

ORIGINAL



Your Touchstone Energy® Cooperative 

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

**ELECTRONIC EXAMINATION OF THE)
APPLICATION OF THE FUEL ADJUSTMENT)
CLAUSE OF BIG RIVERS ELECTRIC)
CORPORATION FROM NOVEMBER 1, 2017)
THROUGH APRIL 30, 2018)**

**Case No.
2018-00221**

**Responses to Commission Staff's Request for Information
dated
August 10, 2018**

FILED: August 24, 2018

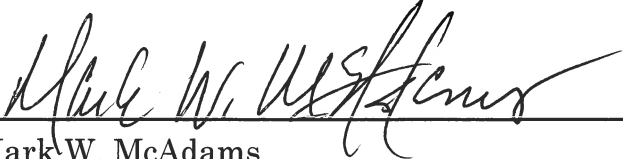
ORIGINAL

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

VERIFICATION

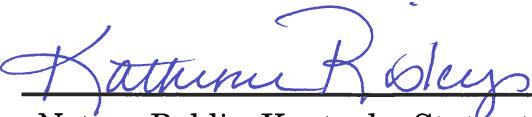
I, Mark W. McAdams, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.



Mark W. McAdams

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

23rd SUBSCRIBED AND SWORN TO before me by Mark W. McAdams on this the
day of August, 2018.



Notary Public, Kentucky State at Large

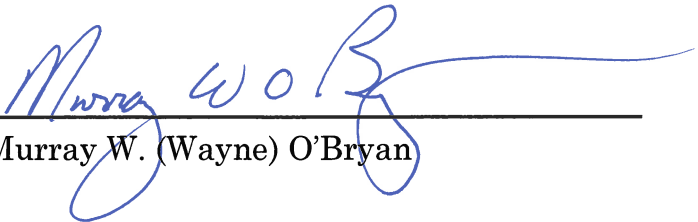
My Commission Expires October 31, 2020

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
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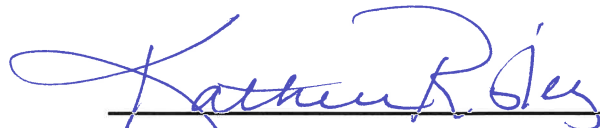
I, Murray W. (Wayne) O'Bryan, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.



Murray W. (Wayne) O'Bryan

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Murray W. (Wayne) O'Bryan
on this the 23rd day of August, 2018.



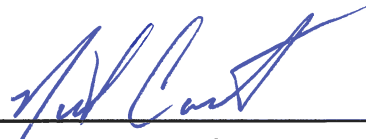
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BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
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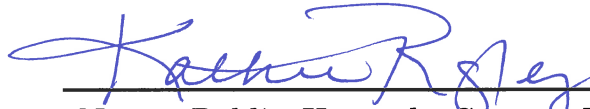
I, Nicholas R. (Nick) Castlen, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.



Nicholas R. (Nick) Castlen

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Nicholas R. (Nick) Castlen on this the 23rd day of August, 2018.



Notary Public, Kentucky State at Large

My Commission Expires

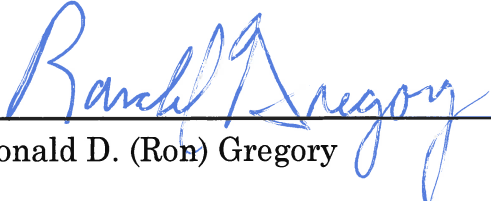
October 31, 2020

BIG RIVERS ELECTRIC CORPORATION

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VERIFICATION


I, Ronald D. (Ron) Gregory, 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.



Ronald D. (Ron) Gregory

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Ronald D. (Ron) Gregory on
this the 23rd day of August, 2018.



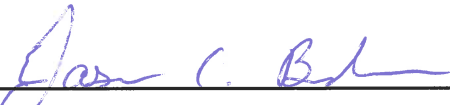
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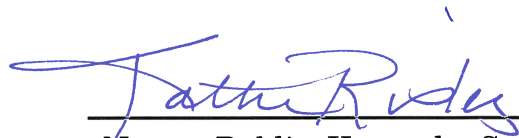
I, Jason C. Burden, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.



Jason C. Burden

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

23rd SUBSCRIBED AND SWORN TO before me by Jason C. Burden on this the
day of August, 2018.



Notary Public, Kentucky State at Large
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BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
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CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

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.

6

For the Period from November 1, 2017, through April 30, 2018

Purchase Vendor	Fuel Type	Purchase Tonnage	Contract Type
Alliance (BRE-15-010)	Coal	89,653.60	Contract
Foresight Coal (BRE-15-005)	Coal	113,904.38	Contract
KenAmerican Resources (BRE-15-006)	Coal	232,138.93	Contract
Peabody Coal Sales (BRE-15-018)	Coal	328,381.00	Contract
Rhino (BRE-15-009)	Coal	87,615.10	Contract
Rhino (BRE-18-001)	Coal	126,333.40	Contract
Sun Energy (BRE-18-002)	Coal	26,015.30	Contract
Alliance (BRE-18-003)	Coal	86,295.00	Contract
Total Tonnage		<u>1,147,010.13</u>	

For the Period from November 1, 2017, through April 30, 2018

Percentage Spot Purchase Tons	0.00 %
Percentage Contract Purchase Tons	<u>100.00 %</u>
Percentage Total Purchase Tons	<u>100.00 %</u>

7

8

9 **Witness)** Mark W. McAdams

10

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
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CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
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August 24, 2018

1 **Item 2)** *For the period under review, list each coal purchase made*
2 *under a long-term contract (one year or greater). For each purchase, list:*

3

4 *a. Contract or purchase order number;*

5 *b. The supplier's name;*

6 *c. The location(s) of production facilities from which the coal is*
7 *sourced;*

8 *d. The method of delivery, (i.e., barge, truck, rail, other);*

9 *e. The actual quantity received during the review period;*

10 *f. The tonnage requirement for the review period; and*

11 *g. Current price paid per ton.*

12

13 **Response)** Please see the attached schedule

14

15

16 **Witness)** Mark W. McAdams

17

Big Rivers Electric Corporation
Case No. 2018-00221
Long-Term Fuel Contract Information

Foresight Coal Supply Agreement

A. CONTRACT NUMBER:	BRE-15-005			
B. SUPPLIER'S NAME / ADDRESS:	Foresight Coal Sales, LLC 211 North Broadway, Suite 2600 St. Louis, MO 63102			
C. PRODUCTION FACILITY:	Shay No. 1 in Montgomery and Macoupin, Illinois			
D. METHOD OF DELIVERY:	Barge			
E. ACTUAL TONNAGE:	2015	-	200,318	Tons
	2016	-	239,969	Tons
	2017	-	239,421	Tons
	2018	-	76,892	Tons <i>(through April)</i>
F. ANNUAL TONNAGE REQUIREMENTS:	2015	-	200,000	Tons
	2016	-	240,000	Tons
	2017	-	240,000	Tons
	2018	-	240,000	Tons
	2019	-	240,000	Tons
PERCENT OF ANNUAL REQUIREMENTS:	2015	-	100.16	%
	2016	-	99.99	%
	2017	-	99.76	%
	2018	-	32.04	% <i>(through April)</i>
G. CURRENT PRICE (<i>Base</i>):	2015	-	\$ 34.0006	per Ton
	2016	-	\$ 36.2491	per Ton
	2017	-	\$ 38.4998	per Ton
	2018	-	\$ 40.5497	per Ton
	2019	-	\$ 42.3490	per Ton
CURRENT PRICE (<i>Contract</i>):	2015	-	\$ 34.0006	per Ton
	2016	-	\$ 36.2491	per Ton
	2017	-	\$ 38.4998	per Ton
	2018	-	\$ 40.5497	per Ton

Big Rivers Electric Corporation
Case No. 2018-00221
Long-Term Fuel Contract Information

KenAmerican Resources Coal Supply Agreement

A. CONTRACT NUMBER:	BRE-15-006		
B. SUPPLIER'S NAME/ADDRESS:	KenAmerican Resources, Inc. 46226 National Road St. Clairsville, OH 43950		
C. PRODUCTION FACILITY:	Paradise #9 Mine Muhlenberg County, Kentucky		
D. METHOD OF DELIVERY:	Truck		
E. ACTUAL TONNAGE:	2015	–	300,077 Tons
	2016	–	500,015 Tons
	2017	–	498,581 Tons
	2018		132,302 Tons <i>(through April)</i>
F. ANNUAL TONNAGE REQUIREMENTS:	2015	–	300,000 Tons
	2016	–	500,000 Tons
	2017	–	500,000 Tons
	2018	–	400,000 Tons
	2019	–	400,000 Tons
PERCENT OF ANNUAL REQUIREMENTS:	2015	–	100.03 %
	2016	–	100.00 %
	2017	–	99.72%
	2018	–	33.08% <i>(through April)</i>
G. CURRENT PRICE (<i>Base</i>):	2015	–	\$ 49.2505 per Ton
	2016	–	\$ 50.5000 per Ton
	2017	–	\$ 51.7496 per Ton
	2018	–	\$ 53.0506 per Ton
	2019	–	\$ 54.4008 per Ton
CURRENT PRICE (<i>Contract</i>):	2015	–	\$ 49.2505 per Ton
	2016	–	\$ 50.5000 per Ton
	2017	–	\$ 51.7496 per Ton
	2018	–	\$ 53.0506 per Ton

Big Rivers Electric Corporation
Case No. 2018-00221
Long-Term Fuel Contract Information

Rhino Energy LLC and Pennyrile Energy LLC Coal Sales

A. CONTRACT NUMBER: BRE-15- 009

B. SUPPLIER'S NAME / ADDRESS: Rhino Energy LLC/Pennyrile Energy, LLC.
424 Lewis Hargett Circle, Suite 250
Lexington, KY 40503

C. PRODUCTION FACILITY: Pennyrile Energy LLC
Riveredge Mine
McLean County, Kentucky

D. METHOD OF DELIVERY: Barge

E. ACTUAL TONNAGE:

2015	-	105,260	Tons	
2016	-	350,004	Tons	
2017	-	450,000	Tons	
2018	-	53,808	Tons	<i>(through April)</i>

F. ANNUAL TONNAGE REQUIREMENTS:

2015	-	105,000	Tons	
2016	-	350,000	Tons	
2017	-	450,000	Tons	
2018	-	150,000	Tons	

PERCENT OF ANNUAL REQUIREMENTS:

2015	-	100.25 %	
2016	-	100.00 %	
2017	-	100.00%	
2018	-	35.87%	<i>(through April)</i>

G. CURRENT PRICE (*Base*):

Riveredge 2015	-	\$ 43.7494	per Ton
Riveredge 2016	-	\$ 45.7498	per Ton
Riveredge 2017	-	\$ 47.7500	per Ton
Riveredge 2018	-	\$ 47.0826	per Ton

CURRENT PRICE (*Contract*):

Riveredge 2015	-	\$ 43.7494	per Ton
Riveredge 2016	-	\$ 45.7498	per Ton
Riveredge 2017	-	\$ 47.7500	per Ton
Riveredge 2018	-	\$ 47.0826	per Ton

Big Rivers Electric Corporation
Case No. 2018-00221
Long-Term Fuel Contract Information

Alliance Coal, LLC

A. CONTRACT NUMBER: BRE-15-010

B. SUPPLIER'S NAME/ADDRESS: Alliance Coal, LLC
1717 South Boulder, Suite 400
Tulsa, OK 74119

C. PRODUCTION FACILITY: Hopkins Cty. Coal, LLC – Elk Creek Mine Facility
Sebree Mining, Onton No. 9 Mine Facility in
Webster County, Kentucky;
Warrior Coal LLC Mining Operations;
Webster Coal, LLC – Dotiki Mine Facility in
Webster County, Kentucky;
Riverview Coal, LLC – River View Mine Facility

D. METHOD OF DELIVERY: Truck and/or Barge

E. ACTUAL TONNAGE: 2015 – 0 Tons (*Option not exercised*)
2016 – 249,968 Tons
2017 – 574,800 Tons (*through December*)

F. ANNUAL TONNAGE REQUIREMENTS: 2015 – 75,000 Tons (*Option tons*)
2016 – 250,000 Tons
2017 – 575,000 Tons

PERCENT OF ANNUAL REQUIREMENTS: 2015 – 0.00 % (*Option not exercised*)
2016 – 99.99 %
2017 – 99.97 % (*through December*)

G. CURRENT PRICE (*Base*): Quality A (11,900 BTU/lb.) – Hopkins Elk Creek
2015 – \$ 53.2493 per Ton

Quality B (11,800 BTU/lb.) – Onton No. 9,
Warrior Coal, & Webster Coal

2015 – \$ 50.8061 per Ton
2016 – \$ 52.7649 per Ton
2017 – \$ 54.7733 per Ton

Quality C (11,500 BTU/lb.) – Onton No. 9 &
River View Coal

2015 – \$ 45.3491 per Ton
2016 – \$ 47.2006 per Ton
2017 – \$ 49.0498 per Ton

Big Rivers Electric Corporation
Case No. 2018-00221
Long-Term Fuel Contract Information

Alliance Coal, LLC – BRE-15-010 (continued)

CURRENT PRICE (<i>Base</i>): (<i>continued</i>)	<u>Quality D (11,250 BTU/lb.) – Onton No. 9</u>	
	2015	– \$ 45.8000 per Ton
	2016	– \$ 47.5505 per Ton
	2017	– \$ 49.4000 per Ton
	<u>Quality E (11,000 BTU/lb.) – Onton No. 9</u>	
	2015	– \$ 44.0996 per Ton
	2016	– \$ 45.8002 per Ton
	2017	– \$ 47.5492 per Ton
CURRENT PRICE (<i>Contract</i>):	2015	– N/A (No option tons)
	<u>Quality A (11,900 BTU/lb.) – Hopkins Elk Creek</u>	
	2016	– N/A
	2017	– N/A
	<u>Quality B (11,800 BTU/lb.) – Onton No. 9, Warrior Coal, & Webster Coal</u>	
	2016	– \$ 52.7649 per Ton
	2017	– \$ 54.7733 per Ton
	<u>Quality C (11,500 BTU/lb.) – Onton No. 9 & River View Coal</u>	
	2016	– \$ 47.2006 per Ton
	2017	– \$ 49.0498 per Ton
	<u>Quality D (11,250 BTU/lb.) – Onton No. 9</u>	
	2016	– \$ 47.5505 per Ton
	2017	– \$ 49.4000 per Ton
	<u>Quality E (11,000 BTU/lb.) – Onton No. 9</u>	
	2016	– \$ 45.8002 per Ton
	2017	– \$ 47.5492 per Ton

**Big Rivers Electric Corporation
Case No. 2018-00221
Long-Term Fuel Contract Information**

Peabody COALSALES

A. CONTRACT NUMBER:	BRE-15- 018		
B. SUPPLIER'S NAME/ADDRESS:	Peabody COALSALES, LLC 701 Market Street St. Louis, MO 63101		
C. PRODUCTION FACILITY:	Somerville and Wild Boar Mining Complex, Surface Mining Operations, Warrick and Gibson Counties, Indiana		
D. METHOD OF DELIVERY:	Barge		
E. ACTUAL TONNAGE:	2016	-	350,001 Tons
	2017	-	525,046 Tons
	2018	-	217,108 Tons <i>(through April)</i>
F. ANNUAL TONNAGE REQUIREMENTS:	2016	-	350,000 Tons
	2017	-	525,000 Tons
	2018	-	625,000 Tons
PERCENT OF ANNUAL REQUIREMENTS:	2016	-	100.00 %
	2017	-	100.01%
	2018	-	34.74% <i>(through April)</i>
G. CURRENT PRICE (<i>Base</i>):	2016	-	\$ 40.4998 per Ton
	2017	-	\$ 40.4998 per Ton
	2018	-	\$ 40.4998 per Ton
CURRENT PRICE (<i>Contract</i>):	2016	-	\$ 40.4998 per Ton
	2017	-	\$ 40.4998 per Ton
	2018	-	\$ 40.4998 per Ton

**Big Rivers Electric Corporation
Case No. 2018-00221
Long-Term Fuel Contract Information**

Rhino Energy LLC and Pennyrile Energy LLC Coal Sales

A. CONTRACT NUMBER:	BRE-18- 001			
B. SUPPLIER'S NAME/ADDRESS:	Rhino Energy LLC/Pennyrile Energy, LLC. 424 Lewis Hargett Circle, Suite 250 Lexington, KY 40503			
C. PRODUCTION FACILITY:	Pennyrile Energy LLC Riveredge Mine McLean County, Kentucky			
D. METHOD OF DELIVERY:	Barge			
E. ACTUAL TONNAGE:	2018	-	126,333	Tons (through April)
F. ANNUAL TONNAGE REQUIREMENTS:	2018	-	350,000	Tons
	2019	-	150,000 min. 350,000 max.	Tons
	2020	-	150,000 min. 350,000 max.	Tons
PERCENT OF ANNUAL REQUIREMENTS:	2018	-	36.10%	(through April)
G. CURRENT PRICE (<i>Base</i>):	2018	-	\$ 37.5002	per Ton
	2019	-	\$ 38.6302	per Ton
	2020	-	\$ 39.7896	per Ton
CURRENT PRICE (<i>Contract</i>):	2018	-	\$ 37.5002	per Ton

**Big Rivers Electric Corporation
Case No. 2018-00221
Long-Term Fuel Contract Information**

Sun Energy Group LLC

A. CONTRACT NUMBER:	BRE-18- 002			
B. SUPPLIER'S NAME/ADDRESS:	Sun Energy Group LLC 2701 West 1100 South Huntingburg, Indiana 47542			
C. PRODUCTION FACILITY:	Hilsmeier #1 Surface Mine Pike and Dubois County, Indiana			
D. METHOD OF DELIVERY:	Barge			
E. ACTUAL TONNAGE:	2018	-	29,213 Tons	<i>(through April)</i>
F. ANNUAL TONNAGE REQUIREMENTS:	2018	-	225,000 Tons	
	2019	-	144,000 min. 240,000 max.	Tons
	2020	-	144,000 min. 240,000 max.	Tons
PERCENT OF ANNUAL REQUIREMENTS:	2018	-	12.98%	<i>(through April - force majeure filed.)</i>
G. CURRENT PRICE (<i>Base</i>):	2018	-	\$ 35.0000 per Ton	
	2019	-	\$ 35.9990 per Ton	
	2020	-	\$ 37.3498 per Ton	
CURRENT PRICE (<i>Contract</i>):	2018	-	\$ 35.0000 per Ton	

Big Rivers Electric Corporation
Case No. 2018-00221
Long-Term Fuel Contract Information

Alliance Coal, LLC

A. CONTRACT NUMBER:	BRE-18- 003
B. SUPPLIER'S NAME/ADDRESS:	Alliance Coal, LLC 1717 South Boulder, Suite 400 Tulsa, OK 74119
C. PRODUCTION FACILITY:	Riverview Coal, LLC – River View Mine Facility
D. METHOD OF DELIVERY:	Barge
E. ACTUAL TONNAGE:	2018 – 84,413 Tons <i>(through April)</i>
F. ANNUAL TONNAGE REQUIREMENTS:	2018 – 585,000 Tons <i>(effective date – February 12, 2018)</i>
	2019 – 300,000 min. Tons 800,000 max.
	2020 – 300,000 min. Tons 800,000 max.
PERCENT OF ANNUAL REQUIREMENTS:	2018 – 14.43%
G. CURRENT PRICE (<i>Base</i>):	2018 – \$ 36.5010 per Ton
	2019 – \$ 37.7499 per Ton
	2020 – \$ 39.0034 per Ton
CURRENT PRICE (<i>Contract</i>):	2018 – \$ 36.5010 per Ton

