports/Exports	As Required by MISO	1 Operating Day	No Max No Max	MISO Price Cap	
Director	Generation Awards Demand Awards Ancillary Service Awards	As Required by MISO	1 Operating Day	425 1700 425	MISO Price Cap	
Resources &	Capacity	≤ 1 Year	≤ 1Year	425	CONE	
Forecasting	Financial Transmission Rights	≤ 6 months	≤ 6 months	425	\$12/MWh	
	Virtual Transaction Awards Imports/Exports	As Required by MISO	1 Operating Day	400 500	MISO Price Cap	
Manager Power Marketing & Member Relations	Capacity	≤ 1 Year	≤ 1Year	425	CONE	
Senior Power	Generation Awards	A D : 11	1.0	425		
Portfolio	Demand Awards	As Required by	1 Operating	1675	MISO Price Cap	
Optimization	Ancillary Service Awards	MISO	Day	425	•	
Analyst or	Financial Transmission Rights	< 6 Months	< 6 Months	425	\$10/MWh	
Manager	Virtual Transaction Awards			400		
Power Marketing & Member Relations	Imports/Exports	As Required by MISO	1 Operating Day	450	MISO Price Cap	
Energy Services Analyst	Demand Award	As Required by MISO	1 Operating Day	1675	MISO Price Cap	
•	Generation Awards	A - D 1-1	1.0	425		
	Demand Awards	As Required by MISO	1 Operating	1650	MISO Price Cap	
ACES	Ancillary Service Awards	MISO	Day	425		
ACES	Financial Transmission Rights	≤ 6 Months	≤ 6 Months	425	\$10/MWh	
	Virtual Transaction Awards	As Required by	1 Operating	400	MISO Price Con	
	Imports/Exports	MISO	Day	400	MISO Price Cap	



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7. PJM Transaction Authority (Non-Bilateral)

The following outlines Big Rivers' staff and ACES transaction limits for PJM products.

		PJM Per Transaction Limits (up to)			
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh
VP Energy	Generation Awards Demand Awards Ancillary Service Awards Capacity	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
Services	Financial Transmission Rights	≤ 1 Year	≤1 Year	210	\$20
	Virtual Transaction Awards Imports/Exports	As Required by PJM	1 Operating Day	No Max No Max	PJM Price Cap
Director Resources &	Generation Awards Demand Awards Ancillary Service Awards Capacity	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
Forecasting	Financial Transmission Rights	≤1 Year	\leq 3 months	105	\$12
J	Virtual Transaction Awards Imports/Exports	As Required by PJM	1 Operating Day	400 500	PJM Price Cap
Senior Power Portfolio Optimization Analyst or	Generation Awards Demand Awards Ancillary Service Awards Capacity	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
Manager Power	Financial Transmission Rights	Not Authorized	Not Authorized	Not Authorized	Not Authorized
Marketing & Member Relations	Virtual Transaction Awards Imports/Exports	As Required by PJM	1 Operating Day	400 450	PJM Price Cap
	Generation Awards Demand Awards Ancillary Service Awards Capacity	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
ACES	Financial Transmission Rights	Not Authorized	Not Authorized	Not Authorized	Not Authorized
	Virtual Transaction Awards Imports/Exports	As Required by PJM	1 Operating Day	400 400	PJM Price Cap



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8. SPP Transaction Authority

(SPP transaction authority is granted here for the purpose of fulfilling the Nebraska Contracts approved by Big Rivers Board of Directors on December 20, 2013.)

The following outlines Big Rivers' staff and ACES transaction limits for SPP products.

		SPP Per	Transaction	Limits (up	to)
Title	Product	Delivery Lead Time	Term	MW Size	\$/MWh
	Generation Awards Demand Awards	As Required by SPP	1 Operating Day	30 110	SPP Price Cap
VP Energy Services	Virtual Transaction Awards Ancillary Service Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
Services	Imports/Exports	As Required by SPP	1 Operating Day	No Max	SPP Price Cap
	Transmission Congestion Rights	≤ 1 Year	≤1 Year	80	\$20/MWh
	Generation Awards Demand Awards	As Required by SPP	1 Operating Day	30 110	SPP Price Cap
Director Resources &	Virtual Transaction Awards Ancillary Service Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
Forecasting	Imports/Exports	As Required by SPP	1 Operating Day	110	SPP Price Cap
	Transmission Congestion Rights	≤ 6 months	≤ 6 months	80	\$12/MWh
Senior Power Portfolio	Generation Awards Demand Awards	As Required by SPP	1 Operating Day	30 110	SPP Price Cap
Optimization Analyst or Manager	Virtual Transaction Awards Ancillary Service Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
Power Marketing &	Imports/Exports	As Required by SPP	1 Operating Day	110	SPP Price Cap
Member Relations	Transmission Congestion Rights	< 6 Months	< 6 Months	80	\$10/MWh
	Generation Awards		None	1	
	Demand Award	As Required by SPP	1 Operating Day	110	SPP Price Cap
Energy Services Analyst	Virtual Transaction Awards Ancillary Service Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
Allalyst	Imports/Exports	As Required by SPP	1 Operating Day	110	SPP Price Cap
	Transmission Congestion Rights		None		



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	Generation Awards	A - Din- 4 h CDD	1 Operating	30	SPP Price
	Demand Awards	As Required by SPP	Day	110	Cap
	Virtual Transaction Awards	Not Descently	Not	Not	Not Descently
ACES	Ancillary Service Awards	Not Presently Transacted	Presently Transacted	Presently Transacted	Not Presently Transacted
	Imports/Exports	As Required by SPP	1 Operating Day	110	SPP Price Cap
	Transmission Congestion Rights	≤ 6 Months	≤ 6 Months	80	\$10/MWh

SPP Authority Matrix Explanations

- Generation Award Limits are per generating unit.
- Demand Award Limits are per each load location.
- Only Transmission Congestion Rights (TCRs) that are bought and sold via the annual and monthly auctions are monitored per the limits above. Participation in the Annual Allocation of TCRs is not considered a transaction subject to this Policy.
- Delivery lead time represents the time period between trade execution and start of flow.
- Transaction Limits represent the MW volume per hour and dollars/MWh for each transaction executed.
- Bilateral Settlement Schedules are not monitored. Bilateral power trades are monitored per the limits identified in the Bilateral Energy, Capacity and Transmission Purchases and Sales Transaction Authority Matrix.



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9. Natural/Synthetic Gas and Transportation Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for natural/synthetic gas (Gas) and transportation transactions.

			Per Transaction Limits (up to)			Aggregate Limits (up to)			
Title	Product	Term	Lead Time	Physical mmBTU Volume per Day	\$/mmBT U	Total Physical Volume mmBT U	Total \$		
Chief	Dhariaal	> 1 Month < 1 Year	41 V	144,000	\$12	1 '	\$43.2		
Operating Officer	Physical	≤ 1 Month	≤1 Year	No Max	No Max		million		
Manager	Discosional	> 1 Week ≤ 1 Month	≤1 Year	144,000	\$12	2.9	2.9	2.9	\$34.8
Fuels Procurement	Physical ≤ 1 We	≤ 1 Week	≤ 1 Month	No Max.	No Max.	million	million		
ACEC	Physical*	(1 W1-	4 1 W1-	144,000	\$12	1 million	\$12.1 million		
ACES	Pipeline Payback	≤ 1 Week	≤ 1 Week	144,000	\$12	1 million	\$12.1 million		

^{*}Excludes purchases for pipeline payback. Purchases for pipeline payback are addressed separately in the row below.

Delegation of authority regarding Gas Firmness

The CEO delegates his authority to sell gas that is more firm than the supply source and/or is excess to the Chief Operating Officer.

Delegation of authority regarding Transportation Firmness and Volume

The CEO delegates his authority to execute transportation purchases not of equal firmness and volume to the gas component that such transportation purchase is associated with to the Chief Operating Officer.



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10. Renewable Energy Credits Trading Authority

The following outlines transaction limits, definitions, and procedural requirements for renewable energy credit transactions.

			Per Transac (up	ction Limits to)	Aggı	regate Limits (up to)	
Title	Product	Term	Lead Time	Total Volume MWh	\$/ MWH	Total Volume MWh	Total \$
VP Energy Services	Renewable Energy Credits	≤2 Years	≤3Years	200,000	\$10	400,000	\$4 Million
Director Resources & Forecasting	Renewable Energy Credits	<1 Year	<18 Months	100,000	\$5	200,000	\$1 Million
ACES	Renewable Energy Credits	As Directed	As Directed	As Directed	As Directed	As Directed	As Directed

Renewable Energy Credits Trading Authority Matrix Explanations

- The authority matrix above addresses authority for Renewable Energy Credits (REC's).
- Transaction Limits represent the total MWh volume and dollars/MWH for each REC transaction executed.
- Aggregate Limits represent the sum total MWh volume and dollars for all forward transactions.
- Term limits only apply to forward transactions, not spot transactions.
- Lead time represents the time period between trade execution and delivery of the REC's. Lead time limits only apply to forward transactions and not to spot transactions.



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11. Fuel Oil Transaction Authority

The following outlines Big Rivers' staff transaction limits for fuel oil transactions.

		Per Transaction Limits (up to)				Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Physical Volume Gallons	\$/Gallon	Total Volume Gallons	Total \$	
Chief	Physical Fuel	> 1 Month <u><</u> 1 Year	< 1 Year	750,000	\$6	4,000,000	\$24 Million	
Officer	Operating Oil Oil	≤ 1 Month	≤ 1 Tear	No Max	No Max	4,000,000		
Manager	Physical Fuel	> 1 Week <u><</u> 1 Month	≤ 1 Year	500,000	\$6	1,000,000	\$6	
Fuels Procurement	Oil	≤ 1 Week	≤ 1 Month	No Max	No Max	1,000,000	million	



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12. Solid Fuel Transaction Authority

The following outlines Big Rivers' staff transaction limits for solid fuel.

			Aggregate Limits (up to)				
Title	Product	Term	Lead Time	Volume Tons	\$/MMBtu	Total Volume Tons	Total \$
Chief	Physical	> 3 Months ≤ 1 Year	≤1 Year	500,000	\$2.50	1.0 million	\$60 million
Operating Officer	Solid Fuel	≤ 3 Months		100,000	\$2.85		
Manager	- I Physical		~ 1 W	250,000	\$2.50	500,000	\$30
Fuels Procurement	Solid Fuel	≤3 Months	≤1 Year	50,000	\$2.85	500,000	million



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13. Transportation Transaction Authority

The following outlines Big Rivers' staff transaction limits for transportation transactions.

		Per Transaction Limits (up to)				Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$	
Chief	Barge, Rail or Truck	> 3 Months < 1 Years	< 1 Year	1 million	\$25	million	\$50 million	
Operating Officer	Transportation	≤3 Months	<u> </u>	No Max	No Max			
Manager Fuels	Barge, Rail or	> 1 Month ≤ 6 Months	≤ 1 Year	500,000	\$25	1:11:	\$25 million	
Procurement	Truck Transportation	≤ 1 Month	≤ 1 Month	No Max	No Max	1 million		



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14. Emission Allowance Transaction Authority

The following outlines Big Rivers' staff and ACES transaction limits for emission allowance transactions.

		Per Transaction Limits (up to)			Aggregate Limits (up to)		
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Administrative Officer	Federal SO2 Emission Allowances	≤1 Year	≤1 Year	2,500	\$300	10,000	\$3 million
	Federal NOx Emission Allowances	≤ 1 Year		1,250	\$2,000	5,000	\$10 million
ACES	Federal SO2 Emission Allowances	As directed	As directed	As directed	As directed	As	As directed
	Federal NOx Emission Allowances	As directed		As directed	As directed	directed	



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15. Limestone Reagent Transaction Authority

The following outlines Big Rivers' staff transaction limits for limestone reagent transactions.

	Per Transaction Limits (up to) Aggregate Limits (up to)						
Title	Product	Term Lead Volume Time S/Ton		Total Volume Tons	Total \$		
Chief Operating Officer	Physical Limestone Reagent	≤1 Year	≤1 Year	187,500	\$18	375,000	\$6.75 million
Manager Fuels Procurement	Physical Limestone Reagent	≤ 3 Months	≤1 Year	93,750	\$18	187,500	\$3.375 million



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16. Bulk Lime and Lime Hydrate Reagent Transaction Authority

The following outlines Big Rivers' staff transaction limits for bulk lime and lime hydrate reagent transactions.

		Per Transaction Limits (up to)				Aggregate Limits (up to)	
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	Physical Lime Reagent	≤1 Year	≤1 Year	250,000	\$200	250,000	\$50 million
Manager Fuels Procurement	Physical Lime Reagent	≤3 Months	≤1 Year	62,500	\$200	62,500	\$12.5 million



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17. MATS Reagent Transaction Authority

The following outlines Big Rivers' staff transaction limits for MATS reagent transactions.

