

ORIGINAL



Your Touchstone Energy® Cooperative 

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

**AN EXAMINATION OF THE APPLICATION)
OF THE FUEL ADJUSTMENT CLAUSE)
OF BIG RIVERS ELECTRIC CORPORATION)
FROM)
NOVEMBER 1, 2016 THROUGH APRIL 30, 2017)**

**Case No.
2017-00287**

**Responses to Commission Staff's Request for Information
dated
August 30, 2017**

FILED: September 13, 2017

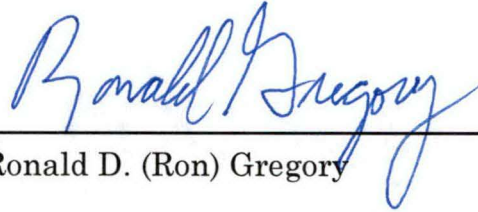
ORIGINAL

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT
CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

VERIFICATION

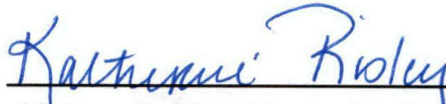
I, Ronald D. (Ron) Gregory, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.



Ronald D. (Ron) Gregory

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Ronald D. (Ron) Gregory on
this the 11th day of September, 2017.



Notary Public, Kentucky State at Large

My Commission Expires 10-31-2020

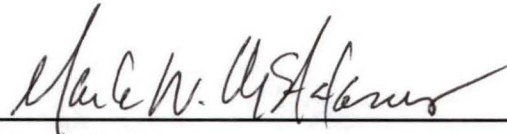


BIG RIVERS ELECTRIC CORPORATION

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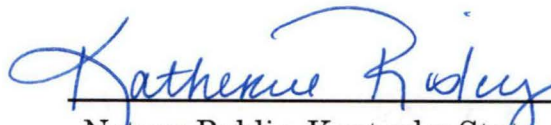
I, Mark W. McAdams, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.



Mark W. McAdams

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

11th SUBSCRIBED AND SWORN TO before me by Mark W. McAdams on this the
day of September, 2017.



Notary Public, Kentucky State at Large

My Commission Expires 10-31-2020




BIG RIVERS ELECTRIC CORPORATION

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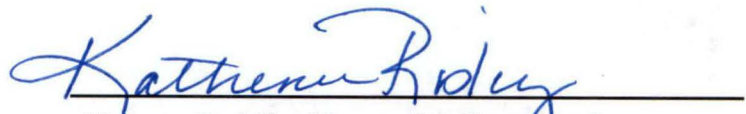
VERIFICATION

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 11th day of September, 2017.


Notary Public, Kentucky State at Large
My Commission Expires 10-31-2020

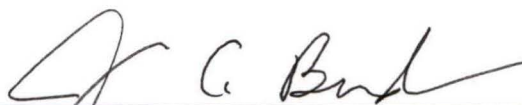


BIG RIVERS ELECTRIC CORPORATION

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VERIFICATION


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)

11th SUBSCRIBED AND SWORN TO before me by Jason C. Burden on this the
day of September, 2017.



Notary Public, Kentucky State at Large
My Commission Expires 10-31-2020

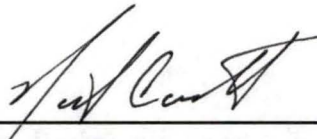


BIG RIVERS ELECTRIC CORPORATION

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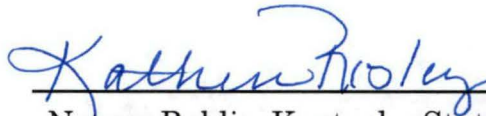
I, Nicholas R. (Nick) Castlen, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.



Nicholas R. (Nick) Castlen

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Nicholas R. (Nick) Castlen on this the 17th day of September, 2017.



Notary Public, Kentucky State at Large

My Commission Expires 10-31-2020



BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 1)** *For the period from November 1, 2016, through April 30, 2017,*
2 *list each vendor from whom coal was purchased and the quantities and*
3 *the nature of each purchase (i.e., spot or contract). For the period under*
4 *review in total, provide the percentage of purchases that were spot versus*
5 *contract. For contract purchases, state whether the contract has been*
6 *filed with the Commission. If no, explain why it has not been filed.*

7

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

9

For the Period from November 1, 2016, through April 30, 2017

Purchase Vendor	Fuel Type	Purchase Tonnage	Contract Type
Alliance (BRE-15-010)	Coal	187,076.46	Contract
Foresight Coal (BRE-15-005)	Coal	94,016.14	Contract
KenAmerican Resources (BRE-15-006)	Coal	277,561.23	Contract
Peabody Coal Sales (BRE-15-018)	Coal	200,476.40	Contract
Rhino (BRE-15-009)	Coal	186,089.00	Contract
Sebree Mining (BRE-11-002)	Coal	237,072.16	Contract
Oxbow Carbon (BRE-17-001)	Pet Coke	46,692.32	Spot
TCP PetCoke (BRE-17-002)	Pet Coke	39,433.10	Spot
TCP PetCoke (BRE-16-004)	Pet Coke	47,724.86	Spot
Total Tonnage		1,316,141.67	

For the Period from November 1, 2016, through April 30, 2017

Percentage Spot Purchase Tons	10.17 %
Percentage Contract Purchase Tons	89.83 %
Percentage Total Purchase Tons	100.00 %

10

11 Big Rivers has filed its contract purchases with the Commission.

12

BIG RIVERS ELECTRIC CORPORATION

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CASE NO. 2017-00287**

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September 13, 2017

1 **Witness)** Mark W. McAdams
2

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
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FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 2) For the period from November 1, 2016, through April 30, 2017,**
2 **list each vendor from whom natural gas was purchased for generation**
3 **and the quantities and the nature of each purchase (i.e., spot or contract).**
4 **For contract purchases, state whether the contract has been filed with the**
5 **Commission. If no, explain why it has not been filed.**

6
7 **Response)** Please see the listing on the following page for vendors from whom
8 natural gas was purchased for generation and the quantity and nature of each
9 purchase from November 1, 2016, through April 30, 2017. Also on the following
10 page please see the percentage of purchases that were either spot versus contract
11 for the period under review in total.

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

20

21

BIG RIVERS ELECTRIC CORPORATION

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1

For the Period from November 1, 2016, through April 30, 2017

Purchase Vendor	Fuel Type	MCF	Contract Type
CIMA Energy, LTD	Natural Gas	13,458	Spot
Tenaska Marketing Ventures	Natural Gas	5,970	Spot

For the Period from November 1, 2016, through April 30, 2017

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

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4 **Witness)** Wayne O'Bryan

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BIG RIVERS ELECTRIC CORPORATION

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September 13, 2017

1 **Item 3)** *State whether Big Rivers engages in hedging activities for its*
2 *coal or natural gas purchases used for generation. If yes, describe the*
3 *hedging activities in detail.*

4

5 **Response)** Big Rivers does not engage in financial hedging activities regarding
6 its 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.

9

10

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

13

BIG RIVERS ELECTRIC CORPORATION

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September 13, 2017

1 Item 4) *For each generating station or unit for which a separate coal*
2 *pile is maintained, state, for the period from November 1, 2016, through*
3 *April 30, 2017, the actual amount of coal burned in tons, the actual*
4 *amount of coal deliveries in tons, the total kWh generated, and the actual*
5 *capacity factor at which the plant operated.*

6
7 **Response)** Please see the schedule below. The North American Electric
8 Reliability Corporation's Generating Availability Data System defines Net
9 Capacity Factor as the value equal to the net MWh produced divided by the
10 product of the hours in the period times the unit rating in Net MWs, which is the
11 formula for this response. At this time Big Rivers does not maintain "a separate
12 coal pile" at its Reid and Coleman Stations.