BIG RIVERS ELECTRIC CORPORATION

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August 24, 2018

1 **Item 3)**

2 *a. As of the last day of the review period, state the coal inventory level*
3 *in tons, and in number of days' supply. Provide this information by*
4 *generating station and in the aggregate.*

5 *b. Describe the criteria used to determine number of days' supply.*

6 *c. 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 *e.*

11 *(1) State whether any significant changes in the current coal*
12 *inventory target are expected within the next 12 months.*

13 *(2) If so, state the expected change, and the reasons for this*
14 *change.*

15

16 **Response)**

17 *a. As of April 30, 2018, Big Rivers' generating stations individually and in*
18 *the aggregate had the following inventory levels and days' supply.*

19

20

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1

Total System/Station	Inventory Level (Tons) ¹	Number of Days' Supply ²	Preceding Six-Month Operating Duration (In Days)	Preceding 6 Months Burn (In Tons)
Big Rivers Electric System	552,922.24	44	110	1,378,337.74
Reid Station ³	0.00	0	0	0.00
Station Two ⁴	106,820.11	224	24	11,351.07
Green Station ⁵	173,039.72	43	171	689,690.96
Coleman Station ⁶	0.00	0	0	0.00
Wilson Station ⁷	273,062.41	64	159	677,295.71

2

3

b. Number of Days' Supply =

$$\frac{\text{Current Inventory (Tons)}}{\text{Preceding 6 Months Burn (Tons)}} \times \text{Duration (In Days)}$$

4

5

c. Big Rivers Electric Corporation's Target Supply is the following range

6

for each Station in days based on the projected annual fuel burn

Big Rivers Electric Corporation Coal Inventory Target Ranges	
Total System	30 – 60 Days
Reid Station	0 Days
Station Two	30 – 60 Days
Green	30 – 60 Days
Coleman	0 Days
Wilson	30 – 60 Days

7

8

d. The actual inventory for Station Two exceeds the target range by 164 days

9

as a result of offering Station Two in MISO on an economic commit basis

10

and scheduled and unscheduled maintenance outages (note duration, in

BIG RIVERS ELECTRIC CORPORATION

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1 days, at only 24). At various times during the period under review, the
2 Station Two Units were placed into Reserve shutdown due to market
3 conditions. Reserve shutdown (economic) hours totaled 6,430.32 hours
4 during the period under review. There were 230.05 scheduled
5 maintenance hours for Station Two during the review period. There were
6 also unscheduled outages on Station Two Unit 1 and Unit 2 during the
7 review period totaling 884.02 hours.

8 Since the end of the period under review, Big Rivers has reduced
9 Station Two inventory from 106,820 tons as of April 30th to 86,618 tons as
10 of July 31, 2018. The methodology of calculating days of inventory
11 (approved by Big Rivers' Board of Directors) has been modified for Station
12 Two due to termination of the Station Two operating agreement between
13 Big Rivers and the City of Henderson and Big Rivers' plans to cease
14 operating Station Two no later than May 31, 2019, as Big Rivers has
15 explained in Case No. 2018-00146. Effective May 1, 2018, the calculation
16 of a days' burn comprises 1,250 tons per day. Thus, the end of month
17 inventory values for May (85,786 tons) is 69 days, June (84,623 tons) is 68
18 days, and July (86,618 tons) is 69 days. The Company plans to hold 30
19 to 60 days inventory at Station Two until such time as Big Rivers ceases
20 operation of Station Two. Any residual inventory will be utilized at the
21 Green Station for its normal coal supply.

22

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1 e.

2 (1) Yes.

3 (2) Big Rivers, as part of its continuing solid fuel procurement and
4 inventory reduction plans, reduced its solid fuel procurement to the
5 minimum tons necessary and is nearing balance of inventory at all
6 Stations. Big Rivers did not enter into any spot contractual
7 agreements for delivery of coal for the review period and has not
8 entered into any spot agreements as of this filing to ensure that
9 inventory levels are balanced to targets, particularly at Station Two
10 for the remainder of 2018. Since the prior FAC review,¹ Big Rivers has
11 continued to work toward its inventory targets and has, through July,
12 further reduced overall coal inventory by 308,084 tons in 2018. The
13 Company remains focused during the remainder of the year in
14 obtaining and maintaining its inventory targets.

15

¹ See *In The Matter Of: Electronic Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from May 1, 2017 through October 31, 2017* – Case No. 2018-00023.

BIG RIVERS ELECTRIC CORPORATION

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1

Footnotes to table in sub-part a. above -

- 1.- Green Station had a pet coke inventory of 4,537.80 tons as of April 30, 2018, and had a target blend of 18% with Green coal. Wilson Station had a pet coke inventory of 12,638.90 tons as of April 30, 2018, and had a target blend of 15% with Wilson coal.
- 2.- Number of days' supply is rounded to reflect whole days.
- 3.- Reid Station Unit 1 was placed in Inactive Reserve Status effective April 1, 2016. Change in the status of this unit is unknown at this time. The duration of generation was reduced to 0 days.
- 4.- Station Two Units 1 and 2 had 1,114.07 unscheduled and scheduled maintenance hours. Station Two Units 1 and 2 had 6,430.32 Reserve hours during the review period. All of these hours were equivalent to 157.17 days. The duration of generation was reduced to 23.83 days. Inventory is being reduced to meet the new target; however, due to existing inventory and contract coal, the reduction target will require possibly to the end of the third quarter in 2018.
- 5.- Green Station Units 1 and 2 had 449.98 unscheduled and scheduled maintenance hours and 51.92 Reserve hours during the period under review. These hours were equivalent to 10.46 days. The duration of generation was reduced to 170.54 days.
- 6.- Coleman Station Units 1 and 2 were placed on Inactive Reserve Status on May 1, 2014, and Coleman Station Unit 3 was placed on Inactive Reserve Status on May 8, 2014. The duration of generation was reduced to 0 days. Change in the status of these units is unknown at this time.
- 7.- Wilson Station had 428.08 scheduled and unscheduled maintenance hours and 102.63 reserve outage hours during the period under review. These hours were equivalent to 22.11 days. The duration of generation was reduced to 158.89 days.

2

3

4 **Witnesses)** Mark W. McAdams

5

BIG RIVERS ELECTRIC CORPORATION

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1 **Item 4)** *List each written coal-supply solicitation issued during the*
2 *period under review.*

3

4 *a. For each solicitation, provide the date of the solicitation, the type*
5 *of solicitation (contract or spot), the quantities solicited, a general*
6 *description of the quality of coal solicited, the time period over*
7 *which deliveries were requested, and the generating unit(s) for*
8 *which the coal was intended.*

9 *b. For each solicitation, state the number of vendors to whom the*
10 *solicitation was sent, the number of vendors who responded, and*
11 *the selected vendor. Provide the bid tabulation sheet or*
12 *corresponding document that ranked the proposals. (This*
13 *document should identify all vendors who made offers.) State the*
14 *reasons for each selection. For each lowest-cost bid not selected,*
15 *explain why the bid was not selected.*

16

17 **Response)**

18 a. and b.

19 There were no written coal-supply solicitations issued during the period
20 from November 1, 2017, through April 30, 2018.

21

22 **Witness)** Mark W. McAdams

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1 **Item 5)** *List each oral coal-supply solicitation issued during the period*
2 *under review.*

3

4 *a. For each solicitation, state why the solicitation was not written,*
5 *the date(s) of the solicitation, the quantities solicited, a general*
6 *description of the quality of coal solicited, the time period over*
7 *which deliveries were requested, and the generating unit(s) for*
8 *which the coal was intended.*

9 *b. For each solicitation, identify all vendors solicited and the vendor*
10 *selected. Provide the tabulation sheet or other document that*
11 *ranks the proposals. (This document should identify all vendors*
12 *who made offers.) State the reasons for each selection. For each*
13 *lowest-cost bid not selected, explain why the bid was not selected.*

14

15 **Response)**

16 a. and b.

17 There were no oral coal-supply solicitations issued during the period from
18 November 1, 2017, through April 30, 2018.

19

20

21 **Witness)** Mark W. McAdams

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1 **Item 6)** *For the period under review, list each vendor from whom*
2 *natural gas was purchased for generation and the quantities and the*
3 *nature of each 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, 2017, through April 30, 2018. Also on the following
8 page please see the percentage of purchases that were either spot versus contract
9 for the period under review in total.

10 Starting in July 2010, Big Rivers began purchasing natural gas under a
11 North American Energy Standard Board ("NAESB") base contract for sale and
12 purchase of natural gas. Actual purchases of gas are made using transaction
13 confirmations that are governed by the NAESB contract. Big Rivers also entered
14 into a contract with Texas Gas Transmission, LLC for the transportation and
15 storage and borrowing of gas to Big Rivers' delivery point, the Reid Combustion
16 Turbine. All of these contracts are on file with the Kentucky Public Service
17 Commission.

18

19

20

BIG RIVERS ELECTRIC CORPORATION

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1

For the Period from November 1, 2017, through April 30, 2018

Purchase Vendor	Fuel Type	MCF	Contract Type
CIMA Energy, LTD	Natural Gas	32,173	Spot

For the Period from November 1, 2017, through April 30, 2018

Percentage Contract	0.00 %
Percentage Spot	<u>100.00 %</u>
Percentage Total	<u>100.00 %</u>

2

3

4 **Witness)** Wayne O'Bryan

5

BIG RIVERS ELECTRIC CORPORATION

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1 **Item 7)** *For the period under review, state if there were any instances in*
2 *which a natural gas generating unit could not be operated when it*
3 *otherwise would have run, due to pipeline constraints or natural gas being*
4 *unavailable.*

5

6 **Response)** There were no instances during this review period that Big Rivers' gas
7 generating unit could not be operated when it otherwise would have run, due to
8 pipeline constraints or natural gas being unavailable.

9

10

11 **Witness)** Wayne O'Bryan

12

BIG RIVERS ELECTRIC CORPORATION

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1 **Item 8)** *State if there have been any changes to hedging activities for*
2 *coal or natural gas purchases used for generation since the previous FAC*
3 *review proceeding. If so, describe the changes in detail.*

4

5 **Response)** Big Rivers does not engage in financial hedging activities regarding its
6 coal or natural gas purchases used for generation. Big Rivers does, however,
7 stagger its purchases of coal to create a natural hedge on price volatility pursuant
8 to Policy No. 111 – Hedge Policy. There have been no changes to these hedging
9 activities since the previous FAC review.

10

11

12 **Witnesses)** Mark W. McAdams (*Coal*) and
13 Wayne O'Bryan (*Natural Gas*)

14

BIG RIVERS ELECTRIC CORPORATION

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1 **Item 9)**

2 *a. State whether Big Rivers has audited any of its fuel or*
3 *transportation contracts during the period under review.*

4 *b. If so, for each audited contract:*

5 *(1) Identify the contract;*

6 *(2) Identify the auditor; and*

7 *(3) State the results of the audit and describe the actions that Big*
8 *Rivers took as a result of the audit.*

9

10 **Response)**

11 a. Big Rivers has not audited any of its fuel or transportation contracts
12 during the period from November 1, 2017, through April 30, 2018.

13 b. (1) – (4)

14 Not Applicable.

15

16

17 **Witnesses)** Mark W. McAdams (*Coal*) and

18 Wayne O'Bryan (*Natural Gas*)

19

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1 **Item 10)**

2 *a. State whether Big Rivers is currently involved in any litigation*
3 *with its current or former fuel suppliers or transportation vendors.*

4 *b. If yes, for each litigation:*

5 *(1) Identify the supplier or vendor;*

6 *(2) Identify the contract involved;*

7 *(3) State the potential liability or recovery to Big Rivers;*

8 *(4) List the issues presented; and*

9 *(5) Provide a copy of the complaint or other legal pleading that*
10 *initiated the litigation and any answers or counterclaims. If*
11 *a copy has previously been filed with the Commission,*
12 *provide the date on which it was filed and the case in which*
13 *it was filed.*

14 *c. State the current status of all litigation with suppliers or vendor.*

15

16 **Response)**

17 *a. Big Rivers is not currently involved in any litigation with its current or*
18 *former fuel suppliers or transportation vendors.*

19

20

BIG RIVERS ELECTRIC CORPORATION

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- 1 b. (1) – (5)
2 Not applicable.
3 c. Not applicable.

4

5

6 **Witnesses)** Mark W. McAdams (*Coal*) and
7 Wayne O'Bryan (*Natural Gas*)

8

BIG RIVERS ELECTRIC CORPORATION

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1 **Item 11)**

2 *a. For the period under review, state if there have been any changes*
3 *to Big River's written policies and procedures regarding its fuel*
4 *procurement.*

5 *b. If yes:*

6 *(1) Describe the changes;*

7 *(2) Provide the written policies and procedures as changed;*

8 *(3) State the date(s) the changes were made; and*

9 *(4) Explain why the changes were made.*

10 *c. If no, provide the date Big River's current fuel procurement*
11 *policies and procedures were last changed, when they were last*
12 *provided to the Commission, and identify the proceeding in which*
13 *they were provided.*

14

15 **Response)**

16 a. Yes. During the period from November 1, 2017, through April 30, 2018,
17 Big Rivers made changes to Policy No. 122 – Energy–Related Transaction
18 Credit Policy and to Appendix A: Energy–Related Transaction Authority
19 Policy (Policy No. 105).

20

21

BIG RIVERS ELECTRIC CORPORATION

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1 b. (1) through (4)

2 Policy No. 122 – Addendum: Energy–Related Transaction Credit Policy

3 On November 17, 2017, Big Rivers removed the Addendum from
4 Policy No. 122 since it contained a scoring model for counterparties. That
5 scoring model is maintained by ACES; and Big Rivers does not need to
6 duplicate that scoring model in its policies. Policy No. 122 and Policy No.
7 122–Addendum were within the same Word file. Future versions of the
8 table in sub-part c. below will list this addendum but note that its removal
9 was reported with this review.

10
11 Appendix A: Energy–Related Transaction Authority Policy (Policy No. 105)

12 On December 18, 2017, Big Rivers added a Southwest Power Pool
13 (“SPP”) Transaction Authority section following approval by Big Rivers’
14 Board of Directors. As noted at the beginning of that section, it outlines
15 Big Rivers’ staff and ACES transaction limits for SPP products involved
16 in conducting daily transactions for the Nebraska entities. This new
17 section replaced the old Section 7, with the old Section 7 and subsequent
18 sections being renumbered, *i.e.*, incremented by 1.

19 c. Big Rivers’ other fuel procurement policies and procedures were not
20 changed during the period from November 1, 2017, through April 30,
21 2018. In the table below, Big Rivers lists those unchanged policies and

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1 procedures, the dates of their last changes, and the proceedings in which
2 Big Rivers provided them to the Commission.
3

Big Rivers Electric Corporation Policies and Procedures for Fuel Procurement				
Number	Name	Date Last Change	Provided In	Date Provided
105	Energy-Related Transaction Authority Policy	2016-12-16	Case No. 2017-00287	2017-09-13
111	Hedge Policy	2016-09-16	Case No. 2017-00006	2017-02-20
120	Fuel Procurement Policy and Procedure	2016-09-16	Case No. 2017-00006	2017-02-20
121	Solid Fuel Inventory Policy	2017-08-18	Case No. 2018-00023	2018-03-01
122	Energy-Related Transaction Credit Policy	2015-11-19	Case No. 2016-00235	2016-08-26

4
5
6
7
8

Witness) Mark W. McAdams (*Coal*) and
Wayne O'Bryan (*Natural Gas*)

Energy Related Transaction Credit Policy				
Original Effective Date	02/21/2003	Date Last Reviewed	11/17/2017	Approved by BOARD
Original Approval Date	02/21/2003	Date Last Revised	11/17/2017	

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:

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

Performance (mark to market) Risk: 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 three voting members (1) President & CEO, (2) CFO, and (3) the VP Energy Services, and one non-voting member, the Director Risk Management & Strategic Planning. The BRCC point of contact is the CFO. All formal credit files are to be maintained at the offices of ACES.

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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:

- Corporate Guarantee: 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.
- Letter of Credit: 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.
- Prepayment (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.

- Available Credit 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**
 - c. the value of any letter of credit or cash collateral held **plus**
 - d. the approved value of any other type of collateral held

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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**
4. 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

Energy Related Transaction Credit Policy				
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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.

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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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Original Approval Date	02/21/2003	Date Last Revised	11/17/2017	

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
Rev 4	03/14/2013	Revised to accommodate promotions, retirement and replacement	Board
Rev 5	08/15/2014	Change APM to ACES; update titles	Board
Rev 6	11/19/2015	Changed Senior VP Accounting, Rates & CFO to CFO, added President & CEO to trade approval	Board
Rev 7	11/17/2017	Remove Addendum as scoring model is controlled by ACES	Board



BOARD POLICY

Policy Number: 122

Energy Related Transaction Credit Policy				
Original Effective Date	02/21/2003	Date Last Reviewed	11/17/2017	Approved by
Original Approval Date	02/21/2003	Date Last Revised	11/17/2017	BOARD

- Deleted: 9
- Deleted: 5
- Deleted: 9
- Deleted: 5

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:

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

Performance (mark to market) Risk: 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 three voting members (1) President & CEO, (2) CFO, and (3) the VP Energy Services, and one non-voting member, the Director Risk Management & Strategic Planning. The BRCC point of contact is the CFO. All formal credit files are to be maintained at the offices of ACES.



BOARD POLICY

Policy Number: 122

Energy Related Transaction Credit Policy				
Original Effective Date	02/21/2003	Date Last Reviewed	11/17/2017	Approved by
Original Approval Date	02/21/2003	Date Last Revised	11/17/2017	BOARD

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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:

- Corporate Guarantee: 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.
- Letter of Credit: 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.
- Prepayment (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.

- Available Credit 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**
 - c. the value of any letter of credit or cash collateral held **plus**
 - d. the approved value of any other type of collateral held



BOARD POLICY

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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.

Deleted: as shown in the Addendum. The outline for each credit scoring model is presented in the Addendum.

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**
4. 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



BOARD POLICY

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Energy Related Transaction Credit Policy				
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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.