		Per Transaction Limits (up to)				te Limits to)	
Title	Product	Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
Chief Operating Officer	MATS Reagent	≤1 Year	≤1 Year	8,500	\$4,000	8,500	\$ 34 million
Manager Fuels Procurement	MATS Reagent	≤3 Months	≤1 Year	3,000	\$4,000	3,000	\$ 12 million



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18. Acknowledgements

Violations and Sanctions

Violations of this Authority Policy must not occur. Any person covered by this policy who becomes aware of a violation of the Authority Policy has an affirmative duty to report the violation to the department head in which the violation occurred and to the General Counsel who in turn shall inform the Big Rivers CEO. However, if it is believed that the Big Rivers CEO is involved then the Big Rivers Chairman of the Board shall be notified. The responsible party(ies) will be sanctioned according to Big Rivers Risk Management Sanctions Policy (for Big Rivers Employees only, ACES employees are governed by the ACES Power Marketing Trading Sanctions Policy).

Appendix Effective

This Transaction Authority Appendix is in effect upon the CEO's approval and shall remain in effect until a replacement appendix has been approved by the CEO.

Responsibility

It shall be the responsibility of the CEO, VP Energy Services, Chief Operating Officer and the Big Rivers-IRMC and the ACES-IRMC to ensure compliance with this policy.



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Revisions

Big River	s Policy 105/A	appendix A Revision Record	
Number	Date	Notes	Approved by
Rev. 0	11-04-2009	Energy Related Trans	Mark Bailey
Rev. 1	11-22-2010	MISO and other misc. updates	Mark Bailey
Rev. 2	01-04-2011	Updated Solid Fuel Transaction Authority	Mark Bailey
Rev, 3	03-18-2011	Added Limestone and Lime, general cleanup	Mark Bailey
Rev. 4	12-05-2011	Update Bi-Lateral and Emission limits, add authority for PJM FTRs, add VP of Production	Mark Bailey
Rev. 5	05-07-2012	Remove Senior VP Energy Services from document due to retirement/elimination of role	Mark Bailey
Rev. 6	07-12-2012	Change Director of Power Portfolio Optimization to Managing Director Energy Services	Mark Bailey
Rev. 7	02-01-2013	Updated MISO capacity and Natural Gas limits, changed VP Production to Chief Operating Officer, changed Managing Director Energy Services to VP Energy Services, added Manager Power Supply & Market Operations, changed Power Scheduling Analyst to Power Portfolio Optimization Analyst and added Energy Services Analyst	Mark Bailey
Rev. 8	12-18-2013	Updated aggregate limits for VP Energy Services, increased offer price caps for capacity, updated VP Energy Services gas authorization to ensure ability to execute standard Texas Gas contracts, changed Power Portfolio Optimization Analyst title to reflect Senior status, replaced Manager Power Supply & Market Operations with Director Power Supply & Market Operations	Mark Bailey
Rev. 9	07-21-2014	Allocate authority previously held by Chief Operating Officer to VP Energy Services and VP Production	Robert W. Berry



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Rev. 12	12-21-2016	Updated to reflect changes in Policy 105 adopted by the Board on December 16, 2016.	Robert W. Berry
Rev. 13	12-18-2017	Added SPP matrix to convey CEO's authority granted by Board resolution to Big Rivers' staff and ACES to conduct daily transactions for the Nebraska contracts.	Robert W. Berry
Rev. 14	10-31-2019	Added renewable energy credits trading authority added to Policy 105 adopted by the Board on August 16, 2019. Added bilateral energy and capacity purchases transaction authority & modified limits on sales. Removed Director Power Supply & Market Operations. Added Manager Marketing & Member Relations to authority matrix.	Robert W. Berry
Rev. 15	03-17-20	Changed authority for as transactions to Executive VP Operations. Also, changed title of VP Production to Executive VP Operations throughout appendix.	Robert W. Berry
Rev. 16	04-12-21	Changed title of Executive VP Operations to VP Production throughout appendix.	Robert W. Berry
Rev. 17	12-17-21	Change of titles; update authority limits to reflect current market conditions; grammatical fixes	Robert W. Berry
Rev. 18	05-26-22	Change titles; update authority limits to reflect current market conditions along with usage limits for gas conversion; change gas unit of measure from mcf to mmbtu	Robert W. Berry
Rev. 19	08-04-22	Change titles; update MISO per transaction authority limits to reflect how MISO market operates	Robert W. Berry



Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority					
Original Effective Date	11/4/2009	Date Last Reviewed	11/29/2023	Approved by	
Original Approval Date 11/4/2009 Date Last Revised 11/29/2023 CEO					

Rev. 20	11-29-23	Increase MISO per transaction limits for VP	CEO
		of Energy Services to reflect current market	
		conditions	

Approved by CEO	
CEO Signature:	
Approval Date:	



Policy Number: 122

Energy Related Transaction Credit Policy					
Original Effective Date	02/21/2003	Date Last Reviewed	<u>0212/1617/202<u>4</u>1</u>	Approved by	
Original Approval Date	02/21/2003	Date Last Revised	<u>02/16</u> /20 <u>24</u> 17	BOARD	

Objective

The Big Rivers Electric Corporation ("Big Rivers") Energy-Related Transaction Credit Policy ("Credit Policy") outlines the credit policies and procedures utilized to guide a disciplined and integrated set of protocols for monitoring, measuring and managing the organization's counterparty credit risks within the policies and risk tolerance of the organization.

This policy establishes an enterprise-wide program for managing total counterparty risk regarding energy-related transactions for only electric power and transmission. This policy excludes all transactions with Independent System Operators ("ISOs") and Regional Transmission Organizations ("RTOs"). This policy will set forth clear credit risk management objectives and articulates the credit risk tolerance of the organization. Lastly, this policy will establish a responsibility hierarchy for measuring and mitigating counterparty risk.

Credit Policy Criteria

Forms of credit risk are:

<u>Payment Risk:</u> The cost exposure to the value of accounts receivable and unbilled receivables (delivered but not invoiced).

<u>Performance (mark to market) Risk:</u> The cost exposure of replacing the contractual obligations of open contracts in the relevant market place.

As part of enterprise-wide risk management, credit risk management is a control and oversight activity. It must remain independent from the energy-related transaction authority activity, but work closely with those having responsibility and authority thereunder to ensure that appropriate credit practices are implemented and maintained.

a. Counterparty Credit Standards

Counterparty analysis

The creditworthiness of each counterparty must be determined through a fundamental analysis of the counterparty's financial and operational condition. The credit analysis incorporates two basic components, a business profile (qualitative analysis) and a financial profile (quantitative analysis). A credit limit is established as a result of this due diligence process. A forward term restriction may also be established at this time if necessary. Big Rivers will utilize ACES' credit staff to conduct counterparty credit analyses at least annually and also at any time when events or circumstances indicate that a counterparty's creditworthiness may have deteriorated or improved significantly.

The credit analysis of each counterparty is to be performed by the Credit Department of ACES and submitted with recommendations regarding credit limits to the Big Rivers Credit Committee ("BRCC") for approval. The BRCC will be comprised of <u>fourthree</u> voting members (1) President & CEO, (2) CFO, (3) COO, and (43) the VP Energy Services. The BRCC point of contact is the CFO. All formal credit files are to be maintained at the offices of ACES.



Policy Number: 122

Energy Related Transaction Credit Policy					
Original Effective Date	02/21/2003	Date Last Reviewed	<u>0212</u> /1 <u>6</u> 7/202 <u>4</u> 1	Approved by	
Original Approval Date	02/21/2003	Date Last Revised	0 <u>2</u> 8/ <u>16</u> 04/20 <u>24</u> 17	BOARD	

Credit Approvals

Counterparties that have an issuer rating or a rating on long-term senior unsecured debt obligations of at least BB from Standard & Poor's or Fitch or Ba2 from Moody's may qualify for the extension of an open line of credit for transactions up to one (1) day forward. In the event that the counterparty does not have rated debt, an internal credit rating will be assigned based on the ACES' proprietary credit scoring model and approved by ACES's Director of Credit. Counterparties that qualify for an ACES internal rating of at least BB may qualify for an open line of credit for up to one (1) day forward.

Counterparties that have an issuer rating or a rating on long-term senior unsecured debt obligations of at least BBB- from Standard & Poor's or Fitch or Baa3 from Moody's may qualify for the extension of an open line of credit for transactions beyond one (1) day forward.

Credit enhancements

Counterparties that do not qualify for an extension of an open line of credit must post at least one of the following types of security prior to the execution of a transaction:

- <u>Corporate Guarantee</u>: Counterparties may provide a guarantee from a third party that meets the creditworthiness requirements noted above. If a counterparty provides such a guarantee, the amount of any open line of credit will be determined through an analysis of the financial statements of the guarantor. All guarantees must be in a format that is acceptable to BRCC.
- <u>Letter of Credit</u>: Counterparties may provide an irrevocable letter of credit for an amount sufficient to cover the related transactions. Letters of credit should be for a term of at least 45 days beyond the term of the most forward transaction. Letters of credit must be issued by a bank or a financial institution with a rating of at least A from Standard & Poor's or Fitch or A2 from Moody's.
- <u>Prepayment</u> (margin): Counterparties may provide a prepayment or cash margin deposit that is sufficient to cover the related transactions.

b. Determination of the Amount of an Open Line of Credit

Once a counterparty has been determined to be creditworthy, an open line of credit may be extended up to 5% of tangible net worth, or, in the case of governmental agencies or non-profit wholesale power suppliers, up to 10% of their average free cash flow for the prior two years.

- <u>Available Credit</u> is the dollar amount remaining open on the credit limit approved for a counterparty.
- Credit Limit is defined as:
 - a. the approved amount of the unsecured credit limit **plus**
 - b. the approved guaranteed amount of any guarantee(s) held \boldsymbol{plus}
 - c. the value of any letter of credit or cash collateral held **plus**
 - d. the approved value of any other type of collateral held



Policy Number: 122

Energy Related Transaction Credit Policy				
Original Effective Date	02/21/2003	Date Last Reviewed	<u>0</u> 12/1 <u>6</u> 7/202 <u>4</u> 1	Approved by
Original Approval Date	02/21/2003	Date Last Revised	0 <u>2</u> 8/ <u>16</u> 04/20 <u>24</u> 17	BOARD

Risk rating

ACES will use the unsecured ratings of Standard & Poor's or Fitch or Moody's when available. Otherwise, an internal rating will be calculated based on ACES' credit scoring model that will assign a rating similar to Standard & Poor's.

Each counterparty will be assigned a risk rating based on the results of the credit analysis. Each risk rating will be associated with a default probability. This risk rating system will closely correspond to a Standard & Poor's based rating system with ratings between A and CCC. The Director of Credit of ACES has the authority to approve risk ratings based on the established credit procedures.

ACES Internal Counterparty Rating System

For unrated counterparties two internal rating models are utilized. One credit scoring model is designed for public counterparties. This includes generation and transmission cooperatives, distribution cooperatives, municipalities, government agencies, public power agencies, and other not-for-profit counterparties. The second credit scoring model is used for assigning a rating to non-public counterparties or for-profit counterparties. The purpose of the two separate credit scoring models is to provide recognition of these two distinct business models and the drivers that meaningfully distinguish and measure the financial and credit risks of each.

Each model measures two sets of risk factors: qualitative and financial indicators. Each model assigns a composite credit score from 1 (best) to 6 (worst) that corresponds to a credit rating formatted to mimic the S&P corporate credit rating scale for both public and non-public counterparties

c. Counterparty Credit Exposure

The total amount of a counterparty's credit exposure is defined as:

- 1. The dollar value of all amounts invoiced and unpaid **plus**
- 2. The dollar amount of all deliveries that have not yet been invoiced **plus**
- 3. The mark to market value of all forward trades **less**
- All offsetting amounts that are supported by legally binding netting agreements or Master Agreements.

Grouping of counterparties

Counterparties sharing a common parent or affiliation will be assigned to a group. A credit limit will be assigned to the group with individual credit limits being assigned to each counterparty within the group. The aggregate credit limit of these counterparties will not exceed the established group limit.

Credit File Documentation

Credit analysis, approvals and denials must be documented in writing and all counterparty information shall be contained in formal credit files, which are maintained at the offices of ACES. These credit files are expected to contain audited financial statements (or reference to the website location where the



Policy Number: 122

Energy Related Transaction Credit Policy				
Original Effective Date	02/21/2003	Date Last Reviewed	<u>0212</u> /1 <u>67</u> /202 <u>41</u>	Approved by
Original Approval Date	02/21/2003	Date Last Revised	0 <u>2</u> 8/ <u>16</u> 04/20 <u>24</u> 17	BOARD

financials can be retrieved) and a credit review analysis report with a credit limit recommendation signed by the Director of Credit of ACES. These files should also contain as much of the following as possible:

- At least the two most recent years of audited financial statement information.
- Rating information as published by Standard & Poor's, Fitch or Moody's.
- · General industry information.
- Copies of all credit related correspondence with the counterparty.

Approval Authority

The BRCC has the authority to approve credit limits up to \$10 million.

Any increase to the existing open line of credit must have the written approval of the BRCC.

Entering into unsecured transactions with a counterparty that will cause the total credit exposure to that counterparty to exceed the sum of its credit line plus any collateral held will not be approved. These transactions must be pre-approved, in writing, by the BRCC. All such transactions in violation of this policy will be reported to the Risk Management Committee of ACES and to Big Rivers' IRMC in a timely manner.

Credit Controls

An approved list of energy-related transaction counterparties noting credit limits and available credit is distributed by ACES on each business day to all traders via e-mail and posted to Big Rivers' ACES website.