13

Plant	Coal & Pet Coke Burn (Tons)	Coal & Pet Coke Receipts (Tons)	Net kWh	Net Capacity Factor (Net MWh) / (Period Hrs x MW rating)
Station Two (Coal) *	197,800.29	145,855.72	445,287,000	68.32%
Green Station (Coal)	493,607.73	448,614.74	1,199,280,200	60.81%
Green Station (Pet Coke) **	87,232.45	133,850.28		
Wilson Station (Coal)	537,183.06	587,820.93	1,341,973,680	74.08%
Wilson Station (Pet Coke) **	74,383.00	0.00		

* Net of City of Henderson. City of Henderson generation take was 480,609,000 kWhs. Part of the City of Henderson generation take was 194,694,000 kWhs for excess energy (effective June 1, 2016). Station Two = Henderson Municipal Power & Light's Station Two.

** Net kWh and Capacity Factor includes energy from burning Coal and Pet Coke.

14

BIG RIVERS ELECTRIC CORPORATION

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1 **Witness)** Mark W. McAdams

2

BIG RIVERS ELECTRIC CORPORATION

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1 **Item 5)** *List all firm power commitments for Big Rivers from November*
2 *1, 2016, through April 30, 2017, for (a) purchases and (b) sales. This list*
3 *shall identify the electric utility, the amount of commitment in MW, and*
4 *the purpose of the commitment (i.e., peaking, emergency).*

5

6 **Response)**

7

(a) Purchases:

8

Southeastern Power Administration ("SEPA"), up to 178 MW,
energy for system. A force majeure, previously declared by
SEPA for this contract due to dam safety issues at Wolf Creek
and Center Hill dams on the Cumberland System, remained in
effect from November 1, 2016, through April 30, 2017. For the
period under review, Big Rivers has operated under an annual
contract in which we have to schedule the purchases under the
terms of weekly capacity declarations. These are limited to 154
MWs due to ongoing repairs on the Center Hill dam. The
repairs currently are expected to last until 2019.

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Additional purchases are shown on the table which
follows. Please note, the purchases listed were made to support
firm Off-System Sales and were not passed through Big Rivers'
FAC.

BIG RIVERS ELECTRIC CORPORATION

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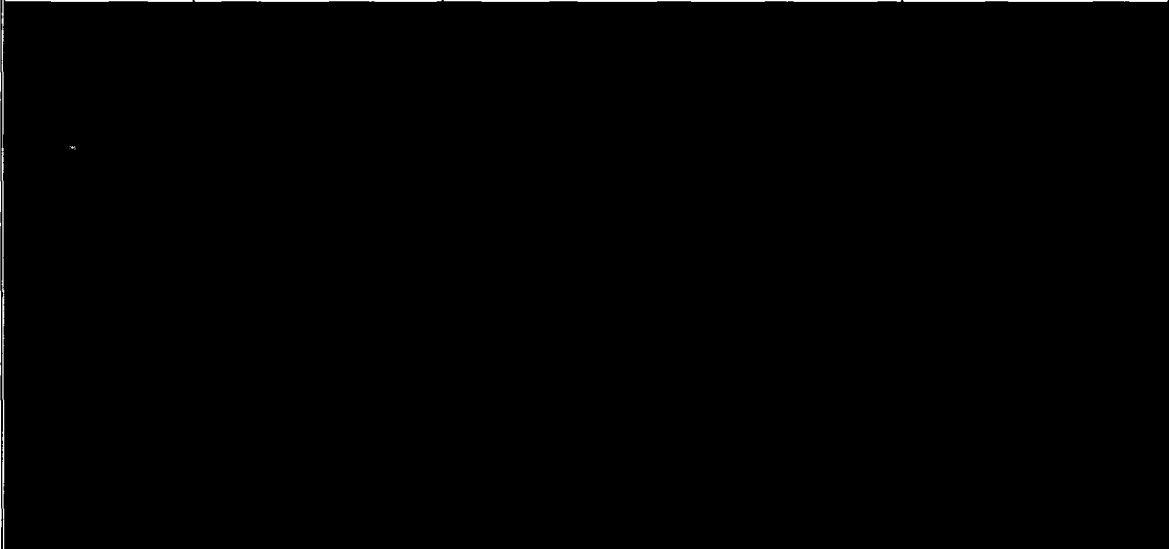
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September 13, 2017

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(a) (a) Purchases (continued):

Big Rivers Electric Corporation Power Purchases November 1, 2016, through April 30, 2017			
Date	Electric Utility	MW Commitment	Purpose
Nov. – Dec. 2016	MISO	200 MWs – On Peak 134,400 Total	Purchases for Off-System Sales
Nov. – Dec. 2016	MISO	100 MWs – On Peak 67,200 Total	Purchases for Off-System Sales
Nov. – Dec. 2016	MISO	100 MWs – Off Peak 79,300 Total	Purchases for Off-System Sales
Nov. – Dec. 2016	MISO	100 MWs – On Peak 79,300 Total	Purchases for Off-System Sales



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BIG RIVERS ELECTRIC CORPORATION

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(a) Purchases (continued):

Big Rivers Electric Corporation Power Purchases (continued) November 1, 2016, through April 30, 2017			
Date	Electric Utility	MW Commitment	Purpose
Jan. – Feb. 2017	MISO	100 MWs – Off-Peak 76,000 Total	Purchases for Off-System Sales
Jan. – Feb. 2017	MISO	100 MWs – Off-Peak 76,000 Total	Purchases for Off-System Sales

BIG RIVERS ELECTRIC CORPORATION

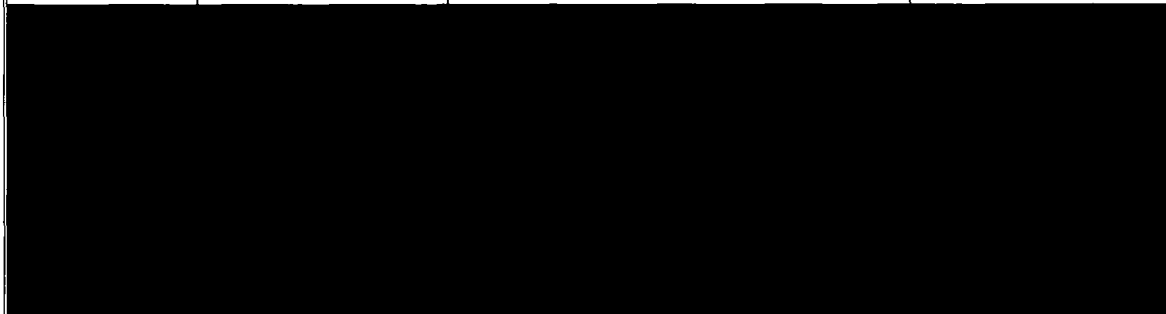
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(b) Sales:

Big Rivers Electric Corporation Firm Off-System Sales November 1, 2016, through April 30, 2017			
Date	Electric Utility	MW Commitment	Purpose
Nov. – Dec. 2016	NextEra	200 MWs – On Peak 134,400 Total	Off-System Sales
Nov. – Dec. 2016	NextEra	100 MWs – On Peak 67,200 Total	Off-System Sales
Nov. – Dec. 2016	NextEra	100 MWs – Off Peak 79,300 Total	Off-System Sales
Nov. – Dec. 2016	NextEra	100 MWs – Off Peak 79,300 Total	Off-System Sales
Nov. – Dec. 2016	ADM	100 MWs – On Peak 67,200 Total	Off-System Sales
Nov. – Dec. 2016	ADM	100 MWs – On Peak 67,200 Total	Off-System Sales
Nov. – Dec. 2016	ADM	100 MWs – Off Peak 79,200 Total	Off-System Sales
			