BOARD POLICY

Policy Number: 122

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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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 ¶
 From time to time it may be necessary to make changes to the addendum of this policy. Changes to the addendum will require approval of the BRCC. ¶

Number	Date	Notes	Approved by
Original	02/21/2003	Originally Power Trading Portfolio Credit Risk Policy	Board



BOARD POLICY

Policy Number: 122

Energy Related Transaction Credit Policy

Original Effective Date	02/21/2003	Date Last Reviewed	11/17/2017	Approved by
Original Approval Date	02/21/2003	Date Last Revised	11/17/2017	BOARD

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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
Rev 4	03/14/2013	Revised to accommodate promotions, retirement and replacement	Board
Rev 5	08/15/2014	Change APM to ACES; update titles	Board
Rev 6	11/16/2015	Changed Senior VP Accounting, Rates & CFO to CFO, added President & CEO to trade approval	Board
Rev 7	<u>11/17/2017</u>	<u>Remove Addendum as scoring model is controlled by ACES</u>	<u>Board</u>



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- Deleted: 60%
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- Deleted: AA+
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- Deleted: >75%
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- Deleted: 5
- Deleted: 61.1%
- Deleted: 75.0%
- Deleted: 5
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- Deleted: 2.6x
- Deleted: 4
- Deleted: 54.1%
- Deleted: 61.0%
- Deleted: 4
- Deleted: 2.61x
- Deleted: 3.4x
- Deleted: 3
- Deleted: 48.1%
- Deleted: 54.0%
- Deleted: 3
- Deleted: 3.41x
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- Deleted: 2
- Deleted: 20.1%
- Deleted: 48.0%
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- Deleted: 3.91x
- Deleted: >3.91x
- Deleted: 1
- Deleted: <20%
- Deleted: 20.0%
- Deleted: 1
- Deleted: Tangible Net Worth (\$millions)
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Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/18/2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/18/2017	

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, and the Director Power Supply & Market Operations.

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/18/2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/18/2017	

4. 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 \$
VP Energy Services	Energy	≤ 1 Year	≤ 2 Years	200	No Limit	3,508,800	No Limit
	Capacity	≤ 1 Year	≤ 1 Year	100	No Limit	878,400	No Limit
Director Resources & Forecasting or Director Power Supply & Market Operations	Energy	≤ 3 Months	≤ 1 Year	100	No Limit	878,400	No Limit
	Capacity	≤ 3 Months	≤ 1 Year	100	No Limit	878,400	No Limit
Senior Power Portfolio Optimization Analyst	Energy	≤ 1 Week	≤ 1 Month	100	No Limit	74,400	No Limit
ACES	Energy	≤ 1 Day*	≤ 1 Week	200	No Limit	33,600	No Limit

* ≤ 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.

Delegation of authority regarding Restricted Delivery Locations

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

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/18/2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/18/2017	

5. 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
VP Energy Services	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1750	
	Ancillary Service Awards			425	
	Capacity	≤ 2 Years	≤ 2Years	425	\$150/MW-day
	Financial Transmission Rights	≤ 1 Year	≤ 1 Year	425	\$20/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	No Max	MISO Price Cap
Imports/Exports	No Max				
Director Resources & Forecasting or Director Power Supply & Market Operations	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1700	
	Ancillary Service Awards			425	
	Capacity	≤ 1 Year	≤ 1Year	425	\$150/MW-day
	Financial Transmission Rights	≤ 6 months	≤ 6 months	425	\$12/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	400	MISO Price Cap
Imports/Exports	500				
Senior Power Portfolio Optimization Analyst	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1675	
	Ancillary Service Awards			425	
	Financial Transmission Rights	< 6 Months	< 6 Months	425	\$10/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	400	MISO Price Cap
Imports/Exports	450				
Energy Services Analyst	Demand Award	As Required by MISO	1 Operating Day	1675	MISO Price Cap
ACES	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1650	
	Ancillary Service Awards			425	
	Financial Transmission Rights	≤ 6 Months	≤ 6 Months	425	\$10/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	400	MISO Price Cap
Imports/Exports	400				

Appendix A to Policy 105 - Energy Related Transaction Authority					
Original Effective Date	11/4/2009	Date Last Reviewed	12/18/2017	Approved by CEO	
Original Approval Date	11/4/2009	Date Last Revised	12/18/2017		

6. 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 Services	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	≤ 1 Year	≤ 1 Year	210	\$20
	Financial Transmission Rights				
	Virtual Transaction Awards				
Imports/Exports	As Required by PJM	1 Operating Day	No Max No Max	PJM Price Cap	
Director Resources & Forecasting or Director Power Supply & Market Operations	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	≤ 1 Year	≤ 3 months	105	\$12
	Financial Transmission Rights				
	Virtual Transaction Awards				
Imports/Exports	As Required by PJM	1 Operating Day	400 500	PJM Price Cap	
Senior Power Portfolio Optimization Analyst	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	Not Authorized	Not Authorized	Not Authorized	Not Authorized
	Financial Transmission Rights				
	Virtual Transaction Awards				
Imports/Exports	As Required by PJM	1 Operating Day	400 450	PJM Price Cap	
ACES	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	Not Authorized	Not Authorized	Not Authorized	Not Authorized
	Financial Transmission Rights				
	Virtual Transaction Awards				
Imports/Exports	As Required by PJM	1 Operating Day	400 400	PJM Price Cap	

Appendix A to Policy 105 - Energy Related Transaction Authority					
Original Effective Date	11/4/2009	Date Last Reviewed	12/18/2017	Approved by CEO	
Original Approval Date	11/4/2009	Date Last Revised	12/18/2017		

7. SPP Transaction Authority

(SPP transaction authority is granted here for the purpose of fulfilling the Nebraska Contracts approved by Big Rivers Board of Director’s 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
VP Energy Services	Generation Awards	As Required by SPP	1 Operating Day	30	SPP Price Cap
	Demand Awards			110	
	Virtual Transaction Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Ancillary Service Awards				
	Imports/Exports	As Required by SPP	1 Operating Day	No Max	SPP Price Cap
	Transmission Congestion Rights	≤ 1 Year	≤ 1 Year	80	\$20/MWh
Director Resources & Forecasting or Director Power Supply & Market Operations	Generation Awards	As Required by SPP	1 Operating Day	30	SPP Price Cap
	Demand Awards			110	
	Virtual Transaction Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Ancillary Service Awards				
	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 Optimization Analyst	Generation Awards	As Required by SPP	1 Operating Day	30	SPP Price Cap
	Demand Awards			110	
	Virtual Transaction Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Ancillary Service Awards				
	Imports/Exports	As Required by SPP	1 Operating Day	110	SPP Price Cap
	Transmission Congestion Rights	< 6 Months	< 6 Months	80	\$10/MWh
Energy Services Analyst	Generation Awards	None			
	Demand Award	As Required by SPP	1 Operating Day	110	SPP Price Cap
	Virtual Transaction Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Ancillary Service Awards				
	Imports/Exports	As Required by SPP	1 Operating Day	110	SPP Price Cap
	Transmission Congestion Rights	None			

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ACES	Generation Awards	As Required by SPP	1 Operating Day	30	SPP Price Cap
	Demand Awards			110	
	Virtual Transaction Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Ancillary Service Awards				
	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.

Appendix A to Policy 105 - Energy Related Transaction Authority				
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8. 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.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Physical MMBtu Volume per Day	\$/MMBtu	Total Physical Volume MMBtu	Total \$
VP Energy Services	Physical	> 1 Month ≤ 1 Year	≤ 1 Year	20,000	\$15	400,000	\$6 million
		≤ 1 Month		No Max	No Max		
Director Resources & Forecasting or Director Power Supply & Market Operations	Physical	> 1 Week ≤ 1 Month	≤ 1 Year	10,000	\$15	200,000	\$3 million
		≤ 1 Week	≤ 1 Month	No Max.	No Max.		
ACES	Physical*	≤ 1 Week	≤ 1 Week	20,000	\$15	100,000	\$1.5 million
	Pipeline Payback			60,000	\$15	60,000	\$900,000

***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 to the VP Energy Services.

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 VP Energy Services.

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9. Fuel Oil Transaction Authority

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

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

Appendix A to Policy 105 - Energy Related Transaction Authority				
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10. Solid Fuel Transaction Authority

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

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/MMBtu	Total Volume Tons	Total \$
VP Production	Physical Solid Fuel	> 3 Months ≤ 1 Year	≤ 1 Year	500,000	\$2.50	1.0 million	\$60 million
		≤ 3 Months		100,000	\$2.85		
Director Fuels Procurement	Physical Solid Fuel	> 3 Months ≤ 6 Months	≤ 1 Year	250,000	\$2.50	500,000	\$30 million
		≤ 3 Months		50,000	\$2.85		

Appendix A to Policy 105 - Energy Related Transaction Authority				
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11. Transportation Transaction Authority

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

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
VP Production	Barge, Rail or Truck Transportation	> 3 Months ≤ 1 Years	≤ 1 Year	1 million	\$25	2 million	\$50 million
		≤ 3 Months		No Max	No Max		
Director Fuels Procurement	Barge, Rail or Truck Transportation	> 1 Month ≤ 6 Months	≤ 1 Year	500,000	\$25	1 million	\$25 million
		≤ 1 Month	≤ 1 Month	No Max	No Max		

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12. Emission Allowance Transaction Authority

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

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
VP Energy Services	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
Director Resources & Forecasting or Director Power Supply & Market Operations	Federal SO2 Emission Allowances	≤ 1 Year	≤ 6 months	2,000	\$275	5,000	\$1 million
	Federal NOx Emission Allowances	≤ 1 Year		500	\$1,500	2,000	\$3 million
ACES	Federal SO2 Emission Allowances	As directed	As directed	As directed	As directed	As directed	As directed
	Federal NOx Emission Allowances	As directed		As directed	As directed		

Appendix A to Policy 105 - Energy Related Transaction Authority				
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13. Limestone Reagent Transaction Authority

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

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

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14. Bulk Lime and Lime Hydrate Reagent Transaction Authority

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

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

Appendix A to Policy 105 - Energy Related Transaction Authority				
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15. MATS Reagent Transaction Authority

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

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

Appendix A to Policy 105 - Energy Related Transaction Authority				
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16. 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 Director of Enterprise Risk Management and Strategic Planning 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, VP Production and the Big Rivers-IRMC and the ACES-IRMC to ensure compliance with this policy.

Appendix A to Policy 105 - Energy Related Transaction Authority				
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Revisions

Big Rivers Policy 105/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. 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

Approved by CEO

CEO Signature: _____

Approval Date: _____



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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, and the Director Power Supply & Market Operations.



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4. 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 \$
VP Energy Services	Energy	≤ 1 Year	≤ 2 Years	200	No Limit	3,508,800	No Limit
	Capacity	≤ 1 Year	≤ 1 Year	100	No Limit	878,400	No Limit
Director Resources & Forecasting or Director Power Supply & Market Operations	Energy	≤ 3 Months	≤ 1 Year	100	No Limit	878,400	No Limit
	Capacity	≤ 3 Months	≤ 1 Year	100	No Limit	878,400	No Limit
Senior Power Portfolio Optimization Analyst	Energy	≤ 1 Week	≤ 1 Month	100	No Limit	74,400	No Limit
ACES	Energy	≤ 1 Day*	≤ 1 Week	200	No Limit	33,600	No Limit

* ≤ 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.

Delegation of authority regarding Restricted Delivery Locations



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



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5. 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
VP Energy Services	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1750	
	Ancillary Service Awards			425	
	Capacity	≤ 2 Years	≤ 2Years	425	\$150/MW-day
	Financial Transmission Rights	≤ 1 Year	≤ 1 Year	425	\$20/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	No Max	MISO Price Cap
Imports/Exports	No Max				
Director Resources & Forecasting or Director Power Supply & Market Operations	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1700	
	Ancillary Service Awards			425	
	Capacity	≤ 1 Year	≤ 1Year	425	\$150/MW-day
	Financial Transmission Rights	≤ 6 months	≤ 6 months	425	\$12/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	400	MISO Price Cap
Imports/Exports	500				
Senior Power Portfolio Optimization Analyst	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1675	
	Ancillary Service Awards			425	
	Financial Transmission Rights	< 6 Months	< 6 Months	425	\$10/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	400	MISO Price Cap
Imports/Exports	450				
Energy Services Analyst	Demand Award	As Required by MISO	1 Operating Day	1675	MISO Price Cap
ACES	Generation Awards	As Required by MISO	1 Operating Day	425	MISO Price Cap
	Demand Awards			1650	
	Ancillary Service Awards			425	
	Financial Transmission Rights	≤ 6 Months	≤ 6 Months	425	\$10/MWh
	Virtual Transaction Awards	As Required by MISO	1 Operating Day	400	MISO Price Cap
Imports/Exports	400				



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6. 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 Services	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	≤ 1 Year	≤ 1 Year	210	\$20
	Financial Transmission Rights				
	Virtual Transaction Awards	As Required by PJM	1 Operating Day	No Max No Max	PJM Price Cap
Director Resources & Forecasting or Director Power Supply & Market Operations	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	≤ 1 Year	≤ 3 months	105	\$12
	Financial Transmission Rights				
	Virtual Transaction Awards	As Required by PJM	1 Operating Day	400 500	PJM Price Cap
Senior Power Portfolio Optimization Analyst	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	Not Authorized	Not Authorized	Not Authorized	Not Authorized
	Financial Transmission Rights				
	Virtual Transaction Awards	As Required by PJM	1 Operating Day	400 450	PJM Price Cap
ACES	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity	Not Authorized	Not Authorized	Not Authorized	Not Authorized
	Financial Transmission Rights				
	Virtual Transaction Awards	As Required by PJM	1 Operating Day	400 400	PJM Price Cap

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7. SPP Transaction Authority

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

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

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



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	<u>Imports/Exports</u>	<u>As Required by SPP</u>	<u>1 Operating Day</u>	<u>110</u>	<u>SPP Price Cap</u>
	<u>Transmission Congestion Rights</u>	<u>None</u>			
<u>ACES</u>	<u>Generation Awards</u>	<u>As Required by SPP</u>	<u>1 Operating Day</u>	<u>30</u>	<u>SPP Price Cap</u>
	<u>Demand Awards</u>		<u>110</u>	<u>SPP Price Cap</u>	
	<u>Virtual Transaction Awards</u>	<u>Not Presently Transacted</u>	<u>Not Presently Transacted</u>	<u>Not Presently Transacted</u>	<u>Not Presently Transacted</u>
	<u>Ancillary Service Awards</u>				
	<u>Imports/Exports</u>	<u>As Required by SPP</u>	<u>1 Operating Day</u>	<u>110</u>	<u>SPP Price Cap</u>
	<u>Transmission Congestion Rights</u>	<u>< 6 Months</u>	<u>< 6 Months</u>	<u>80</u>	<u>\$10/MWh</u>

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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8. 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.

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Physical MMBtu Volume per Day	\$/MMBtu	Total Physical Volume MMBtu	Total \$
VP Energy Services	Physical	> 1 Month ≤ 1 Year	≤ 1 Year	20,000	\$15	400,000	\$6 million
		≤ 1 Month		No Max	No Max		
Director Resources & Forecasting or Director Power Supply & Market Operations	Physical	> 1 Week ≤ 1 Month	≤ 1 Year	10,000	\$15	200,000	\$3 million
		≤ 1 Week	≤ 1 Month	No Max.	No Max.		
ACES	Physical*	≤ 1 Week	≤ 1 Week	20,000	\$15	100,000	\$1.5 million
	Pipeline Payback			60,000	\$15	60,000	\$900,000

***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 to the VP Energy Services.

Delegation of authority regarding Transportation Firmness and Volume



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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 VP Energy Services.



CEO POLICY

Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority

Original Effective Date	11/4/2009	Date Last Reviewed	12/ 18 /2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/ 18 /2017	

Deleted: 21/2016

Deleted: 21/2016

9. Fuel Oil Transaction Authority

Deleted: 8

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

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



CEO POLICY

Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/ 18 /2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/ 18 /2017	

Deleted: 21/2016

Deleted: 21/2016

10. Solid Fuel Transaction Authority

Deleted: 2

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

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/MMBtu	Total Volume Tons	Total \$
VP Production	Physical Solid Fuel	> 3 Months ≤ 1 Year	≤ 1 Year	500,000	\$2.50	1.0 million	\$60 million
		≤ 3 Months		100,000	\$2.85		
Director Fuels Procurement	Physical Solid Fuel	> 3 Months ≤ 6 Months	≤ 1 Year	250,000	\$2.50	500,000	\$30 million
		≤ 3 Months		50,000	\$2.85		



CEO POLICY

Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/ 18 /2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/ 18 /2017	

Deleted: 21/2016

Deleted: 21/2016

11. Transportation Transaction Authority

Deleted: 10

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

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
VP Production	Barge, Rail or Truck Transportation	> 3 Months ≤ 1 Years	≤ 1 Year	1 million	\$25	2 million	\$50 million
		≤ 3 Months		No Max	No Max		
Director Fuels Procurement	Barge, Rail or Truck Transportation	> 1 Month ≤ 6 Months	≤ 1 Year	500,000	\$25	1 million	\$25 million
		≤ 1 Month	≤ 1 Month	No Max	No Max		



CEO POLICY

Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/18/2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/18/2017	

Deleted: 21/2016

Deleted: 21/2016

12. Emission Allowance Transaction Authority

Deleted: 11

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

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/Ton	Total Volume Tons	Total \$
VP Energy Services	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
Director Resources & Forecasting or Director Power Supply & Market Operations	Federal SO2 Emission Allowances	≤ 1 Year	≤ 6 months	2,000	\$275	5,000	\$1 million
	Federal NOx Emission Allowances	≤ 1 Year		500	\$1,500	2,000	\$3 million
ACES	Federal SO2 Emission Allowances	As directed	As directed	As directed	As directed	As directed	As directed
	Federal NOx Emission Allowances	As directed		As directed	As directed		



CEO POLICY

Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/18/2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/18/2017	

Deleted: 21/2016

Deleted: 21/2016

13. Limestone Reagent Transaction Authority

Deleted: 12

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

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



CEO POLICY

Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/ 18 /2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/ 18 /2017	

Deleted: 21/2016

Deleted: 21/2016

14. Bulk Lime and Lime Hydrate Reagent Transaction Authority

Deleted: 13

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

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



CEO POLICY

Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/18/2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/18/2017	

Deleted: 21/2016

Deleted: 21/2016

15. MATS Reagent Transaction Authority

Deleted: 14

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

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



CEO POLICY

Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/18/2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/18/2017	

Deleted: 21/2016

Deleted: 21/2016

16. Acknowledgements

Deleted: 15

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 Director of Enterprise Risk Management and Strategic Planning 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, VP Production and the Big Rivers-IRMC and the ACES-IRMC to ensure compliance with this policy.



CEO POLICY

Policy Number: **105 Appendix A**

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/18/2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/18/2017	

Deleted: 21/2016

Deleted: 21/2016

Revisions

Big Rivers Policy 105/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

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CEO POLICY

Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/18/2017	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/18/2017	

Deleted: 21/2016

Deleted: 21/2016

Rev. 9	07-21-2014	Allocate authority previously held by Chief Operating Officer to VP Energy Services and VP Production	Robert W. Berry
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 \leq 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
<u>Rev. 13</u>	<u>12-18-2017</u>	<u>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.</u>	<u>Robert W. Berry</u>

Approved by CEO

CEO Signature: _____

Approval Date: _____

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

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

5

6 **Response)**

7 (a) Purchases:

8 Big Rivers has a contract with Southeastern Power Administration
9 ("SEPA") to purchase up to 178 MWs of energy. A force majeure,
10 previously declared by SEPA for this contract due to dam safety issues at
11 Wolf Creek and Center Hill dams on the Cumberland System, remained
12 in effect from November 1, 2017, through April 30, 2018. For the period
13 under review, Big Rivers has operated under an annual contract in which
14 we have to schedule the purchases under the terms of weekly capacity
15 declarations. These are limited to 154 MWs due to ongoing repairs on the
16 Center Hill dam. The repairs currently are expected to last until 2019.