An energy-related transaction restriction report noting counterparties that are credit approved on a secured basis or not approved for energy-related transactions under any scenario is periodically distributed by ACES to Big Rivers and posted to Big Rivers' ACES web site. Restrictions will be noted on the approved list of energy-related transaction counterparties report, which is distributed each business day.

Under no circumstances should a trade be executed with a counterparty that does not appear on the approved list of energy-related transaction counterparties unless the trade has been approved in writing by Big Rivers' President & CEO or CFO.

No credit sleeving transactions shall be executed. However, this policy does not prohibit a member of ACES being positioned between Big Rivers and a counterparty to bridge a contract gap with a counterparty, and vice versa.

The Director of Credit of ACES is to provide general oversight over the credit function, reporting any credit issues to the Risk Management Committee of ACES and to the BRCC.



Policy Number: 122

Energy Related Transaction Credit Policy					
	Original Effective Date	02/21/2003	Date Last Reviewed	<u>0</u> 12/1 <u>6</u> 7/202 <u>4</u> 1	Approved by
	Original Approval Date	02/21/2003	Date Last Revised	0 <u>2</u> 8/ <u>16</u> 04/20 <u>24</u> 17	BOARD

No new transactions are to be entered into with counterparties that have exceeded their credit limits except as they may mitigate (offset) existing exposure, or, if those transactions have prior approval of the BRCC. Any new unsecured, unauthorized transactions entered into with a counterparty that has a credit exposure in excess of its assigned credit limit will subject the trader to be sanctioned according to the Big Rivers' Risk Management Sanctions Policy (for Big Rivers Employees only, ACES' employees are governed by the ACES Power Marketing Trading Sanctions Policy).

Receivables/Payables Management

Unless otherwise notified by Big Rivers, ACES will assume all payments are received/sent by Big Rivers on the due date.

Credit Risk Mitigation

Negotiations of agreements and ongoing contractual terms with counterparties shall strive to include prudent industry practice credit provisions. These shall include, but are not limited to, explicit netting agreements and provisions granting the right to call for and receive collateral in the event the counterparty exceeds its approved credit limit or suffers a material adverse credit event.

Collateral Management

ACES is authorized to give Big Rivers' credit information to counterparties in order to establish credit approvals.

ACES is authorized to issue and respond to margin calls on behalf of Big Rivers. ACES will coordinate with Big Rivers regarding the issuance or receipt of collateral to support a transaction. ACES holds no collateral. ACES retains copies of letters of credit and guarantees unless instructed otherwise by BRCC.



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Energy Related Transaction Credit Policy				
Original Effective Date	02/21/2003	Date Last Reviewed	<u>0212</u> /1 <u>67</u> /202 <u>41</u>	Approved by
Original Approval Date	02/21/2003	Date Last Revised	0208/1604/20241	BOARD

Number	Date	Notes	Approved by
Original	02/21/2003	Originally Power Trading Portfolio Credit Risk Policy	Board
Rev 1	10/08/2004	Amendment to Section 1.3.1 and addition of Addendum	President/CEO
Rev 2	10/21/2011	Revised and renamed to Energy- Related Transaction Credit Policy	Board
Rev 3	02/21/2012	Revised to accommodate retirement of Senior VP Energy Supply	Board
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<u>Rev 9</u>	02/16/2024	Updated to include COO on Credit Committee.	Board

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Energy Related Transaction Credit Policy					
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As part of enterprise-wide risk management, credit risk management is a control and oversight activity. It must remain independent from the energy-related transaction authority activity, but work closely with those having responsibility and authority thereunder to ensure that appropriate credit practices are implemented and maintained.

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Credit enhancements

Counterparties that do not qualify for an extension of an open line of credit must post at least one of the following types of security prior to the execution of a transaction:

- <u>Corporate Guarantee</u>: Counterparties may provide a guarantee from a third party that meets the creditworthiness requirements noted above. If a counterparty provides such a guarantee, the amount of any open line of credit will be determined through an analysis of the financial statements of the guarantor. All guarantees must be in a format that is acceptable to BRCC.
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- <u>Available Credit</u> is the dollar amount remaining open on the credit limit approved for a counterparty.
- Credit Limit is defined as:
 - a. the approved amount of the unsecured credit limit **plus**
 - b. the approved guaranteed amount of any guarantee(s) held **plus**
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Risk rating

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Original Effective Date	02/21/2003	Date Last Reviewed	02/16/2024	Approved by
Original Approval Date	02/21/2003	Date Last Revised	02/16/2024	BOARD

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Original	02/21/2003	Originally Power Trading Portfolio Credit Risk Policy	Board
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Rev 4	03/14/2013	Revised to accommodate promotions, retirement and replacement	Board
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Rev 9	02/16/2024	Updated to include COO on Credit Committee.	Board

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

Responses to Commission Staff's First Request for Information in the Appendix of the Commission's Order dated August 2, 2024

August 26, 2024

- 1 Item 12) For the period under review, list all firm power commitments for
- 2 (a) purchases and (b) sales. This list shall identify the electric utility, the
- 3 amount of commitment in megawatts, and the purpose of the commitment
- 4 (i.e., peaking, emergency).

5

- 6 Response)
- 7 (a) Purchases:
- 8 Big Rivers has a contract with Southeastern Power Administration ("SEPA")
- 9 to purchase up to $178\,\mathrm{MWs}$ of energy. This volume fluctuates on a weekly basis based
- 10 on hydrological conditions.
- Additional purchases are shown on the table below.

Case No. 2024-00141 Response to PSC 1-12 Witness: Terry Wright, Jr. Page 1 of 5

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

Responses to Commission Staff's First Request for Information in the Appendix of the Commission's Order dated August 2, 2024

August 26, 2024

1 (a) Purchases: (continued)

	Big Rivers Electric Corporation Power Purchases November 1, 2022 through April 30, 2023												
Date	Electric Utility	MW	Block	Total MWh	ISO	Purpose							
Nov-Dec 2022		100	7x24	146,400	MISO	Hedge BREC Load							
Nov-Dec 2022		50	7x24	73,200	MISO	Hedge Off-System Sales							
Nov 2022		50	7x24	36,000	MISO	Hedge BREC Load							
Nov 2022 - Apr 2023		150	7x24	651,600	MISO	Hedge Off-System Sales and BREC Load							
Nov-Dec 2022		40		26,880	SPP	Hedging Nebraska Load							
Dec 2022		5	Peak	1,680	SPP	Hedging Nebraska Load							
Nov-Dec 2022		35	Off- Peak	27,720	SPP	Hedging Nebraska Load							
Jan-Apr 2023		25	Peak	33,600	SPP	Hedging Nebraska Load							
Jan-Mar 2023		10	Peak	10,240	SPP	Hedging Nebraska Load							
Jan-Feb 2023		10	Peak	6,560	SPP	Hedging Nebraska Load							
Jan 2023		5	Peak	1,680	SPP	Hedging Nebraska Load							
Jan-Apr 2023		20	Off- Peak	30,720	SPP	Hedging Nebraska Load							

Case No. 2024-00141 Response to PSC 1-12 Witness: Terry Wright, Jr. Page 2 of 5

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

Responses to Commission Staff's First Request for Information in the Appendix of the Commission's Order dated August 2, 2024

August 26, 2024

Date	Electric Utility	MW	Block	Total MWh	ISO	Purpose
Jan-Mar 2023		10	Off- Peak	11,360	SPP	Hedging Nebraska Load
Jan-Feb 2023		5	Off- Peak	3,800	SPP	Hedging Nebraska Load
Jan 2023		5	Off- Peak	2,040	SPP	Hedging Nebraska Load

1

2 (b) Sales:

- 3 Big Rivers has a contract to provide up to 100 MWs to the Kentucky Municipal
- 4 Energy Agency ("KYMEA"). KYMEA uses this as a baseload resource.
- 5 Big Rivers has a second contract to KYMEA for up to 100 MWs. KYMEA uses
- 6 this agreement for economic energy, when the contract price is below the cost of their
- 7 other resourcesOn June 1, 2020, Owensboro Municipal Utilities ("OMU") began
- 8 taking energy from Big Rivers under a 6.5-year contract in which Big Rivers supplies
- 9 full requirements service, net of OMU's SEPA allocation of capacity and energy. The
- 10 price is contractually specified.

11

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

Responses to Commission Staff's First Request for Information in the Appendix of the Commission's Order dated August 2, 2024

August 26, 2024

- 1 (b) Sales: (continued)
- 2 Big Rivers has contracts with three public power entities in Nebraska with
- 3 about 90 MWs of load to provide partial requirements service, balancing what they
- 4 receive from their incumbent supplier, Western Area Power Administration, and a
- 5 wind farm with their load. Any purchases to hedge this transaction shown in sub-
- 6 part (a) do not pass through Big Rivers' FAC.
- 7 On additional forward sale was transacted for the period under review, which
- 8 is shown below

Big Rivers Electric Corporation Firm Off-System Sales November 1, 2022 through April 30, 2023											
Date	Date Electric Utility MW Block Total Mwh ISO Purpose										
Nov-Dec 2022		50	7x24	73,200	MISO	Off-System Sales					

9

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

Responses to Commission Staff's First Request for Information in the Appendix of the Commission's Order dated August 2, 2024

August 26, 2024

1
2
3 Witness) Terry Wright, Jr.
4

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

Responses to Commission Staff's First Request for Information in the Appendix of the Commission's Order dated August 2, 2024

August 26, 2024

Item 13) Provide a monthly billing summary of sales to all electric utilities for the period under review.

Response) Please see the attached monthly billing summaries for sales to all electric utilities for the period November 1, 2022 through April 30, 2023.

Witness) Christopher A. ("Chris") Warren

Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - November 2022

$1 \\ 2$	Member Billing November 2022	KW Billed (a)	kWh (b)	Demand Revenue (c)]	Base Energy Revenue (d)	•	Total Demand & Energy (e) = (c) + (d)
3	JP RURALS	104,831	47,370,858	 1,447,191.96	\$	2,131,688.61	\$	3,578,880.57
4	KENERGY	191,450	85,489,446	2,642,967.25	·	3,847,025.07	·	6,489,992.32
5	MEADE CO. RURALS	96,667	38,251,543	1,334,487.94		1,721,319.43		3,055,807.37
6 7	TOTAL RURALS	392,948	171,111,847	\$ 5,424,647.15	\$	7,700,033.11	\$	13,124,680.26
8		4,521	2,035,000	 48,442.51	\$	77,431.75	\$	125,874.26
		1,629	468,537	17,454.74		17,827.83		35,282.57
		2,282	912,141	24,451.63		34,706.97		59,158.60
		40,800	16,434,219	437,172.00		625,322.03		1,062,494.03
		35,000	15,056,132	375,025.00		$572,\!885.82$		947,910.82
		60	9,762	642.90		371.44		1,014.34
		100	15,676	1,071.50		596.47		1,667.97
		33,177	10,816,960	355,491.55		411,585.33		767,076.88
		150	12,940	1,607.25		492.37		2,099.62
		180	31,479	1,928.70		1,197.78		3,126.48
		2,500	193,375	26,787.50		7,357.92		34,145.42
		863	160,625	9,247.05		6,111.78		15,358.83
		3,470	1,617,101	37,181.05		61,530.69		98,711.74
		7,704	4,241,125	82,548.36		161,374.81		243,923.17
24		11,120	6,079,201	119,150.80		231,313.60		350,464.40
25 26		143,556	58,084,273	\$ 1,538,202.54	\$	2,210,106.59	\$	3,748,309.13
		7,501	5,400,001	80,373.21		205,470.04		285,843.25
		3,191	1,020,647	34,191.57		38,835.62		73,027.19
29 30 31	TOTAL INDUSTRIALS	154,248	64,504,921	\$ 1,652,767.32	\$	2,454,412.25	\$	4,107,179.57
91		$22,500 \\ 0$	15,043,223 1,009,556	172,254.00 (53,200.00)		803,417.69 75,389.84		975,671.69 22,189.84
$\begin{array}{c} 34 \\ 35 \end{array}$	Sub-Total CoGEN/MARKET	22,500	16,052,779	 119,054.00		878,807.53		997,861.53
36 37	Sub-10tal COGEIVINARRE1	22,300	10,002,779	 119,004.00		010,001.03		997,001.93
	GRAND TOTAL	569,696	251,669,547	\$ 7,196,468.47	\$	11,033,252.89	\$	18,229,721.36

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Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - November 2022