4

BIG RIVERS ELECTRIC CORPORATION

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2

(b) Sales (continued):

Big Rivers Electric Corporation Firm Off-System Sales (continued) November 1, 2016, through April 30, 2017			
Date	Electric Utility	MW Commitment	Purpose
Jan. – Feb. 2017	NextEra	100 MWs – Off Peak 76,000 Total	Off-System Sales
Jan. – Feb. 2017	Morgan Stanley	50 MWs – On Peak	Off-System Sales 50 MW Call Option

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Witness) Wayne O'Bryan

BIG RIVERS ELECTRIC CORPORATION

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September 13, 2017

1 **Item 6)** *Provide a monthly billing summary of sales to all electric*
2 *utilities for the period November 1, 2016, through April 30, 2017.*

3

4 **Response)** Please see the attached monthly billing summaries for sales to all
5 electric utilities for the period November 1, 2016, through April 30, 2017. 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 This information also is redacted pursuant to the customer privacy
10 discussion in the joint utilities' report¹ filed by the utilities in Case No. 2012-
11 00428.² The Commission's Order dated April 16, 2013 ("the April 2013 Order"), in
12 that case concurred with the position of the joint utilities. Finally, this redaction
13 is consistent with Big Rivers' Customer Information and Privacy Policy filed with

¹ See *Report of the Joint Utilities: Atmos Energy Corporation, Big Rivers Electric Corporation, Big Sandy Rural Electric Cooperative Corporation, Blue Grass Energy Cooperative Corporation, Clark Energy Cooperative, Inc., Columbia Gas of Kentucky, Inc., Cumberland Valley Electric, Delta Natural Gas Company, Inc., Duke Energy Kentucky, Inc., East Kentucky Power Cooperative, Inc., Farmers Rural Electric Cooperative Corporation, Fleming-Mason Energy Cooperative, Inter-County Energy Cooperative Corporation, Jackson Energy Cooperative Corporation, Jackson Purchase Energy Corporation, Kenergy Corp., Kentucky Power Company, Kentucky Utilities Company, Licking Valley Rural Electric Cooperative Corporation, Louisville Gas and Electric Company, Meade County Rural Electric Cooperative Corporation, Nolin Rural Electric Cooperative Corporation, Owen Electric Cooperative, Inc., Salt River Electric Cooperative Corporation, Shelby Energy Cooperative, Inc., South Kentucky Rural Electric Cooperative Corporation, and Taylor County Rural Electric Cooperative Corporation with Comments by: The Attorney General of the Commonwealth of Kentucky by and through His Office of Rate Intervention and the Community Action Council for Lexington-Fayette, Bourbon, Harrison and Nicholas Counties, Inc.* filed June 30, 2014, in Case No. 2012-00428.

² *In the Matter of: Consideration of the Implementation of Smart Grid and Smart Meter Technologies*, Case No. 2012-00428

BIG RIVERS ELECTRIC CORPORATION

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1 the Commission on June 13, 2016, pursuant to Ordering Paragraph No. 4 of the
2 April 2013 Order.

3

4

5 **Witness)** Nicholas R. Castlen

6

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
November 2016**

	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 2016						
2						
3 JP RURALS	95,803	44,684,972	\$ 1,322,560.42	\$ 2,010,823.74	\$ 3,333,384.16	\$ 5.00
4 KENERGY RURALS	179,950	81,992,613	2,484,209.75	3,689,667.59	6,173,877.34	-
5 MEADE CO. RURALS	84,931	34,007,930	1,172,472.46	1,530,356.85	2,702,829.31	-
6						
7 TOTAL RURALS	360,684	160,685,515	\$ 4,979,242.63	\$ 7,230,848.18	\$ 12,210,090.81	\$ 5.00
8						
9	5,126	1,738,112	\$ 54,925.09	\$ 66,135.16	\$ 121,060.25	\$ -
10	63	35,860	675.05	1,364.47	2,039.52	-
11	29,548	16,132,200	316,606.82	613,830.21	930,437.03	-
12	1,823	515,370	19,533.45	19,609.83	39,143.28	-
13	10,679	4,579,010	114,425.49	174,231.33	288,656.82	-
14	2,760	733,767	29,573.40	27,919.83	57,493.23	-
15	1,000	288,680	10,715.00	10,984.27	21,699.27	-
16	3,739	678,880	40,063.39	25,831.38	65,894.77	-
17	15,000	10,741,925	160,725.00	408,730.25	569,455.25	-
18	60	10,780	642.90	410.18	1,053.08	-
19	120	33,730	1,285.80	1,283.43	2,569.23	-
20	36,893	25,394,210	395,308.50	966,249.69	1,361,558.19	-
21	4,763	1,913,110	51,035.55	72,793.84	123,829.39	-
22	3,417	1,370,570	36,613.16	52,150.19	88,763.35	-
23	100	30,330	1,071.50	1,154.06	2,225.56	-
24	475	89,220	5,089.63	3,394.82	8,484.45	-
25	7,242	4,110,270	77,598.03	156,395.77	233,993.80	-
26	11,988	5,884,300	128,451.42	223,897.62	352,349.04	-
27	2,322	1,010,498	24,880.23	38,449.45	63,329.68	-
28						
29 Sub-Total Kenergy Industrials	137,118	75,290,822	\$ 1,469,219.41	\$ 2,864,815.78	\$ 4,334,035.19	\$ -
30						
31	1,782	623,240	19,094.13	23,714.28	42,808.41	-
32						
33 TOTAL INDUSTRIALS	138,900	75,914,062	\$ 1,488,313.54	\$ 2,888,530.06	\$ 4,376,843.60	\$ -
34						
35 GRAND TOTAL	499,584	236,599,577	\$ 6,467,556.17	\$ 10,119,378.24	\$ 16,586,934.41	\$ 5.00

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
November 2016**

Member Billing November 2016	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 (m)
1						
2						
3	\$ -	\$ -	\$ 104,339.41	\$ 280,120.12	\$ 59,699.12	\$ 3,777,547.81
4	-	-	191,452.75	518,593.88	109,542.13	6,993,466.10
5	-	-	79,408.52	226,477.62	45,434.59	3,054,150.04
6						
7	TOTAL RURALS		\$ 375,200.68	\$ 1,025,191.62	\$ 214,675.84	\$ 13,825,163.95
8						
9	\$ -	\$ -	\$ 4,058.49	\$ 10,207.16	\$ 2,322.12	\$ 137,648.02
10	471.46	-	83.73	173.90	47.91	2,816.52
11	-	-	37,668.69	79,265.00	21,552.62	1,068,923.34
12	-	-	1,203.39	3,286.64	688.53	44,321.84
13	-	16,352.62	10,691.99	24,465.81	6,117.56	346,284.80
14	-	2,403.95	1,713.35	4,820.57	980.31	67,411.41
15	-	618.86	674.07	1,822.85	385.68	25,200.73
16	-	-	1,585.18	5,477.33	906.98	73,864.26
17	-	-	25,082.39	48,767.92	14,351.21	657,656.77
18	-	-	25.17	87.51	14.40	1,180.16
19	-	-	78.76	215.70	45.06	2,908.75
20	-	-	59,295.48	116,518.16	33,926.66	1,571,298.49
21	-	-	4,467.11	10,480.40	2,555.91	141,332.81
22	407.17	-	3,200.28	7,512.33	1,831.08	101,714.21
23	-	-	70.82	187.17	40.52	2,524.07
24	-	-	208.33	705.78	119.20	9,517.76
25	-	-	9,597.48	19,949.85	5,491.32	269,032.45
26	1,446.53	-	13,739.84	29,950.91	7,861.42	405,347.74
27	2,764.47	-	2,359.51	5,369.39	1,350.03	75,173.08
28						
29	Sub-Total Kenergy Industrials		\$ 175,804.06	\$ 369,264.38	\$ 100,588.52	\$ 5,004,157.21
30						
31	-	-	1,455.27	3,611.91	832.65	48,708.24
32						
33	TOTAL INDUSTRIALS		\$ 177,259.33	\$ 372,876.29	\$ 101,421.17	\$ 5,052,865.45
34						
35	GRAND TOTAL		\$ 552,460.01	\$ 1,398,067.91	\$ 316,097.01	\$ 18,878,029.40

Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
November 2016

	Expense Mitigation Adjustment (EMA) (m)	MRSM Adjustment Fuel Roll-In (n)	MRSM - ER Transmission Rural Adjustment (o)	MRSM - ER Transmission Industrial Adjustment (p)	RER Business Adjustment (q)	Total Adjustments for ER & RER on Power Bill (r) = Σ (o) to (q)	Revenue Net of MRSM Adjustments (s) = (l) + (r)
1 Member Billing November 2016							
2							
3 JP RURALS	\$ 402,164.75	\$ (456,322.92)	\$ (71,956.93)	\$ -	\$ (3.16)	\$ (71,960.09)	\$ 3,705,587.72
4 KENERGY RURALS	737,933.52	(837,308.55)	(132,788.75)	-	(6.22)	(132,794.97)	6,860,671.13
5 MEADE CO. RURALS	306,071.37	(347,288.97)	(56,943.70)	-	(2.82)	(56,946.52)	2,997,203.52
6							
7 TOTAL RURALS	\$ 1,446,169.64	\$ (1,640,920.44)	\$ (261,689.38)	\$ -	\$ (12.20)	\$ (261,701.58)	\$ 13,563,462.37
8							
9	\$ 15,643.01	\$ (17,749.60)	\$ -	\$ (1,752.28)	\$ -	\$ (1,752.28)	\$ 135,895.74
10	322.74	(366.20)	-	(32.22)	-	(32.22)	2,784.30
11	145,189.80	(164,742.03)	-	(14,607.68)	-	(14,607.68)	1,054,315.66
12	4,638.33	(5,262.96)	-	(547.40)	-	(547.40)	43,774.44
13	41,211.09	(46,760.85)	-	(4,356.81)	-	(4,356.81)	341,927.99
14	6,603.90	(7,493.23)	-	(794.48)	-	(794.48)	66,616.93
15	2,598.12	(2,948.00)	-	(304.68)	-	(304.68)	24,896.05
16	6,109.92	(6,932.72)	-	(843.94)	-	(843.94)	73,020.32
17	96,677.33	(109,696.54)	-	(9,297.39)	-	(9,297.39)	648,359.38
18	97.02	(110.09)	-	(13.45)	-	(13.45)	1,166.71
19	303.57	(344.45)	-	(35.89)	-	(35.89)	2,872.86
20	228,547.89	(259,325.67)	-	(22,110.87)	-	(22,110.87)	1,549,187.62
21	17,217.99	(19,536.68)	-	(1,847.95)	-	(1,847.95)	139,484.86
22	12,335.13	(13,996.26)	-	(1,324.33)	-	(1,324.33)	100,389.88
23	272.97	(309.73)	-	(31.54)	-	(31.54)	2,492.53
24	802.98	(911.11)	-	(109.40)	-	(109.40)	9,408.36
25	36,992.43	(41,974.08)	-	(3,695.54)	-	(3,695.54)	265,336.91
26	52,958.70	(60,090.47)	-	(5,439.39)	-	(5,439.39)	399,908.35
27	9,094.48	(10,319.21)	-	(958.28)	-	(958.28)	74,214.80
28							
29 Sub-Total Kenergy Industrials	\$ 677,617.40	\$ (768,869.88)	\$ -	\$ (68,103.52)	\$ -	\$ (68,103.52)	\$ 4,936,053.69
30							
31	5,609.16	(6,364.53)	-	(623.17)	-	(623.17)	48,085.07
32							
33 TOTAL INDUSTRIALS	\$ 683,226.56	\$ (775,234.41)	\$ -	\$ (68,726.69)	\$ -	\$ (68,726.69)	\$ 4,984,138.76
34							
35 GRAND TOTAL	\$ 2,129,396.20	\$ (2,416,154.85)	\$ (261,689.38)	\$ (68,726.69)	\$ (12.20)	\$ (330,428.27)	\$ 18,547,601.13

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
December 2016**

	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 2016						
2						
3 JP RURALS	129,313	62,837,250	\$ 1,785,165.97	\$ 2,827,676.25	\$ 4,612,842.22	\$ 5.00
4 KENERGY	235,336	114,381,810	3,248,813.48	5,147,181.45	8,395,994.93	-
5 MEADE CO. RURALS	111,052	50,221,930	1,533,072.86	2,259,986.85	3,793,059.71	-
6						
7 TOTAL RURALS	475,701	227,440,990	\$ 6,567,052.31	\$ 10,234,844.55	\$ 16,801,896.86	\$ 5.00
8						
9	5,027	1,801,750	\$ 53,864.31	\$ 68,556.59	\$ 122,420.90	\$ -
10	70	42,700	750.05	1,624.74	2,374.79	-
11	31,432	14,699,350	336,793.88	559,310.27	896,104.15	-
12	1,633	473,260	17,497.60	18,007.54	35,505.14	-
13	11,447	5,016,060	122,654.61	190,861.08	313,515.69	-
14	2,760	778,579	29,573.40	29,624.93	59,198.33	-
15	1,000	300,690	10,715.00	11,441.25	22,156.25	-
16	3,909	876,360	41,884.94	33,345.50	75,230.44	-
17	15,000	11,122,332	160,725.00	423,204.73	583,929.73	-
18	60	12,160	642.90	462.69	1,105.59	-
19	164	59,000	1,757.26	2,244.95	4,002.21	-
20	36,720	25,979,700	393,454.80	988,527.59	1,381,982.39	-
21	4,946	1,932,810	52,996.39	73,543.42	126,539.81	-
22	3,372	971,600	36,130.98	36,969.38	73,100.36	-
23	100	23,660	1,071.50	900.26	1,971.76	-
24	475	204,510	5,089.63	7,781.61	12,871.24	-
25	7,001	4,006,720	75,015.72	152,455.70	227,471.42	-
26	11,126	6,009,160	119,215.09	228,648.54	347,863.63	-
27	2,365	934,730	25,340.98	35,566.48	60,907.46	-
28						
29 Sub-Total Kenergy Industrials	138,607	75,245,131	\$ 1,485,174.04	\$ 2,863,077.25	\$ 4,348,251.29	\$ -
30						
31	3,197	1,074,200	34,255.86	40,873.31	75,129.17	-
32						
33 TOTAL INDUSTRIALS	141,804	76,319,331	\$ 1,519,429.90	\$ 2,903,950.56	\$ 4,423,380.46	\$ -
34						
35 GRAND TOTAL	617,505	303,760,321	\$ 8,086,482.21	\$ 13,138,795.11	\$ 21,225,277.32	\$ 5.00