17 Additional purchases are shown on the table which follows. Please
18 note, the purchases listed were made to support firm Off-System Sales
19 and to adjust the amount of sales in selected months. The listed
20 purchases were not passed through Big Rivers' FAC.

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

1 (a) Purchases:

2

Big Rivers Electric Corporation Power Purchases November 1, 2017, through April 30, 2018			
Date	Electric Utility	MW Commitment	Purpose
Nov – Dec 2017	MISO	100 MWs – On-Peak 65,600 Total	Purchases for Off-System Sales
Nov – Dec 2017	MISO	100 MWs – Off-Peak 80,900 Total	Purchases for Off-System Sales
Nov – Dec 2017	MISO	50 MWs – On-Peak 32,800 Total	Purchases for Off-System Sales
Nov – Dec 2017	MISO	100 MWs – On-Peak 65,600 Total	Purchases for Off-System Sales
Nov – Dec 2017	MISO	50 MWs – 7x24 73,250 Total	Purchases for Off-System Sales
Nov – Dec 2017	MISO	25 MWs – 7x24 36,625 Total	Purchases for Off-System Sales
Nov – Dec 2017	MISO	25 MWs – 7x24 36,625 Total	Purchases for Off-System Sales
Nov – Dec 2017	MISO	50 MWs – 7x24 73,250 Total	Purchases for Off-System Sales
Nov – Dec 2017	MISO	50 MWs – On-Peak 32,800 Total	Purchases for Off-System Sales
Nov – Dec 2017	MISO	50 MWs – 7x24 73,250 Total	Purchases for Off-System Sales
Nov – Dec 2017	MISO	50 MWs – Off-Peak 40,450 Total	Purchases for Off-System Sales

3

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

1 (a) Purchases (continued):

2

Big Rivers Electric Corporation Power Purchases (continued) November 1, 2017, through April 30, 2018			
Date	Electric Utility	MW Commitment	Purpose
Nov-Dec 2017	ADM	100 MWs – On-Peak 65,600 Total	Off-System Sales Adjustments
Nov-Dec 2017	ADM	100 MWs – On-Peak 65,600 Total	Off-System Sales Adjustments
Nov-Dec 2017	ADM	100 MWs – On-Peak 65,600 Total	Off-System Sales Adjustments

3

4

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

1 (a) Purchases (continued):

2

Big Rivers Electric Corporation Power Purchases (continued) November 1, 2017, through April 30, 2018			
Date	Electric Utility	MW Commitment	Purpose

3

4

5 (b) Sales:

6

Big Rivers Electric Corporation Firm Off-System Sales November 1, 2017, through April 30, 2018			
Date	Electric Utility	MW Commitment	Purpose
Nov – Dec 2017	Morgan Stanley	100 MWs – On-Peak 65,600 Total	Off-System Sales
Nov – Dec 2017	Morgan Stanley	100 MW – Off-Peak 80,900 Total	Off-System Sales
Nov – Dec 2017	NextEra	50 MWs – On-Peak 32,800 Total	Off-System Sales

7

8

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

1 (b) Sales (continued):

2

Big Rivers Electric Corporation Firm Off-System Sales November 1, 2017, through April 30, 2018			
Date	Electric Utility	MW Commitment	Purpose
Nov-Dec, 2017	EDF	100 MWs – On-Peak 65,600 Total	Off-System Sales
Nov-Dec, 2017	NextEra	50 MWs – 7x24 73,250 Total	Off-System Sales
Nov-Dec, 2017	DTE Energy	25 MWs – 7x24 36,625 Total	Off-System Sales
Nov-Dec, 2017	Morgan Stanley	25 MWs – 7x24 36,625 Total	Off-System Sales
Nov-Dec, 2017	ADM	50 MWs – 7x24 73,250 Total	Off-System Sales
Nov-Dec, 2017	EDF	50 MWs - 7x24 73,250 Total	Off-System Sales
Nov-Dec, 2017	NextEra	50 MWs – On-Peak 32,800 Total	Off-System Sales
Nov-Dec, 2017	Morgan Stanley	50 MWs – 7x24 73,250 Total	Off-System Sales
Nov-Dec, 2017	NextEra	50 MWs – Off-Peak 40,450 Total	Off-System Sales

3

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

1 (b) Sales (continued):

2

Big Rivers Electric Corporation Firm Off-System Sales (continued) November 1, 2017, through April 30, 2018			
Date	Electric Utility	MW Commitment	Purpose
Jan - Feb, 2018	BP Energy	100 MWs – On-Peak	Off-System Sales - 100 MW Call Option
Feb, 2018	ADM	50 MWs – Off-Peak 17,600 Total	Off-System Sales

3

4

5

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

1 (b) Sales (continued):

2

Big Rivers Electric Corporation Firm Off-System Sales (continued) November 1, 2017, through April 30, 2018			
Date	Electric Utility	MW Commitment	Purpose
			

3

4

5 **Witness)** Wayne O'Bryan

6

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

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

3

4 **Response)** Please see the attached monthly billing summaries for sales to all
5 electric utilities for the period November 1, 2017, through April 30, 2018. Please
6 note that certain identifying information has been redacted from these billing
7 summaries pursuant to 807 KAR 5:001 Section 4(10), which relates to privacy
8 protection for filings.

9

10

11 **Witness)** Nicholas R. Castlen

12

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
November 2017**

	KW Billed (a)	kWh (b)	Demand Revenue (c)	Base Energy Revenue (d)	Total Demand & Energy (e) = (c) + (d)	Net Green Power (f)
1 Member Billing November 2017						
2						
3 JP RURALS	98,553	47,391,338	1,360,524.17	\$ 2,132,610.21	\$ 3,493,134.38	\$ 8.00
4 KENERGY	179,015	86,798,553	2,471,302.08	3,905,934.89	6,377,236.97	
5 MEADE CO. RURALS	85,122	37,147,694	1,175,109.21	1,671,646.23	2,846,755.44	-
6						
7 TOTAL RURALS	362,690	171,337,585	\$ 5,006,935.46	\$ 7,710,191.33	\$ 12,717,126.79	\$ 8.00
8						
9	4,990	1,891,030	53,467.85	\$ 71,953.69	\$ 125,421.54	\$ -
10	63	39,335	675.05	1,496.70	2,171.75	
11	32,373	16,626,423	346,876.70	632,635.40	979,512.10	
12	1,763	545,418	18,890.55	20,753.15	39,643.70	
13	10,912	4,025,210	116,922.08	153,159.24	270,081.32	
14	2,760	596,404	29,573.40	22,693.17	52,266.57	
15	800	277,844	8,572.00	10,571.96	19,143.96	
16	3,704	699,830	39,688.36	26,628.53	66,316.89	
17	15,000	10,681,153	160,725.00	406,417.87	567,142.87	
18	60	10,288	642.90	391.46	1,034.36	
19	101	33,048	1,082.22	1,257.48	2,339.70	
20	36,936	25,381,125	395,769.24	965,751.81	1,361,521.05	
21	4,517	1,876,646	48,399.66	71,406.38	119,806.04	
22	3,508	1,770,617	37,588.22	67,371.98	104,960.20	
23	100	15,612	1,071.50	594.04	1,665.54	
24	250	40,903	2,678.75	1,556.36	4,235.11	
25	7,303	4,233,992	78,251.65	161,103.40	239,355.05	
26	12,169	6,926,042	130,390.84	263,535.90	393,926.74	
27	2,365	1,148,439	25,340.98	43,698.10	69,039.08	
28						
29 Sub-Total Kenergy Industrials	139,674	76,819,359	\$ 1,496,606.95	\$ 2,922,976.62	\$ 4,419,583.57	\$ -
30						
31	1,804	201,987	19,329.86	7,685.61	27,015.47	
32						
33 TOTAL INDUSTRIALS	141,478	77,021,346	\$ 1,515,936.81	\$ 2,930,662.23	\$ 4,446,599.04	\$ -
34						
35 GRAND TOTAL	504,168	248,358,931	\$ 6,522,872.27	\$ 10,640,853.56	\$ 17,163,725.83	\$ 8.00

Case No. 2018-00221

Attachment for Response to Staff Item 13

Witness: Nicholas R. Castlen

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**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
November 2017**

1	Member Billing November 2017	Power Factor Penalty (g)	Billing Adjustment (h)	Fuel Adjustment Clause (FAC) (i)	Environmental Surcharge (ES) (j)	Non-FAC PPA (k)	Revenue (l) = \sum (e) to (k)
2							
3	JP RURALS	\$ -	\$ -	\$ 95,256.59	\$ 306,514.35	\$ 63,978.31	\$ 3,958,891.63
4	KENERGY	-	-	174,465.09	559,666.16	117,178.05	7,228,546.27
5	MEADE CO. RURALS	-	-	74,666.86	249,380.42	50,149.39	3,220,952.11
6							
7	TOTAL RURALS	\$ -	\$ -	\$ 344,388.54	\$ 1,115,560.93	\$ 231,305.75	\$ 14,408,390.01
8							
9		\$ -	\$ -	\$ 3,800.97	\$ 11,058.86	\$ 2,552.89	\$ 142,834.26
10		621.47	-	79.06	193.35	53.10	3,118.73
11			(36,896.03)	33,419.11	83,794.57	22,445.67	1,082,275.42
12		214.30	-	1,096.29	3,480.78	736.31	45,171.38
13			20,017.13	8,090.67	23,800.80	5,434.03	327,423.95
14			2,610.96	1,198.77	4,554.49	805.15	61,435.94
15			849.55	558.47	1,684.95	375.09	22,612.02
16		900.06	-	1,406.66	5,762.79	944.77	75,331.17
17			-	21,469.12	50,607.65	14,419.56	653,639.20
18			-	20.68	89.71	13.89	1,158.64
19		10.72	-	66.43	205.67	44.61	2,667.13
20			-	51,016.06	121,418.57	34,264.52	1,568,220.20
21			-	3,772.06	10,583.54	2,533.47	136,695.11
22			-	3,558.94	9,307.75	2,390.33	120,217.22
23			-	31.38	144.18	21.08	1,862.18
24			-	82.22	366.95	55.22	4,739.50
25			-	8,510.32	21,281.06	5,715.89	274,862.32
26			-	13,921.34	35,012.14	9,350.16	452,210.38
27		2,818.05	-	2,308.36	6,117.74	1,550.39	81,833.62
28							
29	Sub-Total Kenergy Industrials	\$ 4,564.60	\$ (13,418.39)	\$ 154,406.91	\$ 389,465.55	\$ 103,706.13	\$ 5,058,308.37
30							
31		-	-	405.99	2,324.15	272.68	30,018.29
32							
33	TOTAL INDUSTRIALS	\$ 4,564.60	\$ (13,418.39)	\$ 154,812.90	\$ 391,789.70	\$ 103,978.81	\$ 5,088,326.66
34							
35	GRAND TOTAL	\$ 4,564.60	\$ (13,418.39)	\$ 499,201.44	\$ 1,507,350.63	\$ 335,284.56	\$ 19,496,716.67

Case No. 2018-00221

Attachment for Response to Staff Item 13

Witness: Nicholas R. Castlen

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**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
November 2017**

	Expense Mitigation Adjustment (EMA) (m)	MRS Adjustment Fuel Roll-In (n)	MRS - ER Transmission Rural Adjustment (o)	MRS - ER Transmission Industrial Adjustment (p)	Total Adjustments for ER & RER on Power Bill (q) = (o) + (p)	Revenue Net of MRS Adjustments (r) = (l) + (q)
1 Member Billing November 2017						
2						
3 JP RURALS	\$ 426,522.04	\$ (483,960.34)	\$ (88,797.50)		\$ (88,797.50)	\$ 3,870,094.13
4 KENERGY	781,186.98	(886,386.81)	(162,301.83)		(162,301.83)	7,066,244.44
5 MEADE CO. RURALS	334,329.25	(379,352.24)	(71,367.28)		(71,367.28)	3,149,584.83
6						
7 TOTAL RURALS	\$ 1,542,038.27	\$ (1,749,699.39)	\$ (322,466.61)	\$ -	\$ (322,466.61)	\$ 14,085,923.40
8						
9	\$ 17,019.27	\$ (19,311.20)		\$ (2,271.13)	\$ (2,271.13)	\$ 140,563.13
10	354.02	(401.69)		(42.38)	(42.38)	3,076.35
11	149,637.81	(169,789.03)		(18,188.94)	(18,188.94)	1,064,086.48
12	4,908.76	(5,569.81)		(693.59)	(693.59)	44,477.79
13	36,226.89	(41,105.44)		(4,868.84)	(4,868.84)	322,555.11
14	5,367.64	(6,090.48)		(857.52)	(857.52)	60,578.42
15	2,500.60	(2,837.34)		(341.64)	(341.64)	22,270.38
16	6,298.47	(7,146.66)		(1,061.64)	(1,061.64)	74,269.53
17	96,130.38	(109,075.93)		(11,258.09)	(11,258.09)	642,381.11
18	92.59	(105.06)		(16.26)	(16.26)	1,142.38
19	297.43	(337.49)		(41.33)	(41.33)	2,625.80
20	228,430.13	(259,192.05)		(26,905.92)	(26,905.92)	1,541,314.28
21	16,889.81	(19,164.31)		(2,202.05)	(2,202.05)	134,493.06
22	15,935.55	(18,081.54)		(1,987.88)	(1,987.88)	118,229.34
23	140.51	(159.43)		(25.75)	(25.75)	1,836.43
24	368.13	(417.70)		(66.03)	(66.03)	4,673.47
25	38,105.93	(43,237.53)		(4,624.27)	(4,624.27)	270,238.05
26	62,334.38	(70,728.74)		(7,590.97)	(7,590.97)	444,619.41
27	10,335.95	(11,727.86)		(1,300.04)	(1,300.04)	80,533.58
28						
29 Sub-Total Kenergy Industrials	\$ 691,374.25	\$ (784,479.29)	\$ -	\$ (84,344.27)	\$ (84,344.27)	\$ 4,973,964.10
30						
31	1,817.88	(2,062.69)		(393.92)	(393.92)	29,624.37
32						
33 TOTAL INDUSTRIALS	\$ 693,192.13	\$ (786,541.98)	\$ -	\$ (84,738.19)	\$ (84,738.19)	\$ 5,003,588.47
34						
35 GRAND TOTAL	\$ 2,235,230.40	\$ (2,536,241.37)	\$ (322,466.61)	\$ (84,738.19)	\$ (407,204.80)	\$ 19,089,511.87

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**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
December 2017**

	KW Billed (a)	kWh (b)	Demand Revenue (c)	Base Energy Revenue (d)	Total Demand & Energy (e) = (c) + (d)	Net Green Power (f)
1 Member Billing December 2017						
2						
3 JP RURALS	129,417	61,976,931	1,786,601.69	\$ 2,788,961.90	\$ 4,575,563.59	\$ 8.00
4 KENERGY	235,703	112,987,479	3,253,879.92	5,084,436.56	8,338,316.48	
5 MEADE CO. RURALS	106,632	51,153,920	1,472,054.76	2,301,926.40	3,773,981.16	-
6						
7 TOTAL RURALS	471,752	226,118,330	\$ 6,512,536.37	\$ 10,175,324.86	\$ 16,687,861.23	\$ 8.00
8						
9	4,861	1,745,974	52,085.62	\$ 66,434.31	\$ 118,519.93	
10	70	43,021	750.05	1,636.95	2,387.00	
11	35,119	18,134,755	376,300.09	690,027.43	1,066,327.52	
12	1,927	548,765	20,647.81	20,880.51	41,528.32	
13	10,238	3,193,914	109,700.17	121,528.43	231,228.60	
14	2,760	86,710	29,573.40	3,299.32	32,872.72	
15	800	235,657	8,572.00	8,966.75	17,538.75	
16	3,982	664,310	42,667.13	25,277.00	67,944.13	
17	15,000	11,124,503	160,725.00	423,287.34	584,012.34	
18	60	10,682	642.90	406.45	1,049.35	
19	101	40,650	1,082.22	1,546.73	2,628.95	
20	37,022	23,237,541	396,690.73	884,188.44	1,280,879.17	
21	4,643	2,060,202	49,749.75	78,390.69	128,140.44	
22	3,425	1,760,216	36,698.88	66,976.22	103,675.10	
23	100	12,705	1,071.50	483.43	1,554.93	
24	250	54,773	2,678.75	2,084.11	4,762.86	
25	7,129	4,225,909	76,387.24	160,795.84	237,183.08	
26	12,053	7,061,809	129,147.90	268,701.83	397,849.73	
27	2,339	1,058,462	25,062.39	40,274.48	65,336.87	
28						
29 Sub-Total Kenergy Industrials	141,879	75,300,558	\$ 1,520,233.53	\$ 2,865,186.26	\$ 4,385,419.79	
30						
31	1,793	85,168	19,212.00	3,240.64	22,452.64	
32						
33 TOTAL INDUSTRIALS	143,672	75,385,726	\$ 1,539,445.53	\$ 2,868,426.90	\$ 4,407,872.43	\$ -
34						
35 GRAND TOTAL	615,424	301,504,056	\$ 8,051,981.90	\$ 13,043,751.76	\$ 21,095,733.66	\$ 8.00

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**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
December 2017**

1	2	Power Factor Penalty (g)	Billing Adjustment (h)	Fuel Adjustment Clause (FAC) (i)	Environmental Surcharge (ES) (j)	Non-FAC PPA (k)	Revenue (l) = \sum (e) to (k)
3	Member Billing December 2017						
4	JP RURALS	\$ -	\$ -	\$ 31,112.42	\$ 438,370.51	\$ 83,668.86	\$ 5,128,723.38
5	KENERGY	-	-	56,719.71	798,875.66	152,533.10	9,346,444.95
6	MEADE CO. RURALS	-	-	25,679.27	361,579.38	69,057.79	4,230,297.60
7	TOTAL RURALS	\$ -	\$ -	\$ 113,511.40	\$ 1,598,825.55	\$ 305,259.75	\$ 18,705,465.93
8							
9		\$ -	\$ -	\$ 876.48	\$ 11,379.36	\$ 2,357.06	\$ 133,132.83
10		460.75		21.60	230.54	58.08	3,157.97
11		-	(63,377.08)	9,103.65	96,877.06	24,481.92	1,133,413.07
12		-		275.48	3,976.32	740.83	46,520.95
13		-	7,869.56	1,603.34	22,164.00	4,311.78	267,177.28
14		-	1,811.60	43.53	3,087.37	117.06	37,932.28
15		-	953.23	118.30	1,680.00	318.14	20,608.42
16		975.07		333.48	6,465.20	896.82	76,614.70
17		-		5,584.50	56,508.71	15,018.08	661,123.63
18		-		5.36	99.92	14.42	1,169.05
19		10.72		20.41	252.74	54.88	2,967.70
20		-		11,665.25	123,736.18	31,370.68	1,447,651.28
21		-		1,034.22	12,332.91	2,781.27	144,288.84
22		-		883.63	9,994.40	2,376.29	116,929.42
23		-		6.38	147.53	17.15	1,725.99
24		-		27.50	454.63	73.94	5,318.93
25		-		2,121.41	22,899.15	5,704.98	267,908.62
26		-		3,545.03	38,406.30	9,533.44	449,334.50
27		2,443.02		531.35	6,289.75	1,428.92	76,029.91
28							
29	Sub-Total Kenergy Industrials	\$ 3,889.56	\$ (52,742.69)	\$ 37,800.90	\$ 416,982.07	\$ 101,655.74	\$ 4,893,005.37
30							
31		-	-	42.75	2,113.22	114.98	24,723.59
32							
33	TOTAL INDUSTRIALS	\$ 3,889.56	\$ (52,742.69)	\$ 37,843.65	\$ 419,095.29	\$ 101,770.72	\$ 4,917,728.96
34							
35	GRAND TOTAL	\$ 3,889.56	\$ (52,742.69)	\$ 151,355.05	\$ 2,017,920.84	\$ 407,030.47	\$ 23,623,194.89