Member Billing November 2022					Billing Adjustment (h)			Fuel Adjustment Clause (FAC) (i)		vironmental Surcharge (ES) (j)
JP RURALS	\$	6.00	\$	<u>-</u>	\$	-	\$	1,113,215.16	\$	164,161.99
KENERGY	•	-	·	-	·	-		2,009,001.98		297,291.03
MEADE CO. RURALS		-		-		-		898,911.26		138,030.94
TOTAL RURALS	\$	6.00	\$	-	\$	-	\$	4,021,128.40	\$	599,483.96
	\$	-	\$	-			\$	47,822.50	\$	6,132.97
		-		-				11,010.62		1,619.89
		-		-						2,839.28
		-		-				,		51,044.48
		-		-						45,923.50
		-		-						42.96
		-		-		170.00				70.28
		-		-		150.00				35,836.74
		-		-		-				81.85 133.77
		-		-		026.54				1,314.48
		-		-		920.94				662.96
		-		1 125 08				,		4,830.21
		_		1,120.00						12,174.46
		-		-				142,861.22		17,478.05
Sub-Total Kenergy Industrials	\$	-	\$	1,125.08	\$	1,076.54	\$	1,364,980.42	\$	180,185.88
		_		_		(53 039 25)		126 900 02		12,936.02
						(00,000.20)		23,985.20		3,402.35
	\$	-	\$	1,125.08	\$	(51,962.71)	\$	1,515,865.64	\$	196,524.25
	_									
		-				22,070.58		00 504 55		1 51 4 00
		-				-		23,724.57		1,714.80
Sub-Total CoGEN/MARKET		-		-		22,070.58		23,724.57		1,714.80
	 \$	6.00	\$	1,125.08	 \$	(29,892.13)	\$	5,560,718.61	\$	797,723.01
	JP RURALS KENERGY MEADE CO. RURALS TOTAL RURALS Sub-Total Kenergy Industrials	JP RURALS KENERGY MEADE CO. RURALS TOTAL RURALS \$ Sub-Total Kenergy Industrials \$ TOTAL INDUSTRIALS \$ Sub-Total CoGEN/MARKET	JP RURALS KENERGY MEADE CO. RURALS TOTAL RURALS \$ 6.00 \$	Member Billing November 2022 Section Sec	Number Billing November 2022 Power (f) Penalty (g)	Power (f) Penalty (g) A	Power (f) Penalty (g) Adjustment (h)	Net Green Power Penalty (g)	Net Green	Net Green Power Power

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Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - November 2022

1 2	Member Billing November 2022	Non-FAC PPA (k)			Revenue $= \sum (e)$ to (k)		MRSM - ER Adjustment (m)	4	Revenue Net of MRSM Adjustments (n) = (l) + (m)
3	JP RURALS	\$	285,125.19	\$	5,141,388.91	\$	(328,341.53)	\$	4,813,047.38
4	KENERGY	•	514,560.98	,	9,310,846.31	,	(592,552.83)	,	8,718,293.48
5	MEADE CO. RURALS		230,236.04		4,322,985.61		(265, 132.85)		4,057,852.76
6 7	TOTAL RURALS	\$	1,029,922.21	\$	18,775,220.83	\$	(1,186,027.21)	\$	17,589,193.62
8		\$	12,248.67	\$	192,078.40	\$	(9,860.62)	\$	182,217.78
			2,820.12		50,733.20		(2,269.88)		48,463.32
			5,490.18		88,923.37		(4,417.92)		84,505.45
			98,917.56		1,598,660.22		(79,595.37)		1,519,064.85
			90,622.86		1,438,276.28		(72,921.75)		1,365,354.53
			58.76		1,345.47		(47.28)		1,298.19
			94.35		2,200.99		(75.96)		2,125.03
			65,107.28		1,122,369.46		(57,866.34)		1,064,503.12
			77.89		2,563.45		(62.69)		2,500.76
			189.47		4,189.48		(152.63)		4,036.85
			1,163.92		42,094.67		(936.97)		41,157.70
			966.80		20,763.28		(778.24)		19,985.04
			9,733.33		152,402.23		(7,833.33)		144,568.90
			25,527.33		381,291.40		(20,544.06)		360,747.34
2.4			36,590.71		547,394.38		(29,452.28)		517,942.10
24 25 26	Sub-Total Kenergy Industrials	\$	349,609.23	\$	5,645,286.28	\$	(286,815.32)	\$	5,358,470.96
			32,502.61		405,142.65		(6,976.47)		398,166.18
			6,143.27		106,558.01		(4,945.74)		101,612.27
29 30 31	TOTAL INDUSTRIALS	\$	388,255.11	\$	6,156,986.94	\$	(298,737.53)	\$	5,858,249.41
			- 6,076.52		997,742.27 53,705.73		- -		997,742.27 53,705.73
34 35 36	Sub-Total CoGEN/MARKET		6,076.52		1,051,448.00		-		1,051,448.00
$\frac{37}{38}$	GRAND TOTAL	\$	1,424,253.84	\$	25,983,655.77	\$	(1,484,764.74)	\$	24,498,891.03

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Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - December 2022

1 2	Member Billing December 2022	KW Billed (a)	kWh (b)	Demand Revenue (c)]	Base Energy Revenue (d)	•	Total Demand & Energy (e) = (c) + (d)
3	JP RURALS	150,842	59,597,271	 2,082,373.81	\$	2,681,877.19	\$	4,764,251.00
4	KENERGY	282,319	107,348,964	3,897,413.79		4,830,703.38		8,728,117.17
5	MEADE CO. RURALS	155,924	50,510,564	2,152,530.82		2,272,975.38		4,425,506.20
6 7 8	TOTAL RURALS	589,085	217,456,799	\$ 8,132,318.42	\$	9,785,555.95	\$	17,917,874.37
0		4,400	2,019,844	47,146.00	\$	76,855.06	\$	124,001.06
		1,743	493,967	18,676.24		18,795.44		37,471.68
		2,249	920,843	24,098.03		35,038.08		59,136.11
		40,800	20,130,390	437,172.00		765,961.34		1,203,133.34
		35,000	19,319,691	375,025.00		$735,\!114.24$		1,110,139.24
		60	9,617	642.90		365.93		1,008.83
		100	24,428	1,071.50		929.49		2,000.99
		33,774	10,991,223	361,888.41		418,216.04		780,104.45
		150	14,036	1,607.25		534.07		2,141.32
		183	19,081 160,500	1,960.85 26,787.50		726.03 $6.107.02$		2,686.88 $32,894.52$
		2,500 920	198.610	9,857.80		7.557.11		52,894.52 17,414.91
		3,470	1,584,858	37,181.05		60,303.85		97,484.90
		7,817	4,173,250	83,759.15		158,792.16		242,551.31
		10,562	5,800,875	113,171.83		220,723.29		333,895.12
24 25 26	Sub-Total Kenergy Industrials	143,728	65,861,213	\$ 1,540,045.51	\$	2,506,019.15	\$	4,046,064.66
		7,500	5,580,000	80,362.50		212,319.00		292,681.50
		55,270	4,672,086	202,011.85		136,662.77		338,674.62
$\frac{29}{30}$	TOTAL INDUSTRIALS	206,498	76,113,299	 1,822,420		2,855,000.92		4,677,420.78
31		22,500	12,449,227	177,995.80		522,336.90		700.332.70
9.1		0	65,965	(53,200.00)		13,138.21		(40,061.79)
34 35 36	Sub-Total CoGEN/MARKET	22,500	12,515,192	 124,795.80		535,475.11		660,270.91
37 38	GRAND TOTAL	818,083	306,085,290	\$ 10,079,534.08	\$	13,176,031.98	\$	23,255,566.06

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Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - December 2022

1	Member Billing December 2022	Net Green Power (f)			Power Factor Penalty (g)		Billing djustment (h)	1	Fuel Adjustment Clause (FAC) (i)		avironmental Surcharge (ES) (j)
$\frac{2}{3}$	JP RURALS	\$	6.00	\$	<u>-</u>	\$	-	\$	1,193,792.94	\$	257,084.74
4	KENERGY		-		-		-		2,150,307.10		469,036.01
5	MEADE CO. RURALS		-		-		-		1,011,777.11		233,664.45
6 7	TOTAL RURALS	\$	6.00	\$	-	\$	-	\$	4,355,877.15	\$	959,785.20
0		\$	-					\$	40,459.50	\$	7,188.15
			-		792.91				9,894.65		2,048.76
			-						18,445.41		3,383.05
			-						403,231.84		70,308.45
			-						386,992.73		65,664.19
			-		-				192.64 489.32		51.25 107.34
			-				150.00		220,165.19		43,408.39
			-				31.41		281.16		102.03
			-				188.45		382.21		129.58
			-				920.26		3,214.98		1,508.93
			-						3,978.36		919.33
			-						31,746.29		5,647.79
			-						83,594.37		14,296.05
9.4			-						116,197.33		19,739.25
24 25 26	Sub-Total Kenergy Industrials	\$	-	\$	792.91	\$	1,290.12	\$	1,319,265.98	\$	234,502.54
20			-		-		(53,039.25)		111,772.98		15,669.10
29 30					709.01		(51.740.19)			ф	050 171 64
30 31			0.00		792.91		(51,749.13)		1,431,038.96	Þ	250,171.64
			-				25,922.62				
34			-				-		1,321.34		(1,560.53)
35	Sub-Total CoGEN/MARKET		-		-		25,922.62		1,321.34		(1,560.53)
$\frac{36}{37}$											
	GRAND TOTAL	\$	6.00	\$	792.91	\$	(25,826.51)	\$	5,788,237.45	\$	1,208,396.31

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Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - December 2022

$\frac{1}{2}$	Member Billing December 2022	Non-FAC PPA (k)			Revenue $= \sum (e)$ to (k)		MRSM - ER Adjustment (m)	Revenue Net of MRSM Adjustments (n) = (l) + (m)		
3	JP RURALS	\$	358,715.97	\$	6,573,850.65	\$	(325,048.40)	\$	6,248,802.25	
4	KENERGY	Ψ	646,133.41	Ψ	11,993,593.69	Ψ	(585,490.05)	Ψ	11,408,103.64	
5	MEADE CO. RURALS		304,023.08		5,974,970.84		(275,488.76)		5,699,482.08	
6 7	TOTAL RURALS	\$	1,308,872.46	\$	24,542,415.18	\$	(1,186,027.21)	\$	23,356,387.97	
8		\$	12,157.44	\$	183,806.15	\$	(8,950.55)	\$	174,855.60	
			2,973.19		53,181.19		(2,188.93)		50,992.26	
			5,542.55		86,507.12		(4,080.54)		82,426.58	
			121,164.82		1,797,838.45		(89,203.99)		1,708,634.46	
			116,285.22		1,679,081.38		(85,611.53)		1,593,469.85	
			57.88		1,310.60		(42.63)		1,267.97	
			147.03		2,744.68		(108.25)		2,636.43	
			66,156.17		1,109,984.20		(48,997.82)		1,060,986.38	
			84.48		2,640.40		(62.20)		2,578.20	
			114.85		3,501.97		(84.55)		3,417.42	
			966.05		39,504.74		(711.23)		38,793.51	
			1,195.43		23,508.03		(880.10)		22,627.93	
			9,539.26		144,418.24		(7,023.00)		137,395.24	
			25,118.79		$365,\!560.52$		(18,492.96)		347,067.56	
24			34,915.47		504,747.17		(25,705.47)		479,041.70	
25 26	Sub-Total Kenergy Industrials	\$	396,418.63	\$	5,998,334.84	\$	(292,143.75)	\$	5,706,191.09	
20			33,586.02		400,670.35		(6,593.79)		394,076.56	
			33,333.52		338,674.62		(0,000.10)		338,674.62	
29	MODAL INDUGEDIALS						(200 525 5.1)			
$\frac{30}{31}$	TOTAL INDUSTRIALS	\$	430,004.65	\$	6,737,679.81	\$	(298,737.54)	\$	6,438,942.27	
34			397.04		726,255.32 (39,903.94)		<u>-</u>		726,255.32 (39,903.94)	
35 36	Sub-Total CoGEN/MARKET		397.04		686,351.38		-		686,351.38	
37 38	GRAND TOTAL	\$	1,739,274.15	\$	31,966,446.37	\$	(1,484,764.75)	\$	30,481,681.62	

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Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - January 2023

1 2	Member Billing January 2023	KW Billed (a)	kWh (b)	Demand Revenue (c)	I	Base Energy Revenue (d)	Total Demand & Energy (e) = (c) + (d)
3	JP RURALS	113,269	53,956,949	1,563,678.55	\$	2,428,062.71	\$ 3,991,741.26
4	KENERGY	204,049	97,278,162	2,816,896.45		4,377,517.29	7,194,413.74
5 6	MEADE CO. RURALS	92,065	44,638,657	 1,270,957.33		2,008,739.57	3,279,696.90
7 8	TOTAL RURALS	409,383	195,873,768	\$ 5,651,532.33	\$	8,814,319.57	\$ 14,465,851.90
0		4,400	2,004,063	47,146.00	\$	76,254.60	\$ 123,400.60
		1,817	651,516	19,469.16		24,790.18	$44,\!259.34$
		2,213	1,001,219	23,712.30		38,096.38	61,808.68
		40,800	19,441,439	437,172.00		739,746.75	1,176,918.75
		35,000	21,096,132	375,025.00		802,707.82	1,177,732.82
		68	9,614	728.62		365.81	1,094.43
		100	28,888	1,071.50		1,099.19	2,170.69
		33,577	10,849,151	359,777.56		412,810.20	772,587.76
		150	17,647	1,607.25		671.47	2,278.72
		180	18,417	1,928.70		700.77	2,629.47
		2,500 866	146,469 191,093	26,787.50 $9,279.19$		5,573.15 7,271.09	32,360.65 $16,550.28$
		3,614	1,684,251	38,724.01		64,085.75	102,809.76
		7,757	4,748,875	83,116.26		180,694.69	263,810.95
		10,860	5,683,187	116,364.90		216,245.27	332,610.17
$\begin{array}{c} 24 \\ 25 \\ 26 \end{array}$	Sub-Total Kenergy Industrials	143,902	67,571,961	\$ 1,541,909.95	\$	2,571,113.12	\$ 4,113,023.07
		2,000	1,488,000	21,430.00		56,618.40	78,048.40
		5,500	4,012,748	58,932.50		152,685.06	211,617.56
		13,616	3,562,188	49,766.48		103,680.28	153,446.76
$\begin{array}{c} 31 \\ 32 \end{array}$	TOTAL INDUSTRIALS	165,018	76,634,897	 1,672,038.93		2,884,096.86	 4,556,135.79
		$22,500 \\ 0$	12,820,797 28,708	178,024.64 (53,200.00)		445,977.75 1,099.55	624,002.39 (52,100.45)
35 36 37		22,500	12,849,505	 124,824.64		447,077.30	 571,901.94
38 39	GRAND TOTAL	596,901	285,358,170	\$ 7,448,395.90	\$	12,145,493.73	\$ 19,593,889.63