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
December 2016**

	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 (m)
1 Member Billing December 2016						
2						
3 JP RURALS	\$ -	\$ -	\$ (65,225.07)	\$ 516,885.13	\$ 83,950.57	\$ 5,148,457.85
4 KENERGY	-	-	(118,728.32)	940,800.97	152,814.10	9,370,881.68
5 MEADE CO. RURALS	-	-	(52,130.36)	424,977.47	67,096.50	4,233,003.32
6						
7 TOTAL RURALS	\$ -	\$ -	\$ (236,083.75)	\$ 1,882,663.57	\$ 303,861.17	\$ 18,752,342.85
8						
9	\$ -	\$ -	\$ (1,870.22)	\$ 13,722.15	\$ 2,407.14	\$ 136,679.97
10	460.75	-	(44.32)	266.45	57.05	3,114.72
11	-	-	(15,257.93)	100,494.50	19,638.33	1,000,979.05
12	-	-	(491.24)	3,978.13	632.28	39,624.31
13	-	7,820.86	(5,206.67)	35,155.32	6,701.46	357,986.66
14	-	3,081.42	(808.17)	6,632.45	1,040.18	69,144.21
15	-	1,289.21	(312.12)	2,482.65	401.72	26,017.71
16	-	-	(909.66)	8,424.90	1,170.82	83,916.50
17	-	-	(11,544.98)	65,536.73	14,859.44	652,780.92
18	-	-	(12.62)	123.79	16.25	1,233.01
19	-	-	(61.24)	448.61	78.82	4,468.40
20	-	-	(26,966.93)	155,093.89	34,708.88	1,544,818.23
21	-	-	(2,006.26)	14,186.18	2,582.23	141,301.96
22	-	-	(1,008.52)	8,190.35	1,298.06	81,580.25
23	-	-	(24.56)	220.84	31.61	2,199.65
24	-	-	(212.28)	1,443.24	273.23	14,375.43
25	-	-	(4,158.98)	25,519.17	5,352.98	254,184.59
26	-	-	(6,237.51)	39,021.59	8,028.24	388,675.95
27	2,475.17	-	(970.25)	6,828.39	1,248.80	70,489.57
28						
29 Sub-Total Kenergy Industrials	\$ 2,935.92	\$ 12,191.49	\$ (78,104.46)	\$ 487,769.33	\$ 100,527.52	\$ 4,873,571.09
30						
31	-	-	(1,115.02)	8,420.18	1,435.13	83,869.46
32						
33 TOTAL INDUSTRIALS	\$ 2,935.92	\$ 12,191.49	\$ (79,219.48)	\$ 496,189.51	\$ 101,962.65	\$ 4,957,440.55
34						
35 GRAND TOTAL	\$ 2,935.92	\$ 12,191.49	\$ (315,303.23)	\$ 2,378,853.08	\$ 405,823.82	\$ 23,709,783.40

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
December 2016**

	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	Member Billing December 2016					
2						
3	JP RURALS	\$ 565,535.25	\$ (641,693.99)	\$ (67,744.34)	\$ (67,744.34)	\$ 5,080,713.51
4	KENERGY	1,029,436.29	(1,168,067.03)	(123,304.10)	(123,304.10)	9,247,577.58
5	MEADE CO. RURALS	451,997.37	(512,866.34)	(55,666.47)	(55,666.47)	4,177,336.85
6						
7	TOTAL RURALS	\$ 2,046,968.91	\$ (2,322,627.36)	\$ (246,714.91)	\$ -	\$ (246,714.91)
8						
9		\$ 16,215.75	\$ (18,399.47)	\$ (1,785.04)	\$ (1,785.04)	\$ 134,894.93
10		384.30	(436.05)	(34.83)	(34.83)	3,079.89
11		132,294.15	(150,109.76)	(13,106.05)	(13,106.05)	987,873.00
12		4,259.34	(4,832.93)	(516.40)	(516.40)	39,107.91
13		45,144.54	(51,224.00)	(4,582.01)	(4,582.01)	353,404.65
14		7,007.21	(7,950.85)	(860.73)	(860.73)	68,283.48
15		2,706.21	(3,070.65)	(322.39)	(322.39)	25,695.32
16		7,887.24	(8,949.39)	(1,090.86)	(1,090.86)	82,825.64
17		100,100.99	(113,581.25)	(8,581.01)	(8,581.01)	644,199.91
18		109.44	(124.18)	(16.01)	(16.01)	1,217.00
19		531.00	(602.51)	(58.35)	(58.35)	4,410.05
20		233,817.30	(265,304.70)	(20,299.55)	(20,299.55)	1,524,518.68
21		17,395.29	(19,737.86)	(1,846.96)	(1,846.96)	139,455.00
22		8,744.40	(9,921.98)	(1,063.13)	(1,063.13)	80,517.12
23		212.94	(241.62)	(28.61)	(28.61)	2,171.04
24		1,840.59	(2,088.46)	(188.07)	(188.07)	14,187.36
25		36,060.48	(40,916.62)	(3,334.16)	(3,334.16)	250,850.43
26		54,082.44	(61,365.54)	(5,095.70)	(5,095.70)	383,580.25
27		8,412.57	(9,545.46)	(889.11)	(889.11)	69,600.46
28						
29	Sub-Total Kenergy Industrials	\$ 677,206.18	\$ (768,403.28)	\$ (63,698.97)	\$ (63,698.97)	\$ 4,809,872.12
30						
31		9,667.80	(10,969.73)	(1,094.64)	(1,094.64)	82,774.82
32						
33	TOTAL INDUSTRIALS	\$ 686,873.98	\$ (779,373.01)	\$ -	\$ (64,793.61)	\$ (64,793.61)
34						
35	GRAND TOTAL	\$ 2,733,842.89	\$ (3,102,000.37)	\$ (246,714.91)	\$ (64,793.61)	\$ (311,508.52)

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
January 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 January 2017						
2						
3 JP RURALS	130,583	59,014,610	\$ 1,802,698.32	\$ 2,655,657.45	\$ 4,458,355.77	\$ 5.00
4 KENERGY	238,031	106,768,736	3,286,017.96	4,804,593.12	8,090,611.08	-
5 MEADE CO. RURALS	106,294	46,309,200	1,467,388.67	2,083,914.00	3,551,302.67	-
6						
7 TOTAL RURALS	474,908	212,092,546	\$ 6,556,104.95	\$ 9,544,164.57	\$ 16,100,269.52	\$ 5.00
8						
9	5,058	2,064,480	\$ 54,196.47	\$ 78,553.46	\$ 132,749.93	\$ -
10	70	41,860	750.05	1,592.77	2,342.82	-
11	32,226	17,562,910	345,301.59	668,268.73	1,013,570.32	-
12	1,663	597,690	17,819.05	22,742.10	40,561.15	-
13	11,428	5,135,350	122,451.02	195,400.07	317,851.09	-
14	2,760	916,440	29,573.40	34,870.54	64,443.94	-
15	800	333,820	8,572.00	12,701.85	21,273.85	-
16	3,856	902,170	41,317.04	34,327.57	75,644.61	-
17	15,000	11,101,229	160,725.00	422,401.76	583,126.76	-
18	60	12,270	642.90	466.87	1,109.77	-
19	120	46,620	1,285.80	1,773.89	3,059.69	-
20	36,806	26,104,100	394,376.29	993,261.01	1,387,637.30	-
21	4,971	2,179,080	53,264.27	82,913.99	136,178.26	-
22	3,440	1,468,690	36,859.60	55,883.65	92,743.25	-
23	100	32,890	1,071.50	1,251.46	2,322.96	-
24	475	167,140	5,089.63	6,359.68	11,449.31	-
25	7,409	4,452,960	79,387.44	169,435.13	248,822.57	-
26	11,787	6,313,460	126,297.71	240,227.15	366,524.86	-
27	1,976	881,180	21,172.84	33,528.90	54,701.74	-
28						
29 Sub-Total Kenergy Industrials	140,005	80,314,339	\$ 1,500,153.60	\$ 3,055,960.58	\$ 4,556,114.18	\$ -
30						
31	3,067	575,940	32,862.91	21,914.52	54,777.43	-
32						
33 TOTAL INDUSTRIALS	143,072	80,890,279	\$ 1,533,016.51	\$ 3,077,875.10	\$ 4,610,891.61	\$ -
34						
35 GRAND TOTAL	617,980	292,982,825	\$ 8,089,121.46	\$ 12,622,039.67	\$ 20,711,161.13	\$ 5.00