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**Big Rivers Electric Corporation
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	Expense Mitigation Adjustment (EMA) (m)	MRS Adjustment Fuel Roll-In (n)	MRS - ER Transmission Rural Adjustment (o)	MRS - ER Transmission Industrial Adjustment (p)	Total Adjustments for ER & RER on Power Bill (q) = (o) + (p)	Revenue Net of MRS Adjustments (r) = (l) + (q)
1 Member Billing December 2017						
2						
3 JP RURALS	\$ 557,792.38	\$ (632,908.42)	\$ (84,859.53)		\$ (84,859.53)	\$ 5,043,863.85
4 KENERGY	1,016,887.31	(1,153,828.13)	(154,657.23)		(154,657.23)	9,191,787.72
5 MEADE CO. RURALS	460,385.28	(522,383.82)	(70,003.36)		(70,003.36)	4,160,294.24
6						
7 TOTAL RURALS	\$ 2,035,064.97	\$ (2,309,120.37)	\$ (309,520.12)	\$ -	\$ (309,520.12)	\$ 18,395,945.81
8						
9	\$ 15,713.77	\$ (17,829.89)		\$ (2,129.38)	\$ (2,129.38)	\$ 131,003.45
10	387.19	(439.33)		(45.08)	(45.08)	3,112.89
11	163,212.80	(185,192.12)		(18,958.81)	(18,958.81)	1,114,454.26
12	4,938.89	(5,603.99)		(728.49)	(728.49)	45,792.46
13	28,745.23	(32,616.25)		(4,094.96)	(4,094.96)	263,082.32
14	780.39	(885.48)		(479.45)	(479.45)	37,452.83
15	2,120.91	(2,406.53)		(308.75)	(308.75)	20,299.67
16	5,978.79	(6,783.93)		(1,126.59)	(1,126.59)	75,488.11
17	100,120.53	(113,603.42)		(11,197.51)	(11,197.51)	649,926.12
18	96.14	(109.08)		(17.51)	(17.51)	1,151.54
19	365.85	(415.12)		(47.77)	(47.77)	2,919.93
20	209,137.87	(237,301.77)		(24,234.16)	(24,234.16)	1,423,417.12
21	18,541.82	(21,038.78)		(2,350.46)	(2,350.46)	141,938.38
22	15,841.94	(17,975.33)		(1,927.80)	(1,927.80)	115,001.62
23	114.35	(129.74)		(25.08)	(25.08)	1,700.91
24	492.96	(559.34)		(81.26)	(81.26)	5,237.67
25	38,033.18	(43,154.98)		(4,465.96)	(4,465.96)	263,442.66
26	63,556.28	(72,115.19)		(7,483.70)	(7,483.70)	441,850.80
27	9,526.16	(10,809.01)		(1,200.70)	(1,200.70)	74,829.21
28						
29 Sub-Total Kenergy Industrials	\$ 677,705.05	\$ (768,969.28)		\$ (80,903.42)	\$ (80,903.42)	\$ 4,812,101.95
30						
31	766.51	(869.74)		(334.72)	(334.72)	24,388.87
32						
33 TOTAL INDUSTRIALS	\$ 678,471.56	\$ (769,839.02)	\$ -	\$ (81,238.14)	\$ (81,238.14)	\$ 4,836,490.82
34						
35 GRAND TOTAL	\$ 2,713,536.53	\$ (3,078,959.39)	\$ (309,520.12)	\$ (81,238.14)	\$ (390,758.26)	\$ 23,232,436.63

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**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
January 2018**

Member Billing January 2018	KW Billed (a)	kWh (b)	Demand Revenue (c)	Base Energy Revenue (d)	Total Demand & Energy (e) = (c) + (d)	Net Green Power (f)
1						
2						
3 JP RURALS	146,088	70,848,101	2,016,744.84	\$ 3,188,164.55	\$ 5,204,909.39	\$ 8.00
4 KENERGY	275,806	128,440,926	3,807,501.83	5,779,841.67	9,587,343.50	
5 MEADE CO. RURALS	139,249	59,167,162	1,922,332.45	2,662,522.29	4,584,854.74	-
6						
7 TOTAL RURALS	561,143	258,456,189	\$ 7,746,579.12	\$ 11,630,528.51	\$ 19,377,107.63	\$ 8.00
8						
9	4,906	2,086,955	52,567.79	\$ 79,408.64	\$ 131,976.43	
10	78	45,068	835.77	1,714.84	2,550.61	
11	33,701	16,673,414	361,106.22	634,423.40	995,529.62	
12	1,961	710,566	21,012.12	27,037.04	48,049.16	
13	10,912	4,413,612	116,922.08	167,937.94	284,860.02	
14	2,760	42,220	29,573.40	1,606.47	31,179.87	
15	800	325,612	8,572.00	12,389.54	20,961.54	
16	3,827	895,415	41,006.31	34,070.54	75,076.85	
17	15,000	10,982,375	160,725.00	417,879.37	578,604.37	
18	60	11,285	642.90	429.39	1,072.29	
19	113	57,092	1,210.80	2,172.35	3,383.15	
20	36,806	24,752,907	394,376.29	941,848.11	1,336,224.40	
21	4,552	2,133,440	48,774.68	81,177.39	129,952.07	
22	3,568	1,733,917	38,231.12	65,975.54	104,206.66	
23	100	22,169	1,071.50	843.53	1,915.03	
24	250	63,233	2,678.75	2,406.02	5,084.77	
25	7,159	4,210,990	76,708.69	160,228.17	236,936.86	
26	11,774	7,044,322	126,158.41	268,036.45	394,194.86	
27	2,006	1,101,500	21,494.29	41,912.08	63,406.37	
28						
29 Sub-Total Kenergy Industrials	140,333	77,306,092	\$ 1,503,668.12	\$ 2,941,496.81	\$ 4,445,164.93	
30						
31	1,760	52,552	18,858.40	1,999.60	20,858.00	
32						
33 TOTAL INDUSTRIALS	142,093	77,358,644	\$ 1,522,526.52	\$ 2,943,496.41	\$ 4,466,022.93	\$ -
34						
35 GRAND TOTAL	703,236	335,814,833	\$ 9,269,105.64	\$ 14,574,024.92	\$ 23,843,130.56	\$ 8.00

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
January 2018**

1	Member Billing January 2018	Power Factor Penalty (g)	Billing Adjustment (h)	Fuel Adjustment Clause (FAC) (i)	Environmental Surcharge (ES) (j)	Non-FAC PPA (k)	Revenue (l) = \sum (e) to (k)
2							
3	JP RURALS	\$ -	\$ -	\$ 49,877.06	\$ 464,677.15	\$ 95,644.94	\$ 5,815,116.54
4	KENERGY	-	-	90,422.41	855,558.96	173,395.25	10,706,720.12
5	MEADE CO. RURALS	-	-	41,653.68	408,742.59	79,875.67	5,115,126.68
6							
7	TOTAL RURALS	\$ -	\$ -	\$ 181,953.15	\$ 1,728,978.70	\$ 348,915.86	\$ 21,636,963.34
8							
9		\$ -	\$ -	\$ 1,469.22	\$ 11,834.25	\$ 2,817.39	\$ 148,097.29
10		557.18		31.73	229.56	60.84	3,429.92
11			(49,702.60)	11,738.08	85,118.01	22,509.11	1,065,192.22
12		235.73		500.24	4,299.75	959.26	54,044.14
13			5,589.69	3,107.18	25,527.01	5,958.38	325,042.28
14			94.33	29.72	2,715.46	57.00	34,076.38
15			162.06	229.23	1,878.56	439.58	23,670.97
16		932.21		630.37	6,680.04	1,208.81	84,528.28
17				7,731.59	52,210.06	14,826.21	653,372.23
18				7.94	95.14	15.23	1,190.60
19				40.19	304.01	77.07	3,804.42
20				17,426.05	120,464.73	33,416.42	1,507,531.60
21				1,501.94	11,666.72	2,880.14	146,000.87
22				1,220.68	9,359.50	2,340.79	117,127.63
23				15.61	170.27	29.93	2,130.84
24				44.52	452.88	85.36	5,667.53
25				2,964.54	21,328.81	5,684.84	266,915.05
26				4,959.20	35,491.86	9,509.83	444,155.75
27		2,989.49		775.46	5,703.24	1,487.03	74,361.59
28							
29	Sub-Total Kenergy Industrials	\$ 4,714.61	\$ (43,856.52)	\$ 54,423.49	\$ 395,529.86	\$ 104,363.22	\$ 4,960,339.59
30							
31		-	-	37.00	1,820.86	70.95	22,786.81
32							
33	TOTAL INDUSTRIALS	\$ 4,714.61	\$ (43,856.52)	\$ 54,460.49	\$ 397,350.72	\$ 104,434.17	\$ 4,983,126.40
34							
35	GRAND TOTAL	\$ 4,714.61	\$ (43,856.52)	\$ 236,413.64	\$ 2,126,329.42	\$ 453,350.03	\$ 26,620,089.74

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**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
January 2018**

Member Billing January 2018	Expense Mitigation Adjustment (EMA) (m)	MRS M Adjustment Fuel Roll-In (n)	MRS M - ER Transmission Rural Adjustment (o)	MRS M - ER Transmission Industrial Adjustment (p)	Total Adjustments for ER & RER on Power Bill (q) = (o) + (p)	Revenue Net of MRS Adjustments (r) = (l) + (q)
1						
2						
3	JP RURALS	\$ 637,632.91	\$ (723,500.81)	\$ (86,196.29)	\$ (86,196.29)	\$ 5,728,920.25
4	KENERGY	1,155,968.33	(1,311,638.74)	(158,152.56)	(158,152.56)	10,548,567.56
5	MEADE CO. RURALS	532,504.46	(604,215.06)	(74,953.39)	(74,953.39)	5,040,173.29
6						
7	TOTAL RURALS	\$ 2,326,105.70	\$ (2,639,354.61)	\$ (319,302.24)	\$ -	\$ (319,302.24)
8						
9		\$ 18,782.60	\$ (21,311.98)	\$ (2,433.60)	\$ (2,433.60)	\$ 145,663.69
10		405.61	(460.23)	(48.55)	(48.55)	3,381.37
11		150,060.73	(170,268.90)	(17,993.43)	(17,993.43)	1,047,198.79
12		6,395.09	(7,256.30)	(870.15)	(870.15)	53,173.99
13		39,722.51	(45,071.81)	(5,223.46)	(5,223.46)	319,818.82
14		379.98	(431.15)	(429.81)	(429.81)	33,646.57
15		2,930.51	(3,325.15)	(384.63)	(384.63)	23,286.34
16		8,058.74	(9,143.98)	(1,290.46)	(1,290.46)	83,237.82
17		98,841.38	(112,152.01)	(11,259.29)	(11,259.29)	642,112.94
18		101.57	(115.24)	(17.94)	(17.94)	1,172.66
19		513.83	(583.02)	(63.54)	(63.54)	3,740.88
20		222,776.16	(252,776.69)	(25,805.83)	(25,805.83)	1,481,725.77
21		19,200.96	(21,786.69)	(2,421.54)	(2,421.54)	143,579.33
22		15,605.25	(17,706.76)	(1,949.25)	(1,949.25)	115,178.38
23		199.52	(226.39)	(32.70)	(32.70)	2,098.14
24		569.10	(645.74)	(88.23)	(88.23)	5,579.30
25		37,898.91	(43,002.63)	(4,518.50)	(4,518.50)	262,396.55
26		63,398.90	(71,936.62)	(7,529.85)	(7,529.85)	436,625.90
27		9,913.50	(11,248.52)	(1,201.01)	(1,201.01)	73,160.58
28						
29	Sub-Total Kenergy Industrials	\$ 695,754.85	\$ (789,449.81)	\$ (83,561.77)	\$ (83,561.77)	\$ 4,876,777.82
30						
31		472.97	(536.66)	(295.35)	(295.35)	22,491.46
32						
33	TOTAL INDUSTRIALS	\$ 696,227.82	\$ (789,986.47)	\$ -	\$ (83,857.12)	\$ 4,899,269.28
34						
35	GRAND TOTAL	\$ 3,022,333.52	\$ (3,429,341.08)	\$ (319,302.24)	\$ (83,857.12)	\$ (403,159.36)

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**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
February 2018**

	KW Billed (a)	kWh (b)	Demand Revenue (c)	Base Energy Revenue (d)	Total Demand & Energy (e) = (c) + (d)	Net Green Power (f)
1 Member Billing February 2018						
2						
3 JP RURALS	119,756	49,933,706	1,653,231.58	\$ 2,247,016.77	\$ 3,900,248.35	\$ 8.00
4 KENERGY	225,564	90,348,345	3,113,911.02	4,065,675.53	7,179,586.55	
5 MEADE CO. RURALS	107,256	39,188,379	1,480,669.08	1,763,477.06	3,244,146.14	-
6						
7 TOTAL RURALS	452,576	179,470,430	\$ 6,247,811.68	\$ 8,076,169.36	\$ 14,323,981.04	\$ 8.00
8						
9	5,118	1,957,561	54,839.37	\$ 74,485.20	\$ 129,324.57	
10	68	37,777	728.62	1,437.41	2,166.03	
11	36,274	17,871,819	388,675.91	680,022.71	1,068,698.62	
12	1,976	641,907	21,172.84	24,424.56	45,597.40	
13	10,924	4,037,806	117,050.66	153,638.52	270,689.18	
14	2,760	37,408	29,573.40	1,423.37	30,996.77	
15	800	261,715	8,572.00	9,958.26	18,530.26	
16	3,771	721,958	40,406.27	27,470.50	67,876.77	
17	15,000	9,935,938	160,725.00	378,062.44	538,787.44	
18	60	10,347	642.90	393.70	1,036.60	
19	107	40,962	1,146.51	1,558.60	2,705.11	
20	36,763	21,702,005	393,915.55	825,761.29	1,219,676.84	
21	4,697	1,953,050	50,328.36	74,313.55	124,641.91	
22	3,462	1,715,782	37,095.33	65,285.51	102,380.84	
23	100	30,750	1,071.50	1,170.04	2,241.54	
24	250	65,028	2,678.75	2,474.32	5,153.07	
25	7,046	3,718,152	75,497.89	141,475.68	216,973.57	
26	12,247	6,389,555	131,226.61	243,122.57	374,349.18	
27	2,200	913,792	23,573.00	34,769.79	58,342.79	
28						
29 Sub-Total Kenergy Industrials	143,623	72,043,312	\$ 1,538,920.47	\$ 2,741,248.02	\$ 4,280,168.49	
30						
31	1,793	97,349	19,212.00	3,704.13	22,916.13	
32						
33 TOTAL INDUSTRIALS	145,416	72,140,661	\$ 1,558,132.47	\$ 2,744,952.15	\$ 4,303,084.62	\$ -
34						
35 GRAND TOTAL	597,992	251,611,091	\$ 7,805,944.15	\$ 10,821,121.51	\$ 18,627,065.66	\$ 8.00

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**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
February 2018**

	Power Factor Penalty (g)	Billing Adjustment (h)	Fuel Adjustment Clause (FAC) (i)	Environmental Surcharge (ES) (j)	Non-FAC PPA (k)	Revenue (l) = \sum (e) to (k)
1 Member Billing February 2018						
2						
3 JP RURALS	\$ -	\$ -	\$ 99,567.81	\$ 362,494.38	\$ 67,410.50	\$ 4,429,729.04
4 KENERGY	-	-	180,154.60	666,812.69	121,970.27	8,148,524.11
5 MEADE CO. RURALS	-	-	78,141.63	300,816.32	52,904.31	3,676,008.40
6						
7 TOTAL RURALS	\$ -	\$ -	\$ 357,864.04	\$ 1,330,123.39	\$ 242,285.08	\$ 16,254,261.55
8						
9	\$ -	\$ -	\$ 3,903.38	\$ 12,109.57	\$ 2,642.71	\$ 147,980.23
10	557.18		75.33	204.31	51.00	3,053.85
11		(74,515.33)	35,636.41	93,933.72	24,126.96	1,147,880.38
12	235.73		1,279.96	4,255.21	866.57	52,234.87
13			8,051.39	25,328.77	5,451.04	309,520.38
14			74.59	2,773.76	50.50	33,895.62
15			521.86	1,729.52	353.32	21,134.96
16	921.49		1,439.58	6,264.73	974.64	77,477.21
17			19,812.26	50,981.07	13,413.52	622,994.29
18			20.63	95.47	13.97	1,166.67
19			81.68	253.30	55.30	3,095.39
20			43,273.80	115,172.53	29,297.71	1,407,420.88
21			3,894.38	11,690.88	2,636.62	142,863.79
22			3,421.27	9,636.13	2,316.31	117,754.55
23			61.32	208.94	41.51	2,553.31
24			129.67	478.65	87.79	5,849.18
25			7,414.00	20,446.06	5,019.51	249,853.14
26			12,740.77	35,268.45	8,625.90	430,984.30
27	2,946.63		1,822.10	5,472.18	1,233.62	69,817.32
28						
29 Sub-Total Kenergy Industrials	\$ 4,661.03	\$ (74,515.33)	\$ 143,654.38	\$ 396,303.25	\$ 97,258.50	\$ 4,847,530.32
30						
31	-	-	194.11	2,071.43	131.42	25,313.09
32						
33 TOTAL INDUSTRIALS	\$ 4,661.03	\$ (74,515.33)	\$ 143,848.49	\$ 398,374.68	\$ 97,389.92	\$ 4,872,843.41
34						
35 GRAND TOTAL	\$ 4,661.03	\$ (74,515.33)	\$ 501,712.53	\$ 1,728,498.07	\$ 339,675.00	\$ 21,127,104.96

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Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
February 2018