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Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - January 2023

1	Member Billing January 2023		Net Green Power (f)	Po	ower Factor Penalty (g)	A	Billing djustment (h)	1	Fuel Adjustment Clause (FAC) (i)		nvironmental Surcharge (ES) (j)
$\frac{2}{3}$	JP RURALS	\$	6.00	\$		\$		\$	781,620.36	\$	542,005,39
4	KENERGY	Ψ	-	Ψ	-	Ψ	-	Ψ	1,409,171.45	Ψ	976,935.57
5	MEADE CO. RURALS		-		-		-		646,635.59		445,991.00
6 7 8	TOTAL RURALS	\$	6.00	\$	-	\$	-	\$	2,837,427.40	\$	1,964,931.96
8		\$	-					\$	29,030.86	\$	17,488.10
			-		-				9,437.86		6,125.70
			-						14,503.66		8,753.80
			-						281,628.69		167,505.58
			-						305,598.57		171,199.33
			-		53.58				139.27		137.31
			-						418.47		293.75
			-				150.00		157,160.80		105,804.23
			-				31.41		255.63		280.73
			-						266.79		319.70
			-				703.42		2,121.75		3,759.71
			-						2,768.17		2,176.11
			-						24,398.06		14,601.81
			-						68,792.20		38,399.40
			-						82,326.65		47,750.55
24											
$\begin{array}{c} 25 \\ 26 \end{array}$		\$	-	\$	53.58	\$	884.83	\$	978,847.43	\$	584,595.81
			-		=		=		21,555.17		11,541.49
							(53,039.25)		58,128.67		25,606.90
30											
31	TOTAL INDUSTRIALS		0.00		53.58		(52,154.42)		1,058,531.27		621,744.20
32							10.050.01				
			-				12,658.21		-		-
25			-				55.61		415.86		(5,470.54)
35							19 719 00		41 E 00		(5 470 F 4)
36			-		-		12,713.82		415.86		(5,470.54)
$\frac{37}{38}$											
	GRAND TOTAL	\$	6.00	\$	53.58	\$	(39,440.60)	\$	3,896,374.53	\$	2,581,205.62

Case No. 2024-00141 Attachment for Response to PSC 1-13 Witness: Chris A. Warren

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Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - January 2023

$\frac{1}{2}$	Member Billing January 2023	N	on-FAC PPA (k)	Revenue (1) = \sum (e) to (k)			MRSM - ER Adjustment (m)	Revenue Net of MRSM Adjustments (n) = (l) + (m)		
3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$	324,766.88 585,517.26 268,680.08	\$	5,640,139.89 10,166,038.02 4,641,003.57	\$	(211,203.49) (380,775.55) (174,728.93)	\$	5,428,936.40 9,785,262.47 4,466,274.64	
6 7	TOTAL RURALS	\$	1,178,964.22	\$	20,447,181.48	\$	(766,707.97)	\$	19,680,473.51	
00		\$	12,062.46 3,921.47 6,026.34 117,018.02 126,977.62 57.87 173.88 65,301.04 106.22 110.85 881.60 1,150.19 10,137.51 28,583.48 34,207.10	\$	181,982.02 63,744.37 91,092.48 1,743,071.04 1,781,508.34 1,482.46 3,056.79 1,101,003.83 2,952.71 3,326.81 39,827.13 22,644.75 151,947.14 399,586.03 496,894.47	\$	(6,069.58) (1,973.20) (3,032.33) (58,881.08) (63,892.55) (29.12) (87.49) (32,945.10) (53.45) (55.78) (443.60) (578.75) (5,100.99) (14,382.62) (17,212.32)	\$	175,912.44 61,771.17 88,060.15 1,684,189.96 1,717,615.79 1,453.34 2,969.30 1,068,058.73 2,899.26 3,271.03 39,383.53 22,066.00 146,846.15 385,203.41 479,682.15	
24 25 26		\$	406,715.65	\$	6,084,120.37	\$	(204,737.96)	\$	5,879,382.41	
20			8,956.27 24,152.73		120,101.33 266,466.61 153,446.76		(4,446.17)		115,655.16 266,466.61 153,446.76	
$\begin{array}{c} 31 \\ 32 \end{array}$	TOTAL INDUSTRIALS		439,824.65		6,624,135.07		(209,184.13)		6,414,950.94	
			- 172.79		636,660.60 (56,926.73)		- -		636,660.60 (56,926.73)	
35 36 37	Sub-Total CoGEN/MARKET		172.79		579,733.87		-		579,733.87	
38 39	GRAND TOTAL	\$	1,618,961.66	\$	27,651,050.42	\$	(975,892.10)	\$	26,675,158.32	

Case No. 2024-00141 Attachment for Response to PSC 1-13 Witness: Chris A. Warren Page 9 of 24

Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - February 2023

1 2	Member Billing February 2023	KW Billed (a)	kWh (b)	Demand Revenue (c)	1	Base Energy Revenue (d)	Total Demand & Energy (e) = (c) + (d)
3	JP RURALS	107,828	45,564,658	1,488,565.54	\$	2,050,409.61	\$ 3,538,975.15
4	KENERGY	202,112	81,899,074	2,790,156.16		3,685,458.33	6,475,614.49
5 6	MEADE CO. RURALS	98,590	37,033,812	1,361,034.95		1,666,521.54	3,027,556.49
7 8	TOTAL RURALS	408,530	164,497,544	\$ 5,639,756.65	\$	7,402,389.48	\$ 13,042,146.13
		4,506	2,048,875	48,281.79	\$	77,959.69	\$ 126,241.48
		1,713	511,955	18,354.80		19,479.89	37,834.69
		2,290	1,001,672	24,537.35		38,113.62	$62,\!650.97$
		40,800	17,469,374	437,172.00		664,709.68	1,101,881.68
		35,000	12,757,397	375,025.00		485,418.96	860,443.96
		68	7,738	728.62		294.43	1,023.05
		100	24,874	1,071.50		946.46	2,017.96
		33,664	10,679,969	360,709.76		406,372.82	767,082.58
		150	15,528	1,607.25		590.84	2,198.09
		$ \begin{array}{r} 180 \\ 2,500 \end{array} $	29,878 145,906	$1,928.70 \\ 26,787.50$		1,136.86 5,551.72	3,065.56 $32,339.22$
		2,500 980	211,688	10,500.70		8,054.73	52,559.22 18,555.43
		3,493	1,673,494	37,427.50		63,676.45	101,103.95
		7,953	4,260,437	85,216.40		162,109.63	247,326.03
		11,690	5,875,815	125,258.35		223,574.76	348,833.11
24 25 26	Sub-Total Kenergy Industrials	145,087	56,714,600	\$ 1,554,607.22	\$	2,157,990.54	\$ 3,712,597.76
20		2,000	1,488,000	21,430.00		56,618.40	78,048.40
		5,500	3,544,519	58,932.50		134,868.95	193,801.45
		15,478	3,217,409	56,572.09		94,104.95	150,677.04
30 31 32		168,065	64,964,528	 1,691,541.81		2,443,582.84	 4,135,124.65
32		22,500	12,497,624	160,799.24		344,041.30	504,840.54
95		0	117,156	(53,200.00)		4,470.57	(48,729.43)
35 36 37 38	Sub-Total CoGEN/MARKET	22,500	12,614,780	 107,599.24		348,511.87	 456,111.11
	GRAND TOTAL	599,095	242,076,852	\$ 7,438,897.70	\$	10,194,484.19	\$ 17,633,381.89

Case No. 2024-00141 Attachment for Response to PSC 1-13 Witness: Chris A. Warren Page 10 of 24

Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - February 2023

1	Member Billing February 2023]	Net Green Power (f)	wer Factor Penalty (g)	A	Billing djustment (h)	1	Fuel Adjustment Clause (FAC) (i)	nvironmental Surcharge (ES) (j)
2 3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$	6.00	\$ - - - -	\$		\$	356,862.40 641,433.55 290,048.82	\$ 209,566.39 382,437.66 177,927.11
6 7	TOTAL RURALS	\$	6.00	\$ _	\$	-	\$	1,288,344.77	\$ 769,931.16
8		\$	- - - - - - - - - - - -	203.59 53.58		62.82 690.98	\$	16,046.79 4,009.63 7,845.10 136,820.14 99,915.93 60.60 194.81 83,645.52 121.62 234.00 1,142.74 1,657.94 13,106.81 33,367.74 46,019.38	\$ 7,770.39 2,257.73 3,845.74 67,534.68 52,121.42 56.80 118.73 45,983.53 121.27 174.86 1,726.76 1,079.85 6,245.82 15,394.87 21,620.50
24 25 26	Sub-Total Kenergy Industrials	\$	- - -	\$ 257.17	\$	753.80 - (53,039.25)	\$	444,188.75 11,654.02 27,760.67	\$ 226,052.95 4,958.06 9,541.21
30 31 32	TOTAL INDUSTRIALS		0.00	 257.17		(52,285.45) 19,414.35		483,603.44	 240,552.22
35 36 37	Sub-Total CoGEN/MARKET		- 	 -		150.00 19,564.35		917.57 917.57	 (2,359.79)
38 39	GRAND TOTAL	\$	6.00	\$ 257.17	\$	(32,721.10)	\$	1,772,865.78	\$ 1,008,123.59

Case No. 2024-00141 Attachment for Response to PSC 1-13 Witness: Chris A. Warren Page 11 of 24

Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - February 2023

1 2	Member Billing February 2023	N	on-FAC PPA (k)	(1	Revenue $= \sum (e) \text{ to } (k)$	_	MRSM - ER Adjustment (m)	A	Revenue Net of MRSM Adjustments n) = (1) + (m)
3	JP RURALS	\$	274,253.68	\$	4,379,663.62	\$	(211,203.49)	\$	4,168,460.13
4	KENERGY	*	492,950.53	,	7,992,436.23	,	(380,775.55)	•	7,611,660.68
5	MEADE CO. RURALS		$222,\!906.51$		3,718,438.93		(174,728.93)		3,543,710.00
6 7	TOTAL RURALS	\$	990,110.72	\$	16,090,538.78	\$	(766,707.97)	\$	15,323,830.81
8		\$	12,332.18	\$	162,390.84	\$	(6,069.58)	\$	156,321.26
			3,081.46	·	47,387.10		(1,973.20)		45,413.90
			6,029.06		80,370.87		(3,032.33)		77,338.54
			105,148.16		1,411,384.66		(58,881.08)		1,352,503.58
			76,786.77		1,089,268.08		(63,892.55)		1,025,375.53
			46.58		1,240.61		(29.12)		1,211.49
			149.72		2,481.22		(87.49)		2,393.73
			64,282.73		960,994.36		(32,945.10)		928,049.26
			93.46		2,597.26		(53.45)		2,543.81
			179.84		3,654.26		(55.78)		3,598.48
			878.21		36,777.91		(443.60)		36,334.31
			1,274.15		22,567.37		(578.75)		21,988.62
			10,072.76		130,529.34		(5,100.99)		125,428.35
			25,643.57		321,732.21		(14,382.62)		307,349.59
			35,366.53		451,839.52		(17,212.32)		434,627.20
25 26	Sub-Total Kenergy Industrials	\$	341,365.18	\$	4,725,215.61	\$	(204,737.96)	\$	4,520,477.65
20			8,956.27		103,616.75		(4,446.17)		99,170.58
			21,334.46		199,398.54		(1,110.11)		199,398.54
			,		150,677.04				150,677.04
30 31 32	TOTAL INDUSTRIALS		371,655.91		5,178,907.94		(209,184.13)		4,969,723.81
			-		524,254.89		-		524,254.89
			705.16		(49,316.49)		-		(49,316.49)
35 36 37	Sub-Total CoGEN/MARKET		705.16		474,938.40		-		474,938.40
38 39	GRAND TOTAL	\$	1,362,471.79	\$	21,744,385.12	\$	(975,892.10)	\$	20,768,493.02

Case No. 2024-00141 Attachment for Response to PSC 1-13 Witness: Chris A. Warren Page 12 of 24

Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - March 2023

$1 \\ 2$	Member Billing March 2023	KW Billed (a)	kWh (b)	Demand Revenue (c)]	Base Energy Revenue (d)	(Total Demand & Energy (e) = (c) + (d)
3	JP RURALS	94,156	46,070,195	1,299,823.58	\$	2,073,158.78	\$	3,372,982.36
4	KENERGY	176,654	84,120,054	2,438,708.47		3,785,402.43		6,224,110.90
5 6	MEADE CO. RURALS	92,149	37,870,804	 1,272,116.95		1,704,186.18		2,976,303.13
7 8	TOTAL RURALS	362,959	168,061,053	\$ 5,010,649.00	\$	7,562,747.39	\$	12,573,396.39
8		4,581	2,424,343	 49,085.42	\$	92,246.25	\$	141,331.67
		1,873	597,479	20,069.20		22,734.08		42,803.28
		2,178	1,115,045	23,337.27		42,427.46		65,764.73
		40,800	20,843,773	437,172.00		793,105.56		1,230,277.56
		35,000	15,058,845	375,025.00		572,989.05		948,014.05
		60	8,164	642.90		310.64		953.54
		100	15,423	1,071.50		586.85		1,658.35
		33,557	11,650,259	359,563.26		443,292.35		802,855.61
		150	14,355	1,607.25		546.21		2,153.46
		$ \begin{array}{r} 180 \\ 2,500 \end{array} $	6,211 206,032	1,928.70		236.33 7,839.52		2,165.03 $34,627.02$
		2,500 888	220,297	26,787.50 $9,514.92$		8,382.30		17,897.22
		3,515	1,845,116	37,663.23		70,206.66		107,869.89
		7,681	4,643,813	82,301.92		176,697.08		258,999.00
		11,152	6,229,133	119,493.68		237,018.51		356,512.19
$\frac{24}{25}$	Sub-Total Kenergy Industrials	144,215	64,878,288	\$ 1,545,263.75	\$	2,468,618.85	\$	4,013,882.60
		2,250	1,488,000	24,108.75		56,618.40		80,727.15
		5,500	4,011,739	58,932.50		152,646.67		211,579.17
		81,921	12,690,911	299,421.26		382,644.27		682,065.53
$\frac{30}{31}$	TOTAL INDUSTRIALS	233,886	83,068,938	 1,927,726.26		3,060,528.19		4,988,254.45
1,2		22,500	15,279,820	178,024.64		434,950.21		612,974.85
		0	124,678	(53,200.00)		4,885.93		(48,314.07)
35 36 37	Sub-Total CoGEN/MARKET	22,500	15,404,498	 124,824.64		439,836.14		564,660.78
38 39	GRAND TOTAL	619,345	266,534,489	\$ 7,063,199.90	\$	11,063,111.72	\$	18,126,311.62

Case No. 2024-00141 Attachment for Response to PSC 1-13 Witness: Chris A. Warren Page 13 of 24

Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - March 2023

1	Member Billing March 2023]	Net Green Power (f)	wer Factor Penalty (g)	A	Billing djustment (h)	A	Fuel Adjustment Clause (FAC) (i)	vironmental Surcharge (ES) (j)
2 3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$	6.00	\$ - - - -	\$	- - -	\$	61,089.08 111,543.19 50,216.69	\$ 173,573.92 319,986.61 152,205.37
6 7	TOTAL RURALS	\$	6.00	\$ -	\$		\$	222,848.96	\$ 645,765.90
8		\$	- - - - - - - - - - - - - - - -	32.14		31.21 633.78	\$	3,214.68 792.26 1,478.55 27,638.84 19,968.03 10.83 20.45 15,448.24 19.03 8.24 273.20 292.11 2,446.62 6,157.70 8,259.83	\$ 7,442.62 2,207.07 3,458.73 64,697.93 49,509.79 47.40 82.86 41,550.10 105.64 103.39 1,690.22 912.70 5,678.70 13,708.12 18,813.21
24 25 26	Sub-Total Kenergy Industrials	\$	-	\$ 32.14	\$	664.99	\$	86,028.61	\$ 210,008.48
			-	-		(53,039.25)		1,973.09 5,319.57	4,286.61 8,792.71
$\frac{30}{31}$	TOTAL INDUSTRIALS		0.00	 32.14		(52,374.26)		93,321.27	 223,087.80
35			-			16,832.75 150.00		- 165.32	(2,209.72)
36 37	Sub-Total CoGEN/MARKET		-	 -		16,982.75		165.32	 (2,209.72)
38 39	GRAND TOTAL	\$	6.00	\$ 32.14	\$	(35,391.51)	\$	316,335.55	\$ 866,643.98

Case No. 2024-00141 Attachment for Response to PSC 1-13 Witness: Chris A. Warren Page 14 of 24

Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - March 2023

1 2	Member Billing March 2023	N	on-FAC PPA (k)	(1	Revenue $= \sum (e)$ to (k)	MRSM - ER Adjustment (m)	A	Revenue Net of MRSM Adjustments n) = (l) + (m)
3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$	277,296.50 506,318.61 227,944.37	\$	3,884,947.86 7,161,959.31 3,406,669.56	\$ (210,175.91) (383,762.42) (172,769.64)	\$	3,674,771.95 6,778,196.89 3,233,899.92
6 7 8	TOTAL RURALS	\$	1,011,559.48	\$	14,453,576.73	\$ (766,707.97)	\$	13,686,868.76
		\$	14,592.12 3,596.23 6,711.46 125,458.67 90,639.19 49.14 92.83 70,122.91 86.40 37.38 1,240.11 1,325.97 11,105.75 27,951.11 37,493.15	\$	166,581.09 49,398.84 77,413.47 1,448,073.00 1,108,131.06 1,093.05 1,854.49 929,976.86 2,395.74 2,314.04 38,464.33 20,428.00 127,100.96 306,815.93 421,078.38	\$ (7,627.11) (1,879.71) (3,507.99) (65,575.62) (47,375.93) (25.68) (48.52) (37,044.58) (45.16) (19.54) (648.19) (693.07) (5,804.83) (14,609.68) (19,597.19)	\$	158,953.98 47,519.13 73,905.48 1,382,497.38 1,060,755.13 1,067.37 1,805.97 892,932.28 2,350.58 2,294.50 37,816.14 19,734.93 121,296.13 292,206.25 401,481.19
24 25 26	Sub-Total Kenergy Industrials	\$	390,502.42	\$	4,701,119.24	\$ (204,502.80)	\$	4,496,616.44
			8,956.27 24,146.66		95,943.12 196,798.86 682,065.53	(4,681.33)		91,261.79 196,798.86 682,065.53
$\frac{30}{31}$	TOTAL INDUSTRIALS		423,605.35		5,675,926.75	 (209,184.13)		5,466,742.62
			- 750.44		629,807.60 (49,458.03)	- -		629,807.60 (49,458.03)
35 36 37	Sub-Total CoGEN/MARKET		750.44		580,349.57	 -		580,349.57
38 39	GRAND TOTAL	\$	1,435,915.27	\$	20,709,853.05	\$ (975,892.10)	\$	19,733,960.95

Case No. 2024-00141 Attachment for Response to PSC 1-13 Witness: Chris A. Warren Page 15 of 24

Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - April 2023

1 2	Member Billing April 2023	KW Billed (a)	kWh (b)	Demand Revenue (c)	F	Base Energy Revenue (d)	Total Demand & Energy e) = (c) + (d)
3	JP RURALS	71,457	37,471,973	 986,463.89	\$	1,686,238.78	\$ 2,672,702.67
4 5	KENERGY MEADE CO. RURALS	120,784 $50,439$	68,790,152 29,232,581	1,667,423.12 696,310.40		3,095,556.84 1,315,466.15	4,762,979.96 2,011,776.55
6	MEADE CO. RORALS		29,232,361	 		1,515,466.15	 2,011,776.55
7 8	TOTAL RURALS	242,680	135,494,706	\$ 3,350,197.41	\$	6,097,261.77	\$ 9,447,459.18
0		4,581	2,061,438	 49,085.42	\$	78,437.72	\$ 127,523.14
		1,620	486,611	17,358.30		18,515.55	35,873.85
		2,020	933,672	21,644.30		$35,\!526.22$	$57,\!170.52$
		40,800	17,900,829	437,172.00		681,126.54	1,118,298.54
		35,000	15,667,199	375,025.00		596,136.92	971,161.92
		60	7,855	642.90		298.88	941.78
		33	0	353.59		-	353.59
		34,006	12,581,789	364,374.29		478,737.07	843,111.36
		150 180	14,299 6,758	1,607.25 1,928.70		544.08 257.14	2,151.33 $2,185.84$
		2,500	176,000	26,787.50		6,696.80	33,484.30
		794	162,093	8,507.71		6,167.64	14,675.35
		3,485	1,506,770	37,341.78		57,332.60	94,674.38
		8,157	4,510,062	87,402.26		171,607.86	259,010.12
		11,690	5,630,649	125,258.35		214,246.19	339,504.54
$\begin{array}{c} 24 \\ 25 \end{array}$		 145,076	61,646,024	\$ 1,554,489.35	\$	2,345,631.21	\$ 3,900,120.56
26		0.040	1 000 040	04.000.00		01 040 00	00.447.10
		3,248	1,620,049	34,802.32		61,642.86	96,445.18
		5,500	3,960,000	58,932.50		150,678.00	209,610.50
30		95,337	21,864,366	 348,456.73		658,192.15	 1,006,648.88
$\begin{array}{c} 30 \\ 31 \\ 32 \end{array}$	TOTAL INDUSTRIALS	249,161	89,090,439	1,996,680.90		3,216,144.22	5,212,825.12
35		22,500	16,093,326 322,290	172,284.90		422,606.01 (40,609.68)	594,890.91 (40,609.68)
36 37 38	Sub-Total CoGEN/MARKET	22,500	16,415,616	172,284.90		381,996.33	554,281.23
	GRAND TOTAL	514,341	241,000,761	\$ 5,519,163.21	\$	9,695,402.32	\$ 15,214,565.53

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Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - April 2023

1	Member Billing April 2023		et Green Power (f)		ver Factor Penalty (g)	A	Billing djustment (h)	A	Fuel djustment Clause (FAC) (i)	nvironmental Surcharge (ES) (j)
$\frac{2}{3}$	JP RURALS	\$	6.00	\$	-	\$	-	\$	148,838.68	\$ 197,759.79
4 5	KENERGY MEADE CO. RURALS		-		-		-		273,234.48 116,111.81	353,729.11 $149,522.16$
6 7 8	TOTAL RURALS	\$	6.00	\$	-	\$	_	\$	538,184.97	\$ 701,011.06
8		\$	-					\$	8,188.03	\$ 9,613.11
			-		-				1,932.82	2,643.79
			-						3,708.55	4,315.86
			-						71,102.09 62,230.11	84,186.44 73,188.74
			-						31.20	66.22
			_		_				51.20	22.95
			_				_		49,974.87	62,877.42
			-				31.21		56.80	148.90
			-						26.84	146.25
			-				911.27		699.07	2,287.30
			-						643.83	1,057.56
			-		1,371.52				5,984.89	7,121.52
			-						17,913.97	19,734.55
			-						22,364.94	25,685.36
24		Α		ф.	1 051 50		0.42.40		244.050.01	 202.005.05
25 26	Sub-Total Kenergy Industrials	\$	-	\$	1,371.52	\$	942.48	\$	244,858.01	\$ 293,095.97
20			_		_		_		6,434.83	7,309.90
							(53,039.25)		15,729.12	12,729.46
							(00,000.20)		10,120.12	12,120.10
30										
$\begin{array}{c} 31 \\ 32 \end{array}$	TOTAL INDUSTRIALS		0.00		1,371.52		(52,096.77)		267,021.96	313,135.33
32							23,766.29			
			-				150.00		1,280.13	(2,416.91)
35										 (2,410.01)
36			-		-		23,916.29		1,280.13	(2,416.91)
37							,		,	· · · · · · · · · · · · · · · · · · ·
38										
39	GRAND TOTAL	\$	6.00	\$	$1,\!371.52$	\$	(28,180.48)	\$	806,487.06	\$ 1,011,729.48

Case No. 2024-00141 Attachment for Response to PSC 1-13 Witness: Chris A. Warren Page 17 of 24

Big Rivers Electric Corporation Monthly Billing Summary Sales to Members - April 2023

1 2	Member Billing April 2023	N	on-FAC PPA (k)	(1	Revenue $= \sum (e)$ to (k)	MRSM - ER Adjustment (m)	I	Revenue Net of MRSM Adjustments (n) = (l) + (m)
$\begin{matrix} 3 \\ 4 \end{matrix}$	JP RURALS KENERGY	\$	225,543.81 414,047.92	\$	3,244,850.95 5,803,991.47	\$ (212,038.25) (389,254.75)	\$	3,032,812.70 5,414,736.72
5	MEADE CO. RURALS		175,950.91		2,453,361.43	(165,414.97)		2,287,946.46
6 7	TOTAL RURALS	\$	815,542.64	\$	11,502,203.85	\$ (766,707.97)	\$	10,735,495.88
8		\$	12,407.80 2,928.91 5,619.77 107,745.09 94,300.87 47.28 - 75,729.79 86.07 40.68 1,059.34 975.64 9,069.25 27,146.06 33,890.88	\$	157,732.08 43,379.37 70,814.70 1,381,332.16 1,200,881.64 1,086.48 376.54 1,031,693.44 2,474.31 2,399.61 38,441.28 17,352.38 118,221.56 323,804.70 421,445.72	\$ (6,781.43) (1,600.80) (3,071.46) (58,887.65) (51,539.77) (25.84) (42,450.04) (47.04) (22.23) (578.98) (533.23) (4,956.76) (14,836.57) (18,522.92)	\$	150,950.65 41,778.57 67,743.24 1,322,444.51 1,149,341.87 1,060.64 376.54 989,243.40 2,427.27 2,377.38 37,862.30 16,819.15 113,264.80 308,968.13 402,922.80
24 25 26	Sub-Total Kenergy Industrials	\$	371,047.43	\$	4,811,435.97	\$ (203,854.72)	\$	4,607,581.25
30			9,751.07 23,835.24		119,940.98 208,865.07 1,006,648.88	(5,329.41)		114,611.57 208,865.07 1,006,648.88
30 31 32			404,633.74		6,146,890.90	 (209,184.13)		5,937,706.77
			1,939.86		618,657.20 (39,656.60)	- -		618,657.20 (39,656.60)
35 36 37 38			1,939.86		579,000.60	-		579,000.60
	GRAND TOTAL	\$	1,222,116.24	\$	18,228,095.35	\$ (975,892.10)	\$	17,252,203.25