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
January 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 (m)
1 Member Billing January 2017						
2						
3 JP RURALS	\$ -	\$ -	\$ 38,241.47	\$ 478,999.19	\$ 78,843.52	\$ 5,054,444.95
4 KENERGY	-	-	69,186.14	869,175.74	142,643.03	9,171,615.99
5 MEADE CO. RURALS	-	-	30,008.36	381,401.58	61,869.09	4,024,581.70
6						
7 TOTAL RURALS	\$ -	\$ -	\$ 137,435.97	\$ 1,729,576.51	\$ 283,355.64	\$ 18,250,642.64
8						
9	\$ -	\$ -	\$ 1,337.78	\$ 14,326.28	\$ 2,758.15	\$ 151,172.14
10	460.75	-	27.13	253.96	55.92	3,140.58
11	-	-	11,380.77	109,757.73	23,464.05	1,158,172.87
12	-	-	387.30	4,370.46	798.51	46,117.42
13	2,785.90	12,577.40	3,327.71	34,342.20	6,860.83	377,745.13
14	-	3,307.42	593.85	6,936.93	1,224.36	76,506.50
15	-	1,057.11	216.32	2,296.48	445.98	25,289.74
16	-	-	584.61	8,106.56	1,205.30	85,541.08
17	-	-	7,193.60	63,352.83	14,831.24	668,504.43
18	-	-	7.95	118.73	16.39	1,252.84
19	-	-	30.21	330.00	62.28	3,482.18
20	-	-	16,915.46	150,692.53	34,875.08	1,590,120.37
21	-	-	1,412.04	14,708.99	2,911.25	155,210.54
22	-	-	951.71	10,014.27	1,962.17	105,671.40
23	-	-	21.31	250.02	43.94	2,638.23
24	-	-	108.31	1,233.33	223.30	13,014.25
25	-	-	2,885.52	26,973.93	5,949.15	284,631.17
26	-	-	4,091.12	39,682.52	8,434.78	418,733.28
27	2,357.30	-	571.00	5,909.70	1,177.26	64,717.00
28						
29 Sub-Total Kenergy Industrials	\$ 5,603.95	\$ 16,941.93	\$ 52,043.70	\$ 493,657.45	\$ 107,299.94	\$ 5,231,661.15
30						
31	-	-	373.21	5,854.23	769.46	61,774.33
32						
33 TOTAL INDUSTRIALS	\$ 5,603.95	\$ 16,941.93	\$ 52,416.91	\$ 499,511.68	\$ 108,069.40	\$ 5,293,435.48
34						
35 GRAND TOTAL	\$ 5,603.95	\$ 16,941.93	\$ 189,852.88	\$ 2,229,088.19	\$ 391,425.04	\$ 23,544,078.12

Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
January 2017

	Expense Mitigation Adjustment (EMA) (m)	MRSMS Fuel Roll-In Adjustment (n)	MRSMS - ER Transmission Rural Adjustment (o)	MRSMS - ER Transmission Industrial Adjustment (p)	Total Adjustments for ER & RER on Power Bill (q) = (o) + (p)	Revenue Net of MRSMS Adjustments (r) = (l) + (q)
1 Member Billing January 2017						
2						
3 JP RURALS	\$ 531,131.49	\$ (602,657.19)	\$ (71,764.28)		\$ (71,764.28)	\$ 4,982,680.67
4 KENERGY	960,918.62	(1,090,322.32)	(130,149.14)		(130,149.14)	9,041,466.85
5 MEADE CO. RURALS	416,782.80	(472,909.54)	(56,987.69)		(56,987.69)	3,967,594.01
6						
7 TOTAL RURALS	\$ 1,908,832.91	\$ (2,165,889.05)	\$ (258,901.11)	\$ -	\$ (258,901.11)	\$ 17,991,741.53
8						
9	\$ 18,580.32	\$ (21,082.47)		\$ (1,900.40)	\$ (1,900.40)	\$ 149,271.74
10	376.74	(427.47)		(34.71)	(34.71)	3,105.87
11	158,066.19	(179,352.44)		(14,899.31)	(14,899.31)	1,143,273.56
12	5,379.21	(6,103.61)		(573.49)	(573.49)	45,543.93
13	46,218.15	(52,442.19)		(4,591.83)	(4,591.83)	373,153.30
14	8,247.96	(9,358.69)		(904.01)	(904.01)	75,602.49
15	3,004.38	(3,408.97)		(305.19)	(305.19)	24,984.55
16	8,119.53	(9,212.96)		(1,023.59)	(1,023.59)	84,517.49
17	99,911.06	(113,365.75)		(8,787.51)	(8,787.51)	659,716.92
18	110.43	(125.30)		(14.80)	(14.80)	1,238.04
19	419.58	(476.08)		(43.59)	(43.59)	3,438.59
20	234,936.90	(266,575.07)		(20,843.50)	(20,843.50)	1,569,276.87
21	19,611.72	(22,252.76)		(1,962.74)	(1,962.74)	153,247.80
22	13,218.21	(14,998.26)		(1,333.39)	(1,333.39)	104,338.01
23	296.01	(335.87)		(32.55)	(32.55)	2,605.68
24	1,504.26	(1,706.83)		(161.54)	(161.54)	12,852.71
25	40,076.64	(45,473.63)		(3,688.24)	(3,688.24)	280,942.93
26	56,821.14	(64,473.05)		(5,379.72)	(5,379.72)	413,353.56
27	7,930.62	(8,998.61)		(789.68)	(789.68)	63,927.32
28						
29 Sub-Total Kenergy Industrials	\$ 722,829.05	\$ (820,170.01)		\$ (67,269.79)	\$ (67,269.79)	\$ 5,164,391.36
30						
31	5,183.46	(5,881.50)		(724.48)	(724.48)	61,049.85
32						
33 TOTAL INDUSTRIALS	\$ 728,012.51	\$ (826,051.51)	\$ -	\$ (67,994.27)	\$ (67,994.27)	\$ 5,225,441.21
34						
35 GRAND TOTAL	\$ 2,636,845.42	\$ (2,991,940.56)	\$ (258,901.11)	\$ (67,994.27)	\$ (326,895.38)	\$ 23,217,182.74

Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
February 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 February 2017						
2						
3 JP RURALS	105,333	45,570,310	\$ 1,454,122.07	\$ 2,050,663.95	\$ 3,504,786.02	\$ 5.00
4 KENERGY	196,073	82,801,520	2,706,787.77	3,726,068.40	6,432,856.17	-
5 MEADE CO. RURALS	91,548	35,102,820	1,263,820.14	1,579,626.90	2,843,447.04	-
6						
7 TOTAL RURALS	392,954	163,474,650	\$ 5,424,729.98	\$ 7,356,359.25	\$ 12,781,089.23	\$ 5.00
8						
9	5,005	1,932,550	\$ 53,628.58	\$ 73,533.53	\$ 127,162.11	\$ -
10	68	36,190	728.62	1,377.03	2,105.65	-
11	32,460	16,416,890	347,808.90	624,662.66	972,471.56	-
12	1,693	534,340	18,140.50	20,331.64	38,472.14	-
13	11,384	4,606,800	121,979.56	175,288.74	297,268.30	-
14	2,760	747,800	29,573.40	28,453.79	58,027.19	-
15	800	296,890	8,572.00	11,296.66	19,868.66	-
16	3,815	697,280	40,877.73	26,531.50	67,409.23	-
17	15,000	10,060,612	160,725.00	382,806.29	543,531.29	-
18	60	10,800	642.90	410.94	1,053.84	-
19	120	35,860	1,285.80	1,364.47	2,650.27	-
20	37,022	22,576,840	396,690.73	859,048.76	1,255,739.49	-
21	4,860	2,002,220	52,074.90	76,184.47	128,259.37	-
22	3,478	1,302,890	37,266.77	49,574.96	86,841.73	-
23	113	42,200	1,210.80	1,605.71	2,816.51	-
24	250	73,110	2,678.75	2,781.84	5,460.59	-
25	7,076	3,928,000	75,819.34	149,460.40	225,279.74	-
26	11,956	6,024,270	128,108.54	229,223.47	357,332.01	-
27	2,297	843,120	24,612.36	32,080.72	56,693.08	-
28						
29 Sub-Total Kenergy Industrials	140,217	72,168,662	\$ 1,502,425.18	\$ 2,746,017.58	\$ 4,248,442.76	\$ -
30						
31	1,825	484,690	19,554.88	18,442.45	37,997.33	-
32						
33 TOTAL INDUSTRIALS	142,042	72,653,352	\$ 1,521,980.06	\$ 2,764,460.03	\$ 4,286,440.09	\$ -
34						
35 GRAND TOTAL	534,996	236,128,002	\$ 6,946,710.04	\$ 10,120,819.28	\$ 17,067,529.32	\$ 5.00

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

Member Billing February 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 (m)
1						
2						
3	\$ -	\$ -	\$ 61,474.35	\$ 299,988.32	\$ 60,881.93	\$ 3,927,135.62
4	-	-	111,699.25	550,426.63	110,622.83	7,205,604.88
5	-	-	47,353.70	242,966.79	46,897.37	3,180,664.90
6						
7	\$ -	\$ -	\$ 220,527.30	\$ 1,093,381.74	\$ 218,402.13	\$ 14,313,405.40
8						
9	-	-	2,607.01	10,946.29	2,581.89	143,297.30
10	557.18	-	48.82	182.19	48.35	2,942.19
11	-	-	22,146.38	84,075.39	21,932.97	1,100,626.30
12	-	-	720.82	3,300.56	713.88	43,207.40
13	-	19,770.64	6,214.57	25,609.04	6,154.68	355,017.23
14	-	2,812.18	1,008.78	4,965.29	999.06	67,812.50
15	-	861.39	400.50	1,709.20	396.65	23,236.40
16	-	-	940.63	5,730.03	931.57	75,011.46
17	-	-	13,571.77	47,187.71	13,440.98	617,731.75
18	-	-	14.57	89.56	14.43	1,172.40
19	-	-	48.38	227.16	47.91	2,973.72
20	-	-	30,456.16	108,871.41	30,162.66	1,425,229.72
21	-	-	2,700.99	11,052.51	2,674.97	144,687.84
22	-	-	1,757.60	7,471.71	1,740.66	97,811.70
23	-	-	56.93	242.32	56.38	3,172.14
24	-	(4,028.85)	98.63	134.65	97.67	1,762.69
25	-	-	5,298.87	19,504.38	5,247.81	255,330.80
26	-	-	8,126.74	30,891.48	8,048.42	404,398.65
27	2,078.71	-	1,137.37	4,876.12	1,126.41	65,911.69
28						
29	\$ 2,635.89	\$ 19,415.36	\$ 97,355.52	\$ 367,067.00	\$ 96,417.35	\$ 4,831,333.88
30						
31	-	-	653.85	3,250.26	647.55	42,548.99
32						
33	\$ 2,635.89	\$ 19,415.36	\$ 98,009.37	\$ 370,317.26	\$ 97,064.90	\$ 4,873,882.87
34						
35	\$ 2,635.89	\$ 19,415.36	\$ 318,536.67	\$ 1,463,699.00	\$ 315,467.03	\$ 19,187,288.27

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

	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 Member Billing February 2017						
2						
3 JP RURALS	\$ 410,132.79	\$ (465,364.00)	\$ (71,351.77)		\$ (71,351.77)	\$ 3,855,783.85
4 KENERGY	745,213.68	(845,569.11)	(130,562.01)		(130,562.01)	7,075,042.87
5 MEADE CO. RURALS	315,925.38	(358,469.99)	(56,997.50)		(56,997.50)	3,123,667.40
6						
7 TOTAL RURALS	\$ 1,471,271.85	\$ (1,669,403.10)	\$ (258,911.28)	\$ -	\$ (258,911.28)	\$ 14,054,494.12
8						
9	\$ 17,392.95	\$ (19,735.20)		\$ (1,942.64)	\$ (1,942.64)	\$ 141,354.66
10	325.71	(369.57)		(33.59)	(33.59)	2,908.60
11	147,752.01	(167,649.28)		(15,413.34)	(15,413.34)	1,085,212.96
12	4,809.06	(5,456.68)		(570.61)	(570.61)	42,636.79
13	41,461.20	(47,044.64)		(4,571.62)	(4,571.62)	350,445.61
14	6,730.20	(7,636.53)		(840.87)	(840.87)	66,971.63
15	2,672.01	(3,031.84)		(301.80)	(301.80)	22,934.60
16	6,275.52	(7,120.62)		(918.52)	(918.52)	74,092.94
17	90,545.51	(102,738.97)		(8,915.77)	(8,915.77)	608,815.98
18	97.20	(110.29)		(14.32)	(14.32)	1,158.08
19	322.74	(366.20)		(38.98)	(38.98)	2,934.74
20	203,191.56	(230,554.69)		(20,371.71)	(20,371.71)	1,404,858.01
21	18,019.98	(20,446.67)		(1,977.43)	(1,977.43)	142,710.41
22	11,726.01	(13,305.11)		(1,320.93)	(1,320.93)	96,490.77
23	379.80	(430.95)		(42.82)	(42.82)	3,129.32
24	657.99	(746.60)		(39.33)	(39.33)	1,723.36
25	35,352.00	(40,112.74)		(3,613.10)	(3,613.10)	251,717.70
26	54,218.43	(61,519.85)		(5,660.85)	(5,660.85)	398,737.80
27	7,588.08	(8,609.94)		(859.80)	(859.80)	65,051.89
28						
29 Sub-Total Kenergy Industrials	\$ 649,517.96	\$ (736,986.37)		\$ (67,448.03)	\$ (67,448.03)	\$ 4,763,885.85
30						
31	4,362.21	(4,949.65)		(548.92)	(548.92)	42,000.07
32						
33 TOTAL INDUSTRIALS	\$ 653,880.17	\$ (741,936.02)	\$ -	\$ (67,996.95)	\$ (67,996.95)	\$ 4,805,885.92
34						
35 GRAND TOTAL	\$ 2,125,152.02	\$ (2,411,339.12)	\$ (258,911.28)	\$ (67,996.95)	\$ (326,908.23)	\$ 18,860,380.04