1	2	Expense Mitigation Adjustment (EMA) (m)	MRS Adjustment Fuel Roll-In (n)	MRS Transmission Rural Adjustment (o)	MRS Transmission Industrial Adjustment (p)	Total Adjustments for ER & RER on Power Bill (q) = (o) + (p)	Revenue Net of MRS Adjustments (r) = (l) + (q)
3	Member Billing February 2018						
4	JP RURALS	\$ 449,403.35	\$ (509,923.01)	\$ (87,572.76)		\$ (87,572.76)	\$ 4,342,156.28
5	KENERGY	813,135.11	(922,637.30)	(160,282.40)		(160,282.40)	7,988,241.71
6	MEADE CO. RURALS	352,695.41	(400,191.73)	(71,463.97)		(71,463.97)	3,604,544.43
7	TOTAL RURALS	\$ 1,615,233.87	\$ (1,832,752.04)	\$ (319,319.13)	\$ -	\$ (319,319.13)	\$ 15,934,942.42
8							
9		\$ 17,618.05	\$ (19,990.61)		\$ (2,450.16)	\$ (2,450.16)	\$ 145,530.07
10		339.99	(385.78)		(43.36)	(43.36)	3,010.49
11		160,846.37	(182,507.02)		(20,153.84)	(20,153.84)	1,127,726.54
12		5,777.16	(6,555.15)		(841.32)	(841.32)	51,393.55
13		36,340.25	(41,234.07)		(5,100.60)	(5,100.60)	304,419.78
14		336.67	(382.01)		(385.62)	(385.62)	33,510.00
15		2,355.44	(2,672.63)		(342.30)	(342.30)	20,792.66
16		6,497.62	(7,372.64)		(1,143.33)	(1,143.33)	76,333.88
17		89,423.44	(101,465.80)		(11,039.14)	(11,039.14)	611,955.15
18		93.12	(105.66)		(17.14)	(17.14)	1,149.53
19		368.66	(418.30)		(51.25)	(51.25)	3,044.14
20		195,318.05	(221,620.88)		(24,620.68)	(24,620.68)	1,382,800.20
21		17,577.45	(19,944.55)		(2,392.43)	(2,392.43)	140,471.36
22		15,442.04	(17,521.57)		(2,017.23)	(2,017.23)	115,737.32
23		276.75	(314.02)		(40.98)	(40.98)	2,512.33
24		585.25	(664.07)		(91.57)	(91.57)	5,757.61
25		33,463.37	(37,969.77)		(4,313.33)	(4,313.33)	245,539.81
26		57,506.00	(65,250.14)		(7,430.00)	(7,430.00)	423,554.30
27		8,224.13	(9,331.64)		(1,119.66)	(1,119.66)	68,697.66
28							
29	Sub-Total Kenergy Industrials	\$ 648,389.81	\$ (735,706.31)		\$ (83,593.94)	\$ (83,593.94)	\$ 4,763,936.38
30							
31		876.14	(994.13)		(317.64)	(317.64)	24,995.45
32							
33	TOTAL INDUSTRIALS	\$ 649,265.95	\$ (736,700.44)	\$ -	\$ (83,911.58)	\$ (83,911.58)	\$ 4,788,931.83
34							
35	GRAND TOTAL	\$ 2,264,499.82	\$ (2,569,452.48)	\$ (319,319.13)	\$ (83,911.58)	\$ (403,230.71)	\$ 20,723,874.25

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**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
March 2018**

	KW Billed (a)	kWh (b)	Demand Revenue (c)	Base Energy Revenue (d)	Total Demand & Energy (e) = (c) + (d)	Net Green Power (f)
1 Member Billing March 2018						
2						
3 JP RURALS	96,195	48,592,022	1,327,971.98	\$ 2,186,640.99	\$ 3,514,612.97	\$ 8.00
4 KENERGY	186,156	92,401,591	2,569,883.58	4,158,071.60	6,727,955.18	
5 MEADE CO. RURALS	88,742	40,795,221	1,225,083.31	1,835,784.95	3,060,868.26	-
6						
7 TOTAL RURALS	371,093	181,788,834	\$ 5,122,938.87	\$ 8,180,497.54	\$ 13,303,436.41	\$ 8.00
8						
9	5,043	2,168,760	54,035.75	\$ 82,521.32	\$ 136,557.07	
10	70	37,730	750.05	1,435.63	2,185.68	
11	37,366	20,140,624	400,376.69	766,350.74	1,166,727.43	
12	1,858	603,689	19,908.47	22,970.37	42,878.84	
13	10,282	3,453,295	110,171.63	131,397.87	241,569.50	
14	2,760	36,905	29,573.40	1,404.24	30,977.64	
15	800	133,552	8,572.00	5,081.65	13,653.65	
16	3,865	1,382,180	41,413.48	52,591.95	94,005.43	
17	15,000	11,080,541	160,725.00	421,614.59	582,339.59	
18	60	11,070	642.90	421.21	1,064.11	
19	403	96,169	4,318.15	3,659.23	7,977.38	
20	100	32,545	1,071.50	1,238.34	2,309.84	
21	36,850	24,142,726	394,847.75	918,630.72	1,313,478.47	
22	5,059	2,289,290	54,207.19	87,107.48	141,314.67	
23	3,432	1,685,671	36,773.88	64,139.78	100,913.66	
24	100	47,790	1,071.50	1,818.41	2,889.91	
25	250	66,260	2,678.75	2,521.19	5,199.94	
26	7,318	4,063,067	78,412.37	154,599.70	233,012.07	
27	12,494	6,711,361	133,873.21	255,367.29	389,240.50	
28	2,338	1,141,264	25,051.67	43,425.10	68,476.77	
29						
30 Sub-Total Kenergy Industrials	145,448	79,324,489	\$ 1,558,475.34	\$ 3,018,296.81	\$ 4,576,772.15	
31						
32	1,771	287,818	18,976.27	10,951.47	29,927.74	
33						
34 TOTAL INDUSTRIALS	147,219	79,612,307	\$ 1,577,451.61	\$ 3,029,248.28	\$ 4,606,699.89	\$ -
35						
36 GRAND TOTAL	518,312	261,401,141	\$ 6,700,390.48	\$ 11,209,745.82	\$ 17,910,136.30	\$ 8.00

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**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
March 2018**

1	Member Billing March 2018	Power Factor Penalty (g)	Billing Adjustment (h)	Fuel Adjustment Clause (FAC) (i)	Environmental Surcharge (ES) (j)	Non-FAC PPA (k)	Revenue (l) = \sum (e) to (k)
2							
3	JP RURALS	\$ -	\$ -	\$ 186,350.40	\$ 242,231.37	\$ 65,599.23	\$ 4,008,801.97
4	KENERGY	-	-	354,360.10	463,493.00	124,742.15	7,670,550.43
5	MEADE CO. RURALS	-	-	156,449.67	210,450.74	55,073.55	3,482,842.22
6							
7	TOTAL RURALS	\$ -	\$ -	\$ 697,160.17	\$ 916,175.11	\$ 245,414.93	\$ 15,162,194.62
8							
9		\$ -	\$ -	\$ 8,317.19	\$ 9,505.30	\$ 2,927.83	\$ 157,307.39
10		578.61		144.69	153.14	50.94	3,113.06
11			(85,046.03)	77,239.29	76,279.94	27,189.84	1,262,390.47
12		225.02		2,315.15	2,958.88	814.98	49,192.87
13			26,321.01	13,243.39	16,687.08	4,661.95	302,482.93
14			219.74	141.53	2,004.51	49.82	33,393.24
15			1,698.87	512.17	922.61	180.30	16,967.60
16				5,300.66	6,506.47	1,865.94	107,678.50
17				42,493.87	41,145.67	14,958.73	680,937.86
18				42.45	72.12	14.94	1,193.62
19		1,660.83		368.81	545.10	129.83	10,681.95
20		21.43		124.81	159.40	43.94	2,659.42
21				92,587.35	92,521.55	32,592.68	1,531,180.05
22				8,779.43	9,851.46	3,090.54	163,036.10
23				6,464.55	7,051.95	2,275.66	116,705.82
24				183.27	201.79	64.52	3,339.49
25				254.11	356.51	89.45	5,900.01
26				15,581.86	16,340.08	5,485.14	270,419.15
27				25,738.07	27,270.36	9,060.34	451,309.27
28		3,128.78		4,376.75	4,784.37	1,540.71	82,307.38
29							
30	Sub-Total Kenergy Industrials	\$ 5,614.67	\$ (56,806.41)	\$ 304,209.40	\$ 315,318.29	\$ 107,088.08	\$ 5,252,196.18
31							
32		-	-	1,103.78	2,020.66	388.55	33,440.73
33							
34	TOTAL INDUSTRIALS	\$ 5,614.67	\$ (56,806.41)	\$ 305,313.18	\$ 317,338.95	\$ 107,476.63	\$ 5,285,636.91
35							
36	GRAND TOTAL	\$ 5,614.67	\$ (56,806.41)	\$ 1,002,473.35	\$ 1,233,514.06	\$ 352,891.56	\$ 20,447,831.53

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Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
March 2018

Member Billing March 2018	Expense Mitigation Adjustment (EMA) (m)	MRSM Adjustment Fuel Roll-In (n)	MRSM - ER Transmission Rural Adjustment (o)	MRSM - ER Transmission Industrial Adjustment (p)	Total Adjustments for ER & RER on Power Bill (q) = (o) + (p)	Revenue Net of MRSM Adjustments (r) = (l) + (q)
1						
2						
3	JP RURALS	\$ 437,328.20	\$ (496,221.72)	\$ (74,685.71)	\$ (74,685.71)	\$ 3,934,116.26
4	KENERGY	831,614.32	(943,605.04)	(142,460.66)	(142,460.66)	7,528,089.77
5	MEADE CO. RURALS	367,156.99	(416,600.79)	(63,787.77)	(63,787.77)	3,419,054.45
6						
7	TOTAL RURALS	\$ 1,636,099.51	\$ (1,856,427.55)	\$ (280,934.14)	\$ -	\$ (280,934.14)
8						
9		\$ 19,518.84	\$ (22,147.38)	\$ (2,096.76)	\$ (2,096.76)	\$ 155,210.63
10		339.57	(385.30)	(35.22)	(35.22)	3,077.84
11		181,265.62	(205,676.05)	(18,242.39)	(18,242.39)	1,244,148.08
12		5,433.20	(6,164.87)	(615.74)	(615.74)	48,577.13
13		31,079.66	(35,265.05)	(3,497.76)	(3,497.76)	298,985.17
14		332.15	(376.87)	(224.60)	(224.60)	33,168.64
15		1,201.97	(1,363.83)	(163.69)	(163.69)	16,803.91
16		12,439.62	(14,114.82)	(1,382.29)	(1,382.29)	106,296.21
17		99,724.87	(113,154.48)	(9,952.10)	(9,952.10)	670,985.76
18		99.63	(113.05)	(13.12)	(13.12)	1,180.50
19		865.52	(982.08)	(105.64)	(105.64)	10,576.31
20		292.91	(332.35)	(33.18)	(33.18)	2,626.24
21		217,284.53	(246,545.52)	(21,978.46)	(21,978.46)	1,509,201.59
22		20,603.61	(23,378.23)	(2,194.62)	(2,194.62)	160,841.48
23		15,171.04	(17,214.07)	(1,595.26)	(1,595.26)	115,110.56
24		430.11	(488.03)	(45.41)	(45.41)	3,294.08
25		596.34	(676.65)	(70.83)	(70.83)	5,829.18
26		36,567.60	(41,492.04)	(3,777.71)	(3,777.71)	266,641.44
27		60,402.25	(68,536.42)	(6,268.70)	(6,268.70)	445,040.57
28		10,271.38	(11,654.59)	(1,081.07)	(1,081.07)	81,226.31
29						
30	Sub-Total Kenergy Industrials	\$ 713,920.42	\$ (810,061.68)	\$ (73,374.55)	\$ (73,374.55)	\$ 5,178,821.63
31						
32		2,590.36	(2,939.20)	(356.11)	(356.11)	33,084.62
33						
34	TOTAL INDUSTRIALS	\$ 716,510.78	\$ (813,000.88)	\$ -	\$ (73,730.66)	\$ 5,211,906.25
35						
36	GRAND TOTAL	\$ 2,352,610.29	\$ (2,669,428.43)	\$ (280,934.14)	\$ (73,730.66)	\$ (354,664.80)

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Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
April 2018

1	2	KW Billed	kWh	Demand	Base Energy	Total	Net Green
3	4	(a)	(b)	Revenue	Revenue	Demand &	Power
5	6			(c)	(d)	Energy	(f)
7	8					(e) = (c) + (d)	
9	Member Billing April 2018						
10	JP RURALS	86,720	43,164,410	1,197,169.60	\$ 1,942,398.45	\$ 3,139,568.05	\$ 8.00
11	KENERGY	166,050	78,593,343	2,292,320.25	3,536,700.44	5,829,020.69	
12	MEADE CO. RURALS	80,258	32,561,898	1,107,961.69	1,465,285.41	2,573,247.10	-
13	TOTAL RURALS	333,028	154,319,651	\$ 4,597,451.54	\$ 6,944,384.30	\$ 11,541,835.84	\$ 8.00
14	[REDACTED]	5,035	2,082,560	53,950.03	\$ 79,241.41	\$ 133,191.44	
15	[REDACTED]	68	36,470	728.62	1,387.68	2,116.30	
16	[REDACTED]	38,546	19,265,135	413,020.39	733,038.39	1,146,058.78	
17	[REDACTED]	1,715	600,464	18,376.23	22,847.66	41,223.89	
18	[REDACTED]	9,160	2,992,268	98,149.40	113,855.80	212,005.20	
19	[REDACTED]	2,760	31,828	29,573.40	1,211.06	30,784.46	
20	[REDACTED]	800	49,815	8,572.00	1,895.46	10,467.46	
21	[REDACTED]	3,654	1,176,835	39,152.61	44,778.57	83,931.18	
22	[REDACTED]	15,000	10,695,911	160,725.00	406,979.41	567,704.41	
23	[REDACTED]	60	10,330	642.90	393.06	1,035.96	
24	[REDACTED]	523	213,303	5,603.95	8,116.18	13,720.13	
25	[REDACTED]	100	28,125	1,071.50	1,070.16	2,141.66	
26	[REDACTED]	36,677	25,387,800	392,994.06	966,005.79	1,358,999.85	
27	[REDACTED]	4,905	2,085,321	52,557.08	79,346.46	131,903.54	
28	[REDACTED]	3,447	1,629,431	36,934.61	61,999.85	98,934.46	
29	[REDACTED]	110	59,070	1,178.65	2,247.61	3,426.26	
30	[REDACTED]	250	32,040	2,678.75	1,219.12	3,897.87	
31	[REDACTED]	7,137	4,386,816	76,472.96	166,918.35	243,391.31	
32	[REDACTED]	12,247	6,852,136	131,226.61	260,723.77	391,950.38	
33	[REDACTED]	2,277	984,449	24,398.06	37,458.28	61,856.34	
34	Sub-Total Kenergy Industrials	144,471	78,600,107	\$ 1,548,006.81	\$ 2,990,734.07	\$ 4,538,740.88	
35	[REDACTED]	1,760	145,569	18,858.40	5,538.90	24,397.30	
36	TOTAL INDUSTRIALS	146,231	78,745,676	\$ 1,566,865.21	\$ 2,996,272.97	\$ 4,563,138.18	\$ -
37	GRAND TOTAL	479,259	233,065,327	\$ 6,164,316.75	\$ 9,940,657.27	\$ 16,104,974.02	\$ 8.00

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
April 2018**

1	2	Power Factor Penalty (g)	Billing Adjustment (h)	Fuel Adjustment Clause (FAC) (i)	Environmental Surcharge (ES) (j)	Non-FAC PPA (k)	Revenue (l) = \sum (e) to (k)
3	Member Billing April 2018						
4	JP RURALS	\$ -	\$ -	\$ 66,171.04	\$ 278,445.89	\$ 58,271.95	\$ 3,542,464.93
5	KENERGY	-	-	120,483.59	516,590.91	106,101.01	6,572,196.20
6	MEADE CO. RURALS	-	-	49,917.39	227,526.64	43,958.56	2,894,649.69
7	TOTAL RURALS	\$ -	\$ -	\$ 236,572.02	\$ 1,022,563.44	\$ 208,331.52	\$ 13,009,310.82
8							
9		\$ -	\$ -	\$ 3,192.56	\$ 11,874.47	\$ 2,811.46	\$ 151,069.93
10		385.74		55.91	189.51	49.23	2,796.69
11			(96,425.36)	29,533.45	94,280.13	26,007.93	1,199,454.93
12		417.89		920.51	3,664.40	810.63	47,037.32
13			8,243.61	4,587.15	18,821.64	4,039.56	247,697.16
14			78.68	48.79	2,633.99	42.97	33,588.89
15			191.90	76.37	905.21	67.25	11,708.19
16				1,804.09	7,449.43	1,588.73	94,773.43
17				16,396.83	51,060.25	14,439.48	649,600.97
18				15.84	90.92	13.95	1,156.67
19		2,153.72		326.99	1,222.90	287.96	17,711.70
20				43.12	189.62	37.97	2,412.37
21				38,919.50	122,177.35	34,273.53	1,554,370.23
22				3,196.80	11,765.28	2,815.18	149,680.80
23				2,497.92	8,840.64	2,199.73	112,472.75
24				90.55	306.81	79.74	3,903.36
25				49.12	340.40	43.25	4,330.64
26				6,724.99	21,842.10	5,922.20	277,880.60
27				10,504.32	35,121.69	9,250.38	446,826.77
28		3,396.66		1,509.16	5,518.95	1,329.01	73,610.12
29							
30	Sub-Total Kenergy Industrials	\$ 6,354.01	\$ (87,911.17)	\$ 120,493.97	\$ 398,295.69	\$ 106,110.14	\$ 5,082,083.52
31							
32		-	-	223.16	2,117.08	196.52	26,934.06
33							
34	TOTAL INDUSTRIALS	\$ 6,354.01	\$ (87,911.17)	\$ 120,717.13	\$ 400,412.77	\$ 106,306.66	\$ 5,109,017.58
35							
36	GRAND TOTAL	\$ 6,354.01	\$ (87,911.17)	\$ 357,289.15	\$ 1,422,976.21	\$ 314,638.18	\$ 18,118,328.40

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Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
April 2018

1	2	Expense Mitigation Adjustment (EMA) (m)	MRSM Adjustment Fuel Roll-In (n)	MRSM - ER Transmission Rural Adjustment (o)	MRSM - ER Transmission Industrial Adjustment (p)	Total Adjustments for ER & RER on Power Bill (q) = (o) + (p)	Revenue Net of MRSM Adjustments (r) = (l) + (q)
3	Member Billing April 2018						
4	JP RURALS	\$ 388,479.69	\$ (440,794.95)	\$ (88,191.73)		\$ (88,191.73)	\$ 3,454,273.20
5	KENERGY	707,340.09	(802,595.22)	(162,711.47)		(162,711.47)	6,409,484.73
6	MEADE CO. RURALS	293,057.08	(332,522.10)	(70,411.91)		(70,411.91)	2,824,237.78
7	TOTAL RURALS	\$ 1,388,876.86	\$ (1,575,912.27)	\$ (321,315.11)	\$ -	\$ (321,315.11)	\$ 12,687,995.71
8							
9		\$ 18,743.04	\$ (21,267.10)		\$ (2,399.09)	\$ (2,399.09)	\$ 148,670.84
10		328.23	(372.43)		(39.49)	(39.49)	2,757.20
11		173,386.22	(196,735.56)		(20,367.81)	(20,367.81)	1,179,087.12
12		5,404.18	(6,131.94)		(724.54)	(724.54)	46,312.78
13		26,930.41	(30,557.04)		(3,687.11)	(3,687.11)	244,010.05
14		286.45	(325.03)		(371.14)	(371.14)	33,217.75
15		448.34	(508.71)		(142.10)	(142.10)	11,566.09
16		10,591.52	(12,017.84)		(1,456.53)	(1,456.53)	93,316.90
17		96,263.20	(109,226.64)		(10,967.79)	(10,967.79)	638,633.18
18		92.97	(105.49)		(16.26)	(16.26)	1,140.41
19		1,919.73	(2,178.25)		(246.63)	(246.63)	17,465.07
20		253.13	(287.21)		(36.38)	(36.38)	2,375.99
21		228,490.20	(259,260.21)		(26,166.89)	(26,166.89)	1,528,203.34
22		18,767.89	(21,295.30)		(2,385.23)	(2,385.23)	147,295.57
23		14,664.88	(16,639.75)		(1,815.70)	(1,815.70)	110,657.05
24		531.63	(603.22)		(63.95)	(63.95)	3,839.41
25		288.36	(327.19)		(58.41)	(58.41)	4,272.23
26		39,481.34	(44,798.16)		(4,621.11)	(4,621.11)	273,259.49
27		61,669.22	(69,974.01)		(7,355.11)	(7,355.11)	439,471.66
28		8,860.04	(10,053.19)		(1,121.21)	(1,121.21)	72,488.91
29							
30	Sub-Total Kenergy Industrials	\$ 707,400.98	\$ (802,664.27)		\$ (84,042.48)	\$ (84,042.48)	\$ 4,998,041.04
31							
32		1,310.12	(1,486.55)		(343.22)	(343.22)	26,590.84
33							
34	TOTAL INDUSTRIALS	\$ 708,711.10	\$ (804,150.82)	\$ -	\$ (84,385.70)	\$ (84,385.70)	\$ 5,024,631.88
35							
36	GRAND TOTAL	\$ 2,097,587.96	\$ (2,380,063.09)	\$ (321,315.11)	\$ (84,385.70)	\$ (405,700.81)	\$ 17,712,627.59