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Big Rivers Electric Corporation Monthly Billing Summary Other Sales - November 2022

1 2	November 2022 - Other Sales M	WH		REVENUE
3	SPECIAL SALES - ENERGY			
4		300	\$	99,269.86
5		7,852	\$	326,858.44
6	MISO	50,399	\$	2,986,008.04
7			\$	(100,824.34)
8		56,273	\$	2,185,891.76
9			\$	97,899.45
10			\$	80,149.62
11		70,150	\$	3,528,112.00
12				
$\frac{13}{14}$	TOTAL SPECIAL SALES - ENERGY	184,975	\$	9,203,364.83
15	TOTAL SI ECIAL SALES - ENERGI	104,970	φ	9,200,304.65
16	SPECIAL SALES - BILATERAL			
17			\$	(1,010,700.00)
18	MISO - CONTRA REVENUE		\$	4,383,360.05
19			\$	(1,011,600.00)
20				
21	TOTAL SPECIAL SALES - BILATERAL		\$	2,361,060.05
22				
23	SPECIAL SALES - CAPACITY			
24			\$	21,250.00
25			\$	109,000.00
26	MISO-CAPACITY SALES		\$	(651, 552.00)
27			\$	417,650.00
28			\$	14,500.00
29			\$	77,600.00
$\frac{30}{31}$	TOTAL SPECIAL SALES - CAPACITY		\$	(11,552.00)
33 34	TOTAL	184,975	\$	11,552,872.88

Case No. 2024-00141 Attachment for Response to PSC 1-13 Witness: Chris A. Warren Page 19 of 24

Big Rivers Electric Corporation Monthly Billing Summary Other Sales - December 2022

1 2	December 2022 - Other Sales	MWH		REVENUE
3	SPECIAL SALES - ENERGY		•	
4		4,689	\$	453,844.43
5		1,055	\$	61,964.24
6	MISO	44,118	\$	4,222,315.80
7		0	\$	(4,399.42)
8		61,254	\$	2,378,097.13
9		0	\$	105,077.77
10		0	\$	88,937.32
11		74,400	\$	3,465,921.98
12				
13				
14	TOTAL SPECIAL SALES - ENERGY	185,516	\$	10,771,759.25
15				
16	SPECIAL SALES - BILATERAL			
17			\$	(1,044,390.00)
18	MISO - CONTRA REVENUE		\$	5,846,726.72
19			\$	(1,045,320.00)
20				
21	TOTAL SPECIAL SALES - BILATERAL		\$	3,757,016.72
22				
23	SPECIAL SALES - CAPACITY			
24			\$	21,250.00
25			\$	109,000.00
26	MISO - CAPACITY SALES		\$	(673, 270.40)
27			\$	417,650.00
28			\$	14,500.00
29			\$	77,600.00
30				
31	TOTAL SPECIAL SALES - CAPACITY		\$	(33,270.40)
32				•
33	TOTAL	185,516	\$	14,495,505.57
34				

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Big Rivers Electric Corporation Monthly Billing Summary Other Sales - January 2023

1	January 2023 - Other Sales	MWH		REVENUE
2 3	SPECIAL SALES - ENERGY			
4		11,383	\$	495,083.16
5	MISO	17,021	\$	629,635.55
6			\$	(83,954.05)
7		61,088	\$	2,268,119.62
8			\$	151,569.31
9			\$	95,348.75
10		72,325	\$	3,494,957.00
11				
12				
13	TOTAL SPECIAL SALES - ENERGY	161,817	\$	7,050,759.34
14				
15	SPECIAL SALES - BILATERAL			
16	MICO GOVERN DELIVERANTE		\$	(2,145,510.00)
17	MISO - CONTRA REVENUE		\$	3,596,464.81
18	MOMAL OPPOLAL GALDS BULAMPRAI		ф.	1 480 084 01
19	TOTAL SPECIAL SALES - BILATERAL		\$	1,450,954.81
$\frac{20}{21}$	SPECIAL SALES - CAPACITY			
22	ST HOLLING STREET		\$	21,250.00
23			\$	109,000.00
24	MISO - CAPACITY SALES		\$	(674,110.12)
25			\$	417,650.00
26			\$	14,500.00
27			\$	77,600.00
28 29	TOTAL SPECIAL SALES - CAPACITY		\$	(34,110.12)
30 31 32	TOTAL	161,817	\$	8,467,604.03

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Attachment for Response to PSC 1-13

Witness: Chris A. Warren

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Big Rivers Electric Corporation Monthly Billing Summary Other Sales - February 2023

1	February 2023 - Other Sales	MWH	REVENUE
$\frac{2}{3}$	SPECIAL SALES - ENERGY		
4		877	\$ 107,625.01
5	MISO	22,793	\$ 801,138.94
6			\$ 204,054.54
7		52,716	\$ 2,030,255.74
8			\$ 185,199.90
9			\$ 107,089.95
10		31,300	\$ 2,319,900.50
11			
12	- -		
13	TOTAL SPECIAL SALES - ENERGY	107,686	\$ 5,755,264.58
14			
15	SPECIAL SALES - BILATERAL		
16			\$ (1,937,880.00)
17	MISO - CONTRA REVENUE		\$ 2,463,192.70
18	-		
19	TOTAL SPECIAL SALES - BILATERAL		\$ 525,312.70
20			
21	SPECIAL SALES - CAPACITY		
22			\$ 21,250.00
23			\$ 109,000.00
24	MISO - CAPACITY SALES		\$ (608,954.92)
25			\$ 417,650.00
26			\$ 14,500.00
27			\$ 77,600.00
28	-		
29	TOTAL SPECIAL SALES - CAPACITY		\$ 31,045.08
30			
31	TOTAL	107,686	\$ 6,311,622.36
$\bf 32$			

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Attachment for Response to PSC 1-13

Witness: Chris A. Warren

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Big Rivers Electric Corporation Monthly Billing Summary Other Sales - March 2023

1	March 2023 - Other Sales MW	/Н		REVENUE
2 3	SPECIAL SALES - ENERGY			
4		2,316	\$	162,983.69
5		4,800	\$	129,784.50
6	MISO	51,464	\$	1,584,776.48
7			\$	177,090.51
8		55,745	\$	2,191,377.67
9			\$	126,766.27
10			\$	99,414.08
11		39,150	\$	2,550,971.50
12				
13				
14	TOTAL SPECIAL SALES - ENERGY	153,474	\$	7,023,164.70
15				
16	SPECIAL SALES - BILATERAL			
17			\$	(2,145,510.00)
18	MISO - CONTRA REVENUE		\$	$2,\!554,\!779.78$
19				
20	TOTAL SPECIAL SALES - BILATERAL		\$	$409,\!269.78$
21				
22	SPECIAL SALES - CAPACITY			
23			\$	21,250.00
24			\$	109,000.00
25	MISO - CAPACITY SALES		\$	(674,200.09)
26			\$	417,650.00
27			\$	14,500.00
28			\$	77,600.00
29	MOMAL ODDGIAL GALDG. GADAGIMY		Ф.	(9.4.200.00)
$\frac{30}{31}$	TOTAL SPECIAL SALES - CAPACITY		\$	(34,200.09)
$\frac{31}{32}$	TOTAL	153,474	\$	7,398,234.39
33		100,474	Ψ	1,000,204.00

Case No. 2024-00141 Attachment for Response to PSC 1-13 Witness: Chris A. Warren Page 23 of 24

Big Rivers Electric Corporation Monthly Billing Summary Other Sales - April 2023

${1 \atop 2}$	April 2023 - Other Sales	MWH	REVENUE
2 3	SPECIAL SALES - ENERGY		
4	ET HOTELS STEELS	2,359	\$ 158,997.91
5		4,217	\$ 152,632.41
6	MISO	48,180	\$ 1,536,135.82
7			\$ 213,529.69
8		51,627	\$ 2,041,128.68
9			\$ 110,414.31
10			\$ 93,272.72
11		$47,\!350$	\$ 2,690,680.50
12			
13			
14	TOTAL SPECIAL SALES - ENERGY	153,732	\$ 6,996,792.04
15			
16	SPECIAL SALES - BILATERAL		
17			\$ (2,076,300.00)
18	MISO - CONTRA REVENUE		\$ 2,537,197.97
19			
20	TOTAL SPECIAL SALES - BILATERAL		\$ 460,897.97
21			
22	SPECIAL SALES - CAPACITY		
23			\$ $21,\!250.00$
24			\$ 109,000.00
25	MISO - CAPACITY SALES		\$ (652, 451.70)
26			\$ 417,650.00
27			\$ 14,500.00
28			\$ 77,600.00
29			
30	TOTAL SPECIAL SALES - CAPACITY		\$ (12,451.70)
31			
32	TOTAL	153,732	\$ 7,445,238.31
33			

Case No. 2024-00141 Attachment for Response to PSC 1-13 Witness: Chris A. Warren Page 24 of 24

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024-00141

Responses to Commission Staff's First Request for Information in the Appendix of the Commission's Order dated August 2, 2024

August 26, 2024

Describe the effect on the FAC calculation of line losses related

1 **Item 14**)

2 to:

3 Intersystem sales when using a third-party transmission system; a. and 4 Intersystem sales when not using a third-party transmission 5 b. 6 system. 7 Response) 9 Big Rivers had no intersystem sales during the period under review that a. 10 used a third party transmission system and effected the FAC. 11 b. Line losses related to intersystem sales, which did not use a third-party transmission system, are included in Big Rivers' total System Losses reported on 13 page 3 of its monthly Form A filing. Big Rivers calculates an overall system average 14 fuel cost per kWh each month by dividing (1) the total cost of fuel for generation by 15 (2) the net kWh generated less total System Losses. The overall system average fuel 16 cost per kWh (which accounts for total System Losses, including losses related to

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

Responses to Commission Staff's First Request for Information in the Appendix of the Commission's Order dated August 2, 2024

August 26, 2024

- 1 intersystem sales) is multiplied by the total intersystem sales volume to calculate the
 2 cost of fuel allocated to intersystem sales in Big Rivers' FAC calculation.
- 3
 4
 5 Witness) Christopher A. ("Chris") Warren

6

AN ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2022 THROUGH APRIL 30, 2023 CASE NO. 2024--00141

Responses to Commission Staff's First Request for Information in the Appendix of the Commission's Order dated August 2, 2024

August 26, 2024

1 Item 15) Provide a list, in chronological order, showing by unit, any
2 scheduled, actual, and forced outages for the period under review.
3
4 Response) Please see the attached summary for the requested information
5 regarding scheduled ("S"), actual ("A"), and forced ("F") outages.
6
7
8 Witness) Jeffrey S. ("Jeff") Brown

Big Rivers Electric Corporation

Schedule vs. Actual

Reid Station Unit #2 - Combustion Turbine - Oil/Gas - 65MW Net

November 1 2022, through April 30 2023

				ENANCE		HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED
		Sche	duled	Actual					MAINTENANCE OR REASON FOR FORCED
MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Scheduled Forced Actual C		OUTAGE AS APPROPRIATE
November 2022		No Outages							
December 2022	\mathbf{F}			12/23/2022 16:45	12/23/2022 18:15		1:30	1:30	Free up linkage and change solenoids due to cold
	F			12/24/2022 4:30	12/24/2022 11:00		6:30	6:30	Free up linkage and change solenoids due to cold
January 2023	F			1/21/2023 16:45	1/21/2023 17:13	8 0:28 Tripped on high atomizing air		Tripped on high atomizing air	
February 2023		No Outages							
March 2023	\mathbf{F}			3/28/2023 5:45	3/28/2023 9:12		3:27	3:27	Blown fuse on undervoltage circuit
April 2023	\mathbf{F}			4/24/2024 5:00	4/24/2024 6:53		1:53	1:53	Auxiliary lube oil pump logic

Case No. 2024-00141 Attachment for Response to PSC 1-15 Witness: Jeffrey S. Brown

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Big Rivers Electric Corporation

Green Station Unit #1 - Natural Gas - 231MW Net

November 1 2022, through April 30 2023

			MAINTI	ENANCE		HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED
	Scheduled Actual		Hooks of Bultation			MAINTENANCE OR REASON FOR FORCED OUTAGE AS			
MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Forced	Actual	APPROPRIATE
November 2022	F			11/27/2022 6:42	11/27/2022 7:55		1:13	1:13	Main flow gas transmitter went bad quality, tripped fires out
	\mathbf{F}			11/29/2022 11:25	11/29/2022 14:22		2:57	2:57	Main flow gas transmitter went bad quality, tripped fires out
December 2022	F			12/4/2022 10:05	12/4/2022 11:37		1:32	1:32	#1 Control valve issue
	F			12/4/2022 22:58	12/5/2022 9:47		10:49	10:49	#1 Control valve issue, changed LVDT and HSS card
	S, A	12/15/2022 8:00	12/17/2022 8:00	12/15/2022 8:48	12/16/2022 18:30	48:00		33:42	Switch replacement in Reid switchyard
January 2023		No Outages							
February 2023		No Outages							
March 2023		No Outages							
April 2023		No Outages							

Case No. 2024-00141 Attachment for Response to PSC 1-15 Witness: Jeffrey S. Brown

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Big Rivers Electric Corporation

Green Station Unit #2 - Natural Gas - 223MW Net

November 1 2022, through April 30 2023

				ENANCE		HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED	
		Schee		Actual					MAINTENANCE OR REASON FOR FORCED OUTAGE	
MONTH	TYPE	FROM	TO	FROM	ТО	Scheduled	Forced	Actual	AS APPROPRIATE	
November 2022	F			11/15/2022 3:37	11/15/2022 4:36		0:59	0:59	False indication of turbine trip button being pushed	
December 2022	S, A	12/15/2022 8:00	12/17/2022 8:00	12/15/2022 8:48	12/16/2022 18:30	48:00		33:42	Switch replacement in Reid switchyard	
January 2023		No Outages								
February 2023		No Outages								
March 2023		No Outages								
April 2023	S, A	4/15/2023 0:00	6/29/2023 0:00	4/15/2022 6:00	5/1/2022 0:00	1800:00		378:00	Major Turbine Overhaul	

Case No. 2024-00141 Attachment for Response to PSC 1-15 Witness: Jeffrey S. Brown

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Big Rivers Electric Corporation

Wilson Station - Unit #1 - Coal/Pet Coke - 417MW Net

November 1 2022, through April 30 2023

MAINTENAN					S OF DURA	ATION	REASON FOR DEVIATION FROM SCHEDULED		
	Scheduled Actual						MAINTENANCE OR REASON FOR FORCED OUTAGE AS		
MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Forced	Actual	APPROPRIATE
November 2022	S, A	10/1/2022 00:00	11/12/2022 0:00	11/1/2022 1:00	11/20/2022 23:07	1008:00		478:07	Continuation to tie in new FGD scrubber
	F			11/21/2022 16:35	11/21/2022 20:17		3:42	3:42	Tripped on low drum level while at low load for AVR testing
	F			11/22/2022 14:26	11/22/2022 17:24		2:58	2:58	Tripped on low drum level while at low load for AVR testing
	S, A	11/22/2022 17:30	11/22/2022 21:30	11/22/2022 17:39	11/22/2022 18:48	4:00		1:09	FGD Commission Testing
	F			11/23/2022 3:46	11/23/2022 22:21		18:35	18:35	Removed from service due to high vibration on ID fans
	F			11/25/2022 4:25	11/26/2022 18:14		37:49	37:49	#2 ID fan out of service
	S, A	11/27/2022 22:00	11/28/2022 22:00	11/27/2022 22:13	11/28/2022 6:34	24:00		8:21	Balance shot on ID fans due to high vibration
December 2022	F			12/2/2022 9:43	12/2/2022 12:00		2:17	2:17	Removed from service to protect new FGD with recycle pumps off
	S, A	12/2/2022 12:00	12/4/2022 12:00	12/2/2022 12:00	12/4/2022 23:44	48:00		59:44	Outage to balance ID fans
	\mathbf{F}			12/18/2022 9:36	12/18/2022 12:59		3:23	3:23	Tripped on low drum level while at low load for AVR testing
	F			12/19/2022 9:01	12/19/2022 13:54		4:53	4:53	Lost communication with FGD, recycle pumps off
	\mathbf{F}			12/22/2022 23:21	12/23/2022 1:56		2:35	2:35	Tripped on air flow issues with # ID fan out of service (wet fuel)
	\mathbf{F}			12/23/2022 19:53	12/23/2022 23:06		3:13	3:13	Tripped on air flow issues with # ID fan out of service (wet fuel)
January 2023	F			1/18/2023 17:37	1/21/2023 21:41		76:04	76:04	Platen Superheater tube leak
	F			1/30/2023 7:07	1/30/2023 13:52		6:45	6:45	Lost #1 BFP due to outboard bearing vibration
February 2023	F			2/16/2023 6:05	2/16/2023 15:23		9:18	9:18	Loss of power to FGD following lightning strike
March 2023	F			3/3/2023 12:40	3/3/2023 23:28		10:48	10:48	Loss of power to FGD

Case No. 2024-00141

Attachment for Response to PSC 1-15

Witness: Jeffrey S. Brown

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Big Rivers Electric Corporation

Wilson Station - Unit #1 - Coal/Pet Coke - 417MW Net

November 1 2022, through April 30 2023

		Scheo	MAINTE duled		zual	HOURS	HOURS OF DURATION 1		REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS
MONTH	TYPE	FROM	TO	FROM	ТО	Scheduled	Forced	Actual	APPROPRIATE
	S, A	3/10/2023 00:00	3/13/2023 0:00	3/9/2023 23:06	3/12/2023 20:37	72:00		69:31	Finishing Superheat tube leak
	S, A	3/18/2023 0:00	3/19/2023 12:00	3/17/2023 23:50	3/19/2023 14:01	36:00		38:11	$\#2~{ m ID}$ fan balance/cleaned out precipitator hoppers
April 2023	S, A	4/15/2023 00:00	4/18/2023 0:00	4/14/2023 23:57	4/17/2023 12:19	72:00		60:22	Primary Air Heater wash and repair water/steam leaks

Case No. 2024-00141 Attachment for Response to PSC 1-15 Witness: Jeffrey S. Brown

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1 Item 16) For the period under review, provide the monthly supporting
2 peaking unit equivalent calculations in electronic Excel spreadsheet format
3 with all formulas, columns, and rows unprotected and fully accessible for the
4 forced outage calculations. In addition, provide the corresponding amount, if
5 any, of forced outage purchased power collected through the purchase power
6 adjustment tariff.

7

- 8 **Response**) Please see the attached Excel spreadsheet showing on the first sheet the
- 9 highest cost fuel unit (\$/MWH) and the calculation of forced outage purchased power
- 10 costs recovered through the Non-FAC PPA (\$). In addition the spreadsheet includes
- 11 the "FuelBurned" calculation for each month under review, which is included in Big
- 12 Rivers' monthly Form B filings. The highest cost fuel unit (\$/MWH) for each month is
- 13 the highest \$/MWH cost from column K of the Fuel Burned sheets. The spreadsheet
- 14 also includes the second page of Big Rivers' Form A filing for each month under review,

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- which contains the inputs for the calculation of the forced outage purchased power costs recovered through the non-FAC PPA.
- 5 Witness) Christopher A. ("Chris") Warren6

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- 1 Item 17) For the period under review, provide the monthly capacity factor
- 2 at which each generating unit operated.

3

4 Response)

	Mo	0	ers Electric	-			
Generating Unit	Metric a.	Nov. 2022	Dec. 2022	Jan. 2023	Feb. 2023	Mar. 2023	April 2023
Reid Station	GCF	0.2%	0.2%	0.3%	0.0%	0.1%	0.2%
Unit # 2 CT	NCF	0.0%	0.0%	0.1%	-0.2%	0.0%	0.0%
Green Station	GCF	14.5%	22.8%	0.0%	0.0%	1.4%	4.5%
Unit # 1	NCF	13.2%	21.5%	-0.9%	-0.9%	0.4%	4.4%
Green Station	GCF	9.6%	16.8%	0.0%	0.0%	0.0%	0.0%
Unit # 2	NCF	8.2%	15.6%	-0.9%	-0.9%	-0.9%	-0.8%
Wilson Station	GCF	15.5%	68.2%	73.1%	86.5%	65.7%	82.0%
Unit # 1	NCF	14.1%	67.3%	72.9%	86.4%	65.8%	81.8%

5

Footnotes to Big Rivers Monthly Capacity Factor table on prior page:

 $NCF (Net Capacity Factor) = \frac{Net Actual Generation x 100\%}{PH (Period Hours) x NMC (Net Maximum Capacity)}$ $GCF (Gross Capacity Factor) = \frac{Gross Actual Generation x 100\%}{PH (Period Hours) x GMC (Gross Maximum Capacity)}$

6

7 Witness) Jeffrey S. ("Jeff") Brown

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1	Item 18) For the period under review, explain whether BREC made any
2	changes to its maintenance and operation practices or completed any
3	specific generation efficiency improvements that affect fuel usage at
4	BREC's generation facilities. If so, describe the impact of these changes on
5	BREC's fuel usage.
6	
7	Response: In the period under review, November 1, 2022, through April 30, 2023,
8	Big Rivers has not made any changes to its maintenance and operation practices or
9	completed any specific generation efficiency improvements that affect fuel usage at
10	Big Rivers' generation facilities, with the exclusion of the replacement and upgrade
11	of the flue gas desulfurization ("FGD") system at Wilson Station, which allows a wider
12	range of fuel quality specifications.
13	
14	
15	Witness: Jeffrey S. ("Jeff") Brown
16	

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1	Item 19)	$State\ whether\ BREC\ is\ aware\ of\ any\ violations\ of\ its\ policies\ and$
2	procedures	regarding fuel procurement that occurred prior to or during the
3	period und	er review.
4		
5	Response)	Big Rivers is unaware of any previously unreported violations of its
6	policies and	procedures regarding fuel procurement occurring prior to or during the
7	period Nove	mber 1, 2022 through April 30, 2023.
8		
9		
10	Witness)	Vicky L. Payne
11		

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		9
1	Item 20)	State whether BREC is aware of any violations of 807 KAR $5:056$
2	that occurr	red prior to or during the period under review.
3		
4	Response)	Big Rivers is unaware of any violations of 807 KAR 5:056 that occurred
5	prior to or d	uring the period under review.
6		
7		
8	Witness)	Christopher A. ("Chris") Warren
9		

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1 Item 21) State whether all fuel contracts related to commodity and
2 transportation have been filed with the Commission. If any contracts have
3 not been filed, explain why they have not been filed, and provide a copy.
4
5 Response) All of Big Rivers' fuel and transportation contracts have been filed with
6 the Commission.
7
8
9 Witness) Vicky L. Payne

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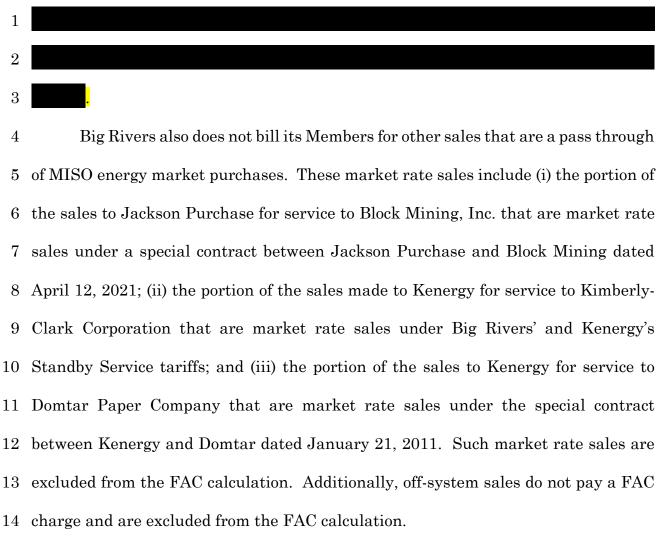
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1	Item 22) Identify any customers, either by class of customer or pursuant
2	to special contract, that are not billed a FAC charge.
3	
4	Response) Big Rivers provides wholesale electric service under wholesale power
5	contracts to its three Member-owner distribution cooperatives (Jackson Purchase
6	Energy Corporation, Kenergy, and Meade County RECC), who, in turn, provide retail
7	electric service to their member-customers.
8	Big Rivers does not bill its Members a FAC charge for certain sales the
9	Members make under special retail contracts for service to their retail member-
10	customers.
11	
12	
13	
14	
15	
16	

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1
2
3 Witness) Christopher A. ("Chris") Warren

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1	Item 23) If any customer class or special contract has or is not being
2	charged a FAC, state the date when the FAC ceased being charged.
3	
4	Response)
5	
6	
7	
8	
9	Block Mining (formerly, Blockware Mining) was also a new business when it
10	began taking service under its special contract with Jackson-Purchase. Block Mining
11	has not paid FAC charges on market rates sales since that contract became effective
12	on October 14, 2021.
13	Kimberly-Clark has not paid FAC charges on market rate sales under the
14	Standby Service tariff since Kimberly-Clark was moved to Kenergy's Standby Service
15	tariff for March 2022 billing.

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1	Domtar has not paid FAC charges on market rate sales under its current	
2	special contract with Kenergy since that contract became effective on April 1, 2011.	
3		
4		
5	Witness)	Christopher A. ("Chris") Warren
6		