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**Big Rivers Electric Corporation
Monthly Billing Summary
Other Sales
November 2017**

1	November 2017 - Other Sales	KWH	REVENUE	MILLS/KWH
2	<hr/>			
3	SPECIAL SALES TO RUS BORROWERS -			
4	KENERGY-DOMTAR COGEN	6,037	\$ 182,197.38	30.18
5	HOOSIER ENERGY RURAL ELECTRIC COOP - CAPACITY SALES		\$ 370,000.00	
6	WABASH VALLEY POWER ASSOC., INC - CAPACITY SALES		\$ 1,750.00	
7	SOUTHERN ILLINOIS POWER COOP - CAPACITY SALES		\$ 1,300.00	
8	<hr/>			
9	TOTAL SPECIAL SALES TO RUS BORROWERS	6,037	\$ 555,247.38	91.97
10	<hr/>			
11	TO OTHER THAN RUS BORROWERS -			
12	ADM INVESTOR SERVICES		\$ (248,726.00)	
13	DTE ENERGY TRADING	18,000	\$ 556,200.00	30.90
14	DTE ENERGY TRADING - CAPACITY SALES		\$ 250,000.00	
15	EDF TRADING NORTH AMERICA	69,600	\$ 2,192,160.00	31.50
16	HENDERSON MUNICIPAL POWER & LIGHT	34,934	\$ 958,420.70	27.44
17	MISO	25,993	\$ 750,283.69	28.87
18	MISO-CAPACITY SALES		\$ (306.00)	
19	MORGAN STANLEY CAPITAL GROUP	126,000	\$ 3,823,200.00	30.34
20	NEXTERA ENERGY POWER MARKETING	88,800	\$ 2,778,600.00	31.29
21	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		\$ 275,000.00	
22	SHELL ENERGY NORTH AMERICA (US) LP - CAPACITY SALES		\$ 125,000.00	
23	CITY OF HANNIBAL, MO - CAPACITY SALES		\$ 85,500.00	
24	CITY OF KAHOKA, MO - CAPACITY SALES		\$ 14,250.00	
25	CITY OF CALIFORNIA, MO - CAPACITY SALES		\$ 29,500.00	
26	CITY OF CENTRALIA, MO - CAPACITY SALES		\$ 24,250.00	
27	CITY OF MARCELINE, MO - CAPACITY SALES		\$ 7,750.00	
28	<hr/>			
29	TOTAL TO OTHER THAN RUS BORROWERS	363,327	\$ 11,621,082.39	31.99
30	<hr/>			
31	TOTAL	<u>369,364</u>	<u>\$ 12,176,329.77</u>	<u>32.97</u>

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**Big Rivers Electric Corporation
Monthly Billing Summary
Other Sales
December 2017**

1	December 2017 - Other Sales	KWH	REVENUE	MILLS/KWH
2	<hr/>			
3	SPECIAL SALES TO RUS BORROWERS -			
4	KENERGY-DOMTAR COGEN	8,418	\$ 278,168.14	33.04
5	HOOSIER ENERGY RURAL ELECTRIC COOP - CAPACITY SALES		\$ 370,000.00	
6	WABASH VALLEY POWER ASSOCIATION - CAPACITY SALES		\$ 1,750.00	
7	SOUTHERN ILLINOIS POWER COOP. - CAPACITY SALES		\$ 1,300.00	
8	<hr/>			
9	TOTAL SPECIAL SALES TO RUS BORROWERS	8,418	\$ 651,218.14	77.36
10	<hr/>			
11	TO OTHER THAN RUS BORROWERS -			
12	ADM INVESTOR SERVICES		\$ (302,842.00)	
13	DTE ENERGY TRADING	18,600	\$ 574,740.00	30.90
14	DTE ENERGY TRADING - CAPACITY SALES		\$ 250,000.00	
15	EDF TRADING NORTH AMERICA	69,200	\$ 2,175,200.00	31.43
16	HENDERSON MUNICIPAL POWER & LIGHT	50,411	\$ 1,442,355.90	28.61
17	MISO	17,310	\$ 653,402.33	37.75
18	MISO-CAPACITY SALES		\$ (316.20)	
19	MORGAN STANLEY CAPITAL GROUP	130,200	\$ 3,950,640.00	30.34
20	NEXTERA ENERGY POWER MARKETING	90,400	\$ 2,812,400.00	31.11
21	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		\$ 275,000.00	
22	SHELL ENERGY NORTH AMERICA (US) LP - CAPACITY SALES		\$ 125,000.00	
23	CITY OF HANNIBAL, MO - CAPACITY SALES		\$ 85,500.00	
24	CITY OF KAHOKA, MO - CAPACITY SALES		\$ 14,250.00	
25	CITY OF CALIFORNIA, MO - CAPACITY SALES		\$ 29,500.00	
26	CITY OF CENTRALIA, MO - CAPACITY SALES		\$ 24,250.00	
27	CITY OF MARCELINE, MO - CAPACITY SALES		\$ 7,750.00	
28	<hr/>			
29	TOTAL TO OTHER THAN RUS BORROWERS	376,121	\$ 12,116,830.03	32.22
30	<hr/>			
31	TOTAL	<u>384,539</u>	<u>\$ 12,768,048.17</u>	<u>33.20</u>

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**Big Rivers Electric Corporation
Monthly Billing Summary
Other Sales
January 2018**

1	January 2018 - Other Sales	KWH	REVENUE	MILLS/KWH
2				
3	SPECIAL SALES ENERGY -			
4	KENERGY-DOMTAR COGEN	15,203	\$ 665,790.43	43.79
5	SOUTHERN ILLINOIS POWER COOPERATIVE	3,780	\$ 99,602.36	26.35
6	ADM INVESTOR SERVICES		\$ (377,806.00)	
7	HENDERSON MUNICIPAL POWER & LIGHT	9,825	\$ 1,164,497.70	118.52
8	MISO	269,451	\$ 9,446,404.10	35.06
9	NORTHEAST POWER		\$ (5,369.32)	
10				
11	TOTAL SPECIAL SALES ENERGY	298,259	\$ 10,993,119.27	36.86
12				
13	SPECIAL SALES BILATERAL -			
14	BP ENERGY		\$ 480,000.00	
15	DTE ENERGY TRADING		\$ 585,900.00	
16	EDF TRADING NORTH AMERICA		\$ 1,203,840.00	
17	MORGAN STANLEY CAPITAL GROUP		\$ 1,101,380.00	
18	NEXTERA ENERGY POWER MARKETING		\$ 4,205,380.00	
19	MISO - CONTRA REVENUE		\$ (7,203,257.18)	
20	AEP ENERGY PARTNERS - CONTRA REVENUE		\$ (636,240.00)	
21	EDF TRADING NORTH AMERCA - CONTRA REVENUE		\$ (1,908,720.00)	
22				
23	TOTAL SPECIAL SALES BILATERAL		\$ (2,171,717.18)	
24				

**Big Rivers Electric Corporation
 Monthly Billing Summary
 Other Sales
 January 2018**

1	January 2018 - Other Sales	KWH	REVENUE	MILLS/KWH
2	<hr/>			
3	SPECIAL SALES CAPACITY -			
4	HOOSIER ENERGY RURAL ELECTRIC COOP-CAPACITY SALES		\$ 370,000.00	
5	WABASH VALLEY POWER ASSOC., INC-CAPACITY SALES		\$ 1,750.00	
6	SOUTHERN ILLINOIS POWER COOPERATIVE-CAPACITY SALES		\$ 1,300.00	
7	BP ENERGY		\$ 112,896.00	
8	CITY OF HANNIBAL, MO-CAPACITY SALES		\$ 85,500.00	
9	CITY OF KAHOKA, MO-CAPACITY SALES		\$ 14,250.00	
10	CITY OF CALIFORNIA, MO-CAPACITY SALES		\$ 29,500.00	
11	CITY OF CENTRALIA, MO-CAPACITY SALES		\$ 24,250.00	
12	CITY OF MARCELINE, MO-CAPACITY SALES		\$ 7,750.00	
13	DTE ENERGY TRADING-CAPACITY SALES		\$ 250,000.00	
14	MISO-CAPACITY SALES		\$ (316.20)	
15	NEXTERA ENERGY POWER MARKETING-CAPACITY SALES		\$ 275,000.00	
16	SHELL ENERGY NORTH AMERICA (US) LP-CAPACITY SALES		\$ 125,000.00	
17		<hr/>	<hr/>	<hr/>
18	TOTAL SPECIAL SALES CAPACITY		\$ 1,296,879.80	
19		<hr/>	<hr/>	<hr/>
20	TOTAL SALES FOR RESALE	<u>298,259</u>	<u>\$ 10,118,281.89</u>	<u>33.92</u>

**Big Rivers Electric Corporation
Monthly Billing Summary
Other Sales
February 2018**

1	February 2018 - Other Sales	KWH	REVENUE	MILLS/KWH
2	<hr/>			
3	SPECIAL SALES ENERGY			
4	KENERGY-DOMTAR COGEN	9,922	\$ 137,571.85	13.87
5	ADM INVESTOR SERVICES		\$ 185,682.00	
6	HENDERSON MUNICIPAL POWER & LIGHT	37,691	\$ 1,071,636.42	28.43
7	MISO	144,913	\$ 3,742,455.31	25.83
8	NORTHEAST POWER		\$ 302,187.37	
9	<hr/>			
10	TOTAL SPECIAL SALES ENERGY	192,526	\$ 5,439,532.95	28.25
11	<hr/>			
12	SPECIAL SALES BILATERAL			
13	DTE ENERGY TRADING		\$ 529,200.00	
14	EDF TRADING NORTH AMERICA		\$ 1,094,400.00	
15	MORGAN STANLEY CAPITAL GROUP		\$ 992,080.00	
16	NEXTERA ENERGY POWER MARKETING		\$ 3,803,600.00	
17	MISO - CONTRA REVENUE		\$ (3,830,836.86)	
18	AEP ENERGY PARTNERS - CONTRA REVENUE		\$ (578,400.00)	
19	EDF TRADING NORTH AMERICA - CONTRA REVENUE		\$ (1,735,200.00)	
20	<hr/>			
21	TOTAL SPECIAL SALES BILATERAL		\$ 274,843.14	
22	<hr/>			

**Big Rivers Electric Corporation
 Monthly Billing Summary
 Other Sales
 February 2018**

1	February 2018 - Other Sales	KWH	REVENUE	MILLS/KWH
2	<hr/>			
3	SPECIAL SALES CAPACITY			
4	HOOSIER ENERGY RURAL ELECTRIC COOP-CAPACITY SALES		\$ 370,000.00	
5	WABASH VALLEY POWER ASSOC., INC-CAPACITY SALES		\$ 1,750.00	
6	SOUTHERN ILLINOIS POWER COOPERATIVE-CAPACITY SALES		\$ 1,300.00	
7	BP ENERGY		\$ 112,896.00	
8	CITY OF HANNIBAL, MO-CAPACITY SALES		\$ 85,500.00	
9	CITY OF KAHOKA, MO-CAPACITY SALES		\$ 14,250.00	
10	CITY OF CALIFORNIA, MO-CAPACITY SALES		\$ 29,500.00	
11	CITY OF CENTRALIA, MO-CAPACITY SALES		\$ 24,250.00	
12	CITY OF MARCELINE, MO-CAPACITY SALES		\$ 7,750.00	
13	DTE ENERGY TRADING-CAPACITY SALES		\$ 250,000.00	
14	MISO-CAPACITY SALES		\$ (285.60)	
15	NEXTERA ENERGY POWER MARKETING-CAPACITY SALES		\$ 275,000.00	
16	SHELL ENERGY NORTH AMERICA (US) LP-CAPACITY SALES		\$ 125,000.00	
17				
18	TOTAL SPECIAL SALES CAPACITY		\$ 1,296,910.40	
19				
20	TOTAL SALES FOR RESALE	192,526	\$ 7,011,286.49	36.42

**Big Rivers Electric Corporation
 Monthly Billing Summary
 Other Sales
 March 2018**

1	March 2018 - Other Sales	KWH	REVENUE	MILLS/KWH
2	<hr/>			
3	SPECIAL SALES ENERGY			
4	KENERGY-DOMTAR COGEN	7,277	\$ 203,740.65	28.00
5	ADM INVESTOR SERVICES		\$ 82,290.00	
6	HENDERSON MUNICIPAL POWER & LIGHT	43,882	\$ 1,205,182.48	27.46
7	MISO	235,926	\$ 6,188,978.69	26.23
8	NORTHEAST POWER		\$ 124,456.98	
9	<hr/>			
10	TOTAL SPECIAL SALES ENERGY	287,085	\$ 7,804,648.80	27.19
11	<hr/>			
12	SPECIAL SALES BILATERAL			
13	DTE ENERGY TRADING		\$ 585,900.00	
14	EDF TRADING NORTH AMERICA		\$ 1,203,840.00	
15	MORGAN STANLEY CAPITAL GROUP		\$ 1,101,380.00	
16	NEXTERA ENERGY POWER MARKETING		\$ 4,205,380.00	
17	MISO - CONTRA REVENUE		\$ (4,105,518.52)	
18	AEP ENERGY PARTNERS - CONTRA REVENUE		\$ (636,240.00)	
19	EDF TRADING NORTH AMERICA - CONTRA REVENUE		\$ (1,908,720.00)	
20	<hr/>			
21	TOTAL SPECIAL SALES BILATERAL		\$ 446,021.48	
22	<hr/>			

**Big Rivers Electric Corporation
 Monthly Billing Summary
 Other Sales
 March 2018**

1	March 2018 - Other Sales	KWH	REVENUE	MILLS/KWH
2	<hr/>			
3	SPECIAL SALES CAPACITY			
3	HOOSIER ENERGY RURAL ELECTRIC COOP-CAPACITY SALES		\$ 370,000.00	
4	WABASH VALLEY POWER ASSOC., INC-CAPACITY SALES		\$ 1,750.00	
5	SOUTHERN ILLINOIS POWER COOPERATIVE-CAPACITY SALES		\$ 1,300.00	
6	CITY OF HANNIBAL, MO-CAPACITY SALES		\$ 85,500.00	
7	CITY OF KAHOKA, MO-CAPACITY SALES		\$ 29,500.00	
8	CITY OF CALIFORNIA, MO-CAPACITY SALES		\$ 24,250.00	
9	CITY OF CENTRALIA, MO-CAPACITY SALES		\$ 14,250.00	
10	CITY OF MARCELINE, MO-CAPACITY SALES		\$ 7,750.00	
11	DTE ENERGY TRADING-CAPACITY SALES		\$ 250,000.00	
12	MISO-CAPACITY SALES		\$ (316.20)	
13	NEXTERA ENERGY POWER MARKETING-CAPACITY SALES		\$ 275,000.00	
14	SHELL ENERGY NORTH AMERICA (US) LP-CAPACITY SALES		\$ 125,000.00	
15	<hr/>			
16	TOTAL SPECIAL SALES CAPACITY		\$ 1,183,983.80	
17	<hr/>			
18	TOTAL SALES FOR RESALE	<u>287,085</u>	<u>\$ 9,434,654.08</u>	<u>32.86</u>

Big Rivers Electric Corporation
Monthly Billing Summary
Other Sales
April 2018

1	April 2018 - Other Sales	KWH	REVENUE	MILLS/KWH
2	<hr/>			
3	SPECIAL SALES ENERGY			
4	KENERGY-DOMTAR COGEN	6,199	\$ 211,000.55	34.04
5	SOUTHERN ILLINOIS POWER COOPERATIVE	2,400	\$ 67,146.00	27.98
6	ADM INVESTOR SERVICES		\$ (30,462.00)	
7	BP ENERGY		\$ 378,336.00	
8	HENDERSON MUNICIPAL POWER & LIGHT	23,057.000	\$ 678,634.14	29.43
9	MISO	321,565.721	\$ 9,701,971.10	30.17
10	NORTHEAST POWER		\$ 189,230.03	
11	<hr/>			
12	TOTAL SPECIAL SALES ENERGY	353,222	\$ 11,195,855.82	31.70
13	<hr/>			
14	SPECIAL SALES BILATERAL			
15	DTE ENERGY TRADING		\$ 567,000.00	
16	EDF TRADING NORTH AMERICA		\$ 1,149,120.00	
17	MORGAN STANLEY CAPITAL GROUP		\$ 1,071,960.00	
18	NEXTERA ENERGY POWER MARKETING		\$ 4,058,040.00	
19	MISO - CONTRA REVENUE		\$ (4,492,946.65)	
20	AEP ENERGY PARTNERS - CONTRA REVENUE		\$ (607,320.00)	
21	EDF TRADING NORTH AMERCA - CONTRA REVENUE		\$ (1,821,960.00)	
22	<hr/>			
23	TOTAL SPECIAL SALES BILATERAL		\$ (76,106.65)	
24	<hr/>			

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Big Rivers Electric Corporation
Monthly Billing Summary
Other Sales
April 2018

1	April 2018 - Other Sales	KWH	REVENUE	MILLS/KWH
2	<hr/>			
3	SPECIAL SALES CAPACITY			
4	HOOSIER ENERGY RURAL ELECTRIC COOP-CAPACITY SALES		\$ 370,000.00	
5	WABASH VALLEY POWER ASSOC., INC-CAPACITY SALES		\$ 1,750.00	
6	SOUTHERN ILLINOIS POWER COOPERATIVE-CAPACITY SALES		\$ 1,300.00	
7	CITY OF HANNIBAL, MO-CAPACITY SALES		\$ 85,500.00	
8	CITY OF KAHOKA, MO-CAPACITY SALES		\$ 14,250.00	
9	CITY OF CALIFORNIA, MO-CAPACITY SALES		\$ 29,500.00	
10	CITY OF CENTRALIA, MO-CAPACITY SALES		\$ 24,250.00	
11	CITY OF MARCELINE, MO-CAPACITY SALES		\$ 7,750.00	
12	DTE ENERGY TRADING-CAPACITY SALES		\$ 250,000.00	
13	MISO-CAPACITY SALES		\$ (306.00)	
14	NEXTERA ENERGY POWER MARKETING-CAPACITY SALES		\$ 275,000.00	
15	SHELL ENERGY NORTH AMERICA (US) LP-CAPACITY SALES		\$ 125,000.00	
16	<hr/>			
17	TOTAL SPECIAL SALES CAPACITY		\$ 1,183,994.00	
18	<hr/>			
19	TOTAL SALES FOR RESALE	<u>353,222</u>	<u>\$ 12,303,743.17</u>	<u>34.83</u>

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

- 1 **Item 14)** *Describe the effect on the FAC calculation of line losses related*
2 *to:*
3 *a. intersystem sales when using a third-party transmission system,*
4 *and*
5 *b. intersystem sales when not using a third-party transmission*
6 *system.*

7

8 **Response)**

- 9 a. Big Rivers had no intersystem sales during the period under review which
10 used a third-party transmission system.
11 b. Line losses related to intersystem sales, which did not use a third-party
12 transmission system, are included in Big Rivers' total System Losses
13 reported on page 3 of its monthly Form A filing. Big Rivers calculates an
14 overall system average fuel cost per kWh each month by dividing (1) the
15 total cost of fuel for generation by (2) the net kWh generated minus total
16 System Losses. The overall system average fuel cost per kWh (which
17 accounts for total System Losses, including losses related to intersystem
18 sales) is multiplied by the total intersystem sales volume to calculate the
19 cost of fuel allocated to intersystem sales in Big Rivers' monthly Form A
20 filing.

21

22

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

1

2

3 **Witnesses)** Wayne O'Bryan (*a. only*) and

4 Nicholas R. Castle (*b. only*)

5

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

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)** Ronald D. Gregory

9

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Reid Station Unit #1 - Coal - 65MW Net
 November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual		Scheduled	Forced	Actual	
		FROM	TO	FROM	TO				
November 2017		No Outages							Reid Unit #1 was idled April 1, 2016, and has not yet been restarted.
December 2017		No Outages							
January 2018		No Outages							
February 2018		No Outages							
March 2018		No Outages							
April 2018		No Outages							

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Reid Station Unit #2 - Combustion Turbine - Oil/Gas - 65MW Net
November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE	
		Scheduled		Actual		Scheduled	Forced	Actual		
		FROM	TO	FROM	TO					
November 2017		No Outages								
December 2017	S, A	12/5/2017 07:00	12/6/2017 19:00	12/5/2017 7:00	12/6/2017 13:20	36:00		30:20	Maintenance Outage to install new enclosure heaters	
	S, A	12/20/2017 11:00	12/20/2017 15:00	12/20/2017 11:00	12/20/2017 13:30	4:00		2:30	Maintenance Outage to install seismic shutoff actuators on gas supply line.	
	F			12/28/2017 10:06	12/28/2017 10:29			0:23	0:23	Starting Failure was declared when the 10 minute Start limit was reached, due to a ground alarm occurring during startup. No cause for the alarm could be found.
	F			12/30/2017 16:02	12/30/2017 17:29			1:27	1:27	Starting Failure was declared when the 10 minute Start limit was reached, due to flameout during startup caused by compressor bleed valve problems
January 2018	F			1/1/2018 17:06	1/1/2018 17:17			0:11	0:11	Starting Failure was declared when the 10 minute Start limit was reached, due to compressor bleed valve failure to engage during startup.
	F			1/2/2018 5:59	1/2/2018 6:58			0:59	0:59	Starting Failure was declared when the 10 minute Start limit was reached, due to compressor bleed valve failure to engage during startup.
	F			1/25/2018 6:42	1/25/2018 6:48			0:06	0:06	Starting Failure was declared when the 10 minute Start limit was reached, due to compressor bleed valve failure to engage during startup.
	F			1/30/2018 20:04	1/30/2018 21:06			1:02	1:02	Starting Failure was declared when the 10 minute Start limit was reached, due to compressor bleed valve failure to engage during startup.
	F			1/30/2018 21:15	1/30/2018 22:48			1:33	1:33	Unit tripped offline, due to High Exhaust Temperature Out alarm.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Reid Station Unit #2 - Combustion Turbine - Oil/Gas - 65MW Net
 November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual		Scheduled	Forced	Actual	
		FROM	TO	FROM	TO				
February 2018		No Outages							
March 2018	S, A	3/13/2018 12:00	3/13/2018 13:00	3/13/2018 12:00	3/13/2018 12:55	1:00		0:55	Maintenance Outage to work on 01171 Disconnect Breaker
April 2018	S, A	4/4/2018 08:00	4/4/2018 16:00	4/4/2018 8:00	4/4/2018 15:14	8:00		7:14	Maintenance outage to finsih repairs on 01171 Disconnect Breaker

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Henderson Station Two - Unit #1 - Coal - 153MW Net
November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual		Scheduled	Forced	Actual	
		FROM	TO	FROM	TO				
November 2017	F			11/6/2017 20:47	11/7/2017 3:36	6:49	6:49		Starting Failure was declared when the 12 Hour Cold Start limit was reached, due to issues with the Overspeed Trigger and Exerciser lock out valve limit switches.
December 2017		No Outages							
January 2018	F			1/3/2018 12:05	1/18/2018 22:00	369:55	369:55		The unit was removed from service, due to hydraulic shock in the Cold Reheat Piping during startup after coming from Reserve Standby status. This resulted in declaration of a Starting Failure that lasted until the repairs were completed.
February 2018	F			2/5/2018 4:00	2/5/2018 9:36	5:36	5:36		Starting Failure was declared when the 15 Hour Cold Start limit was reached, due to issues with the Inlet Guide Vanes on the Booster Fan not responding to the operational commands.
March 2018	F			2/5/2018 10:14	2/15/2018 6:00	235:46	235:46		The unit was removed from service, due to a connecting malfunction on the 0169 Middle Disconnect Switch and then a condenser tube failure occurred on unit re-start.
	F			3/14/2018 7:00	3/14/2018 10:39	3:39	3:39		Starting Failure was declared when the 17 Hour Cold Start limit was reached, due to high silica levels in the boiler during startup.
	F			3/14/2018 14:52	3/15/2018 15:54	25:02	25:02		The unit was removed from service, due to high silica levels in the boiler.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Henderson Station Two - Unit #1 - Coal - 153MW Net
November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual		Scheduled	Forced	Actual	
		FROM	TO	FROM	TO				
March 2018	F			3/15/2018 21:15	3/20/2018 6:00		104:45	104:45	The unit was removed from service, due to high silica levels in the boiler.
April 2018	S, A	4/2/2018 06:00	4/6/2018 20:00	4/2/2018 6:00	4/6/2018 18:03	110:00		108:03	Maintenance Outage to make repairs to the Inlet Guide Vanes on the Booster Fan
	F			4/15/2018 23:32	4/16/2018 1:07		1:35	1:35	Unit tripped due to high drum level, while putting on a second mill to raise load shortly after being tied online.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Henderson Station Two - Unit #2 - Coal - 159MW Net
November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual		Scheduled	Forced	Actual	
		FROM	TO	FROM	TO				
November 2017		No Outages							
December 2017	S, A	12/18/2017 06:00	12/22/2017 12:00	12/18/2017 6:00	12/22/2017 8:00	102:00		98:00	Maintenance Outage to repalce coolers on the Step Up Transformer.
January 2018	F			1/4/2018 22:43	1/5/2018 3:27		4:44	4:44	A Starting Failure was declared at the end of the 24 Cold Start period, when the unit had failed to tie online due to starting delays from extremely cold conditions.
February 2018	S, A	2/5/2018 00:00	2/6/2018 0:00	2/5/2018 0:00	2/6/2018 0:00	24:00		24:00	Maintenance Outage to wash the air heaters.
	F			2/6/2018 0:00	2/8/2018 14:30		62:30	62:30	Forced Outage at the end of the Maintenance Outage was caused by the circulating water line 6" vent valve having to be replaced.
March 2018	F			3/17/2018 14:20	3/20/2018 6:00		63:40	63:40	The unit was removed from service, due to silica contamination in the condensate and feed water systems.
April 2018		No Outages							

Big Rivers Electric Corporation Scheduled ("S"), Actual ("A"), and Forced ("F") Outages November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Green Station Unit #1 - Coal/Pet coke - 231MW Net
November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual		Scheduled	Forced	Actual	
		FROM	TO	FROM	TO				
November 2017		No Outages							
December 2017	F			12/27/2017 15:48	12/30/2017 21:31		77:43	77:43	The unit was removed from service to repair a tube leak in the Primary Super-Heater section at elevation 576'.
January 2018	S, A	1/7/2018 00:00	1/9/2018 0:00	1/7/2018 0:15	1/8/2018 21:12	48:00		44:57	Maintenance Outage to repair a tube leak in the 12th leading edge boiler tube from east in the Reheat Outlet section at elevation 600'.
	F			1/8/2018 21:12	1/9/2018 2:16		5:04	5:04	Starting failure declared due to a faulty thermocouple giving bad Super Heater temperature readings during startup.
	S, A	1/25/2018 00:00	1/30/2018 0:00	1/24/2018 23:53	1/29/2018 23:53	120:00		120:00	Maintenance Outage to inspect and repair FGD inlet and outlet ducts.
	S, A	1/30/2018 00:00	—————>	1/29/2018 23:53	—————>	48:00		48:07	Maintenance Outage Extended due to continue work on the FGD inlet and outlet ducts.
February 2018	S, A	—————>	2/4/2018 0:00	—————>	2/3/2018 13:44	72:00		61:44	Maintenance Outage Extended due to continue work on the FGD inlet and outlet ducts.
	F			2/3/2018 13:44	2/3/2018 14:39		0:55	0:55	Starting failure declared due to Turbine drain valve stuck open, Chemical Feed line froze up, and the Continuous Blow down sample line froze up.
March 2018	F			3/7/2018 22:03	3/9/2018 6:55		32:52	32:52	The unit was removed from service to repair a tube leak in the reheat section of the boiler. Three dutchman installed - two in leading edge of intermediate - one in outlet rear edge.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Green Station Unit #1 - Coal/Pet coke - 231MW Net
 November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual		Scheduled	Forced	Actual	
		FROM	TO	FROM	TO				
March 2018	F			3/12/2018 9:05	3/14/2018 7:27	46:22	46:22		Unit tripped on high furnace pressure, due to a roof tube leak on the southeast side of the roof at the top of the boiler
April 2018		No Outages							

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Green Station Unit #2 - Coal/Pet coke - 223MW Net
November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual		Scheduled	Forced	Actual	
		FROM	TO	FROM	TO				
November 2017		No Outages							
December 2017		No Outages							
January 2018		No Outages							
February 2018	F			2/26/2018 14:01	2/26/2018 17:30		3:29	3:29	Unit tripped off-line, due to wet fuel issues causing coal feeders to trip.
March 2018		No Outages							
April 2018	F			4/30/2018 14:22	4/30/2018 23:08		8:46	8:46	The Control Room Operator tripped the unit, due to low excess oxygen level in the boiler during recovery from a coal mill trip.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Coleman Station Unit #1 - Coal - 150MW Net
 November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual		Scheduled	Forced	Actual	
		FROM	TO	FROM	TO				
November 2017		No Outages							Coleman Unit #1 was idled on May 1, 2014, and has not yet been returned to service.
December 2017		No Outages							
January 2018		No Outages							
February 2018		No Outages							
March 2018		No Outages							
April 2018		No Outages							

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Coleman Station Unit #2 - Coal - 138MW Net
 November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual		Scheduled	Forced	Actual	
		FROM	TO	FROM	TO				
November 2017		No Outages							Coleman Unit #2 was idled on May 1, 2014, and has not yet been returned to service.
December 2017		No Outages							
January 2018		No Outages							
February 2018		No Outages							
March 2018		No Outages							
April 2018		No Outages							

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Coleman Station Unit #3 - Coal - 155MW Net
 November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual		Scheduled	Forced	Actual	
		FROM	TO	FROM	TO				
November 2017		No Outages							Coleman Unit #3 was idled on May 8, 2014, and has not yet been returned to service.
December 2017		No Outages							
January 2018		No Outages							
February 2018		No Outages							
March 2018		No Outages							
April 2018		No Outages							

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2017, through April 30, 2018

Big Rivers Electric Corporation
Wilson Station - Unit #1 - Coal/Pet Coke - 417MW Net
 November 1, 2017, through April 30, 2018 (the review period)

Schedule vs. Actual

MONTH	TYPE	MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual		Scheduled	Forced	Actual	
		FROM	TO	FROM	TO				
November 2017	F			11/7/2017 23:58	11/11/2017 18:38		90:40	90:40	Clean and make repairs to FGD
December 2017		No Outages							
January 2018		No Outages							
February 2018	S, A	2/16/2018 09:00	2/22/2018 17:00	2/16/2018 9:15	2/22/2018 16:12	152:00		150:57	Maintenance Outage to perform FGD maintenance and cleaning. A water wall tube leak was found on hydro and was also repaired.
March 2018	F			3/13/2018 23:33	3/14/2018 4:02		4:29	4:29	Unit tripped on low drum level, due to boiler going into a swing during a routine mill swap.
	F			3/23/2018 07:46	3/25/2018 11:45		51:59	51:59	Unit tripped due to a water wall tube leak at 10 ½ floor elevation on the west wall.
	F			3/25/2018 17:50	3/26/2018 17:30		23:40	23:40	The unit was in Reserve Standby (RS), after a recent forced outage, and a water wall tube leak at 4th floor east elevation 455' was discovered during a hydro while on RS.
	F			3/26/2018 17:32	3/26/2018 17:39		0:07	0:07	Unit tripped on No Load/Steam flow - generator reverse current relay trip during unit start-up
April 2018	F			4/1/2018 14:05	4/6/2018 0:18		106:13	106:13	Water wall tube leak, the first rear wall tube and first side wall tube at 4 ½ floor elevation in the northeast corner

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

1 **Item 16)** *For the period under review, provide the monthly capacity*
2 *factor at which each generating unit operated.*

3

4 **Response)** Please see the table below and the footnotes on following page

Big Rivers Electric Corporation Monthly Capacity Factor by Generating Unit							
Generating Unit	Metric ^a	Nov. 2017	Dec. 2017	Jan. 2018	Feb. 2018	Mar. 2018	Apr. 2018
Station Two Unit # 1	GCF	9.2%	0.0%	8.5%	9.2%	8.3%	38.6%
	NCF	8.0%	-0.6%	7.1%	8.3%	7.1%	37.3%
Station Two Unit # 2	GCF	6.1%	0.0%	35.2%	7.4%	0.0%	0.0%
	NCF	4.9%	-0.6%	33.9%	6.6%	-0.6%	-0.8%
Reid Station Unit # 1 ^b	GCF	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	NCF	-3.6%	-3.9%	-4.2%	-3.9%	-3.9%	-3.7%
Reid Station Unit # 2 CT	GCF	0.0%	0.7%	2.0%	0.1%	0.1%	0.4%
	NCF	-0.1%	0.6%	2.0%	0.0%	0.0%	0.4%
Green Station Unit # 1	GCF	74.1%	62.5%	62.3%	60.1%	50.9%	86.3%
	NCF	71.4%	59.6%	60.2%	57.0%	47.3%	84.8%
Green Station Unit # 2	GCF	74.0%	75.1%	89.3%	73.2%	74.9%	87.1%
	NCF	72.2%	73.2%	87.9%	71.1%	73.3%	86.4%
Wilson Station Unit # 1	GCF	85.4%	100.0%	100.0%	57.7%	85.0%	86.0%
	NCF	79.5%	93.4%	93.7%	52.8%	78.8%	79.7%
Coleman Station Unit # 1 ^c	GCF	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	NCF	-0.2%	-0.3%	-0.3%	-0.3%	-0.3%	-0.2%
Coleman Station Unit # 2 ^c	GCF	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	NCF	-0.2%	-0.3%	-0.3%	-0.3%	-0.3%	-0.2%
Coleman Station Unit # 3 ^c	GCF	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	NCF	-0.2%	-0.3%	-0.3%	-0.3%	-0.3%	-0.2%

5

6

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

1

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

a.- NCF (Net Capacity Factor) =
$$\frac{\text{Net Actual Generation} \times 100\%}{\text{PH (Period Hours)} \times \text{NMC (Net Maximum Capacity)}}$$

 GCF (Gross Capacity Factor) =
$$\frac{\text{Gross Actual Generation} \times 100\%}{\text{PH (Period Hours)} \times \text{GMC (Gross Maximum Capacity)}}$$

b.- Reid 1 was put in Idled Status effective April 1, 2016.

c.- Coleman Station Units 1 and 2 were placed in Idled Status on May 1, 2014; Coleman
Station Unit 3 was placed in Idled Status on May 8, 2014.

2

3

4 **Witness)** Jason C. Burden

5

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

1 **Item 17)**

2 *a. For the period under review, explain if Big Rivers made any*
3 *changes to its maintenance and operation practices, or completed*
4 *any specific generation efficiency improvements that affect fuel*
5 *usage at Big Rivers' generation facilities.*

6 *b. Describe the impact of these changes on Big Rivers' fuel usage.*

7

8 **Response)**

9 a. For the period under review, November 1, 2017, through April 30, 2018,
10 Big Rivers has not made any changes to its maintenance and operation
11 practices, or completed any specific generation efficiency improvements
12 that affect fuel usage at Big Rivers' generation facilities.

13 b. Not applicable.

14

15

16 **Witnesses)** Ronald D. Gregory (*a. only*) and

17 Jason C. Burden (*b. only*)

18

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2017 THROUGH APRIL 30, 2018
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated August 10, 2018**

August 24, 2018

1 **Item 18)** *State whether Big Rivers is aware of any violations of its*
2 *policies and procedures regarding fuel procurement that occurred prior to*
3 *or during the period under review.*

4

5 **Response)** Big Rivers is unaware of any violations of its policies and procedures
6 regarding fuel procurement that occurred during the period November 1, 2017,
7 through April 30, 2018. Big Rivers is also unaware of any unreported violation prior
8 to the current period under review.

9

10

11 **Witnesses)** Mark W. McAdams (*Coal*) and
12 Wayne O'Bryan (*Natural Gas*)

13

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM MAY 1, 2017 THROUGH OCTOBER 31, 2017
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated February 16, 2018**

March 1, 2018

1 **Item 19)** *State whether Big Rivers is aware of any violations of 807 KAR*
2 *5:056 that occurred prior to or during the period under review.*

3

4 **Response)** Big Rivers is unaware of any violations of 807 KAR 5:056 that
5 occurred prior to or during the period under review.

6

7

8 **Witness)** Nicholas R. Castlen

9

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM MAY 1, 2017 THROUGH OCTOBER 31, 2017
CASE NO. 2018-00221**

**Response to Commission Staff's Request for Information
dated February 16, 2018**

March 1, 2018

1 **Item 20)** *State whether all fuel contracts related to commodity and/or*
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 **Witnesses)** Mark W. McAdams (*Coal*) and

10 Wayne O'Bryan (*Natural Gas*)

11