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
March 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 March 2017						
2						
3 JP RURALS	107,112	47,266,200	\$ 1,478,681.16	\$ 2,126,979.00	\$ 3,605,660.16	\$ 5.00
4 KENERGY	203,306	86,199,380	2,806,639.33	3,878,972.10	6,685,611.43	-
5 MEADE CO. RURALS	98,171	36,316,726	1,355,250.66	1,634,252.67	2,989,503.33	-
6						
7 TOTAL RURALS	408,589	169,782,306	\$ 5,640,571.15	\$ 7,640,203.77	\$ 13,280,774.92	\$ 5.00
8						
9	4,967	2,239,740	\$ 53,221.41	\$ 85,222.11	\$ 138,443.52	\$ -
10	68	40,720	728.62	1,549.40	2,278.02	-
11	31,946	17,784,050	342,301.39	676,683.10	1,018,984.49	-
12	1,691	583,440	18,119.07	22,199.89	40,318.96	-
13	11,246	4,601,560	120,500.89	175,089.36	295,590.25	-
14	2,760	713,870	29,573.40	27,162.75	56,736.15	-
15	800	294,560	8,572.00	11,208.01	19,780.01	-
16	3,821	690,960	40,942.02	26,291.03	67,233.05	-
17	15,000	9,894,337	160,725.00	376,479.52	537,204.52	-
18	60	11,480	642.90	436.81	1,079.71	-
19	113	37,020	1,210.80	1,408.61	2,619.41	-
20	37,022	25,833,410	396,690.73	983,151.50	1,379,842.23	-
21	4,942	2,174,300	52,953.53	82,732.12	135,685.65	-
22	3,515	1,425,600	37,663.23	54,244.08	91,907.31	-
23	107	57,720	1,146.51	2,196.25	3,342.76	-
24	250	65,480	2,678.75	2,491.51	5,170.26	-
25	6,872	4,126,050	73,633.48	156,996.20	230,629.68	-
26	11,923	6,857,200	127,754.95	260,916.46	388,671.41	-
27	2,280	1167440	24,430.20	44,421.09	68,851.29	-
28						
29 Sub-Total Kenergy Industrials	139,383	78,603,937	\$ 1,493,488.88	\$ 2,990,879.80	\$ 4,484,368.68	\$ -
30						
31	1,782	356,410	19,094.13	13,561.40	32,655.53	-
32						
33 TOTAL INDUSTRIALS	141,165	78,960,347	\$ 1,512,583.01	\$ 3,004,441.20	\$ 4,517,024.21	\$ -
34						
35 GRAND TOTAL	549,754	248,742,653	\$ 7,153,154.16	\$ 10,644,644.97	\$ 17,797,799.13	\$ 5.00

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
March 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 (m)	
1	Member Billing March 2017						
2							
3	JP RURALS	\$ -	\$ -	\$ 81,534.20	\$ 224,095.57	\$ 63,147.64	\$ 3,974,442.57
4	KENERGY	-	-	148,693.93	415,254.12	115,162.37	7,364,721.85
5	MEADE CO. RURALS	-	-	62,646.35	185,275.41	48,519.15	3,285,944.24
6							
7	TOTAL RURALS	\$ -	\$ -	\$ 292,874.48	\$ 824,625.10	\$ 226,829.16	\$ 14,625,108.66
8							
9		\$ -	\$ -	\$ 3,863.55	\$ 8,682.13	\$ 2,992.29	\$ 153,981.49
10		407.17	-	70.24	143.57	54.40	2,953.40
11		-	-	30,677.49	64,140.55	23,759.49	1,137,562.02
12		-	-	1,006.43	2,515.91	779.48	44,620.78
13		-	13,590.61	7,937.69	18,504.16	6,147.68	341,770.39
14		-	2,431.85	1,231.43	3,520.75	953.73	64,873.91
15		-	1,273.81	508.12	1,235.80	393.53	23,191.27
16		-	-	1,191.91	4,143.78	923.12	73,491.86
17		-	-	17,067.73	33,909.50	13,218.83	601,400.58
18		-	-	19.80	66.62	15.34	1,181.47
19		-	-	63.86	163.29	49.46	2,896.02
20		-	-	44,571.26	87,176.20	34,520.12	1,546,109.81
21		6,621.87	-	3,750.67	8,505.37	2,904.86	157,468.42
22		-	-	2,459.16	5,752.52	1,904.60	102,023.59
23		-	-	99.57	210.30	77.11	3,729.74
24		-	-	112.95	320.92	87.48	5,691.61
25		-	-	7,117.44	14,535.58	5,512.40	257,795.10
26		-	-	11,828.67	24,478.64	9,161.22	434,139.94
27		2,378.73	-	2,013.83	4,327.63	1,559.70	79,131.18
28							
29	Sub-Total Kenergy Industrials	\$ 9,407.77	\$ 17,296.27	\$ 135,591.80	\$ 282,333.22	\$ 105,014.84	\$ 5,034,012.58
30							
31		-	-	614.81	2,016.47	476.16	35,762.97
32							
33	TOTAL INDUSTRIALS	\$ 9,407.77	\$ 17,296.27	\$ 136,206.61	\$ 284,349.69	\$ 105,491.00	\$ 5,069,775.55
34							
35	GRAND TOTAL	\$ 9,407.77	\$ 17,296.27	\$ 429,081.09	\$ 1,108,974.79	\$ 332,320.16	\$ 19,694,884.21

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

	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 Member Billing March 2017						
2						
3 JP RURALS	\$ 425,395.80	\$ (482,682.42)	\$ (64,550.63)		\$ (64,550.63)	\$ 3,909,891.94
4 KENERGY	775,794.42	(880,268.06)	(118,889.77)		(118,889.77)	7,245,832.08
5 MEADE CO. RURALS	326,850.53	(370,866.40)	(51,925.89)		(51,925.89)	3,234,018.35
6						
7 TOTAL RURALS	\$ 1,528,040.75	\$ (1,733,816.88)	\$ (235,366.29)	\$ -	\$ (235,366.29)	\$ 14,389,742.37
8						
9	\$ 20,157.66	\$ (22,872.22)		\$ (1,827.17)	\$ (1,827.17)	\$ 152,154.32
10	366.48	(415.83)		(31.50)	(31.50)	2,921.90
11	160,056.45	(181,610.72)		(13,933.72)	(13,933.72)	1,123,628.30
12	5,250.96	(5,958.09)		(506.41)	(506.41)	44,114.37
13	41,414.04	(46,991.13)		(3,833.76)	(3,833.76)	337,936.63
14	6,424.83	(7,290.04)		(672.59)	(672.59)	64,201.32
15	2,651.04	(3,008.05)		(251.55)	(251.55)	22,939.72
16	6,218.64	(7,056.08)		(739.13)	(739.13)	72,752.73
17	89,049.03	(101,040.97)		(7,539.55)	(7,539.55)	593,861.03
18	103.32	(117.23)		(12.01)	(12.01)	1,169.46
19	333.18	(378.05)		(32.57)	(32.57)	2,863.45
20	232,545.69	(263,861.84)		(19,524.25)	(19,524.25)	1,526,585.56
21	19,568.70	(22,203.95)		(1,783.00)	(1,783.00)	155,685.42
22	12,830.40	(14,558.23)		(1,190.10)	(1,190.10)	100,833.49
23	519.48	(589.44)		(45.47)	(45.47)	3,684.27
24	589.32	(668.68)		(61.45)	(61.45)	5,630.16
25	37,134.45	(42,135.22)		(3,191.37)	(3,191.37)	254,603.73
26	61,714.80	(70,025.73)		(5,342.32)	(5,342.32)	423,797.62
27	10,506.96	(11,921.90)		(928.70)	(928.70)	78,202.48
28						
29 Sub-Total Kenergy Industrials	\$ 707,435.43	\$ (802,703.40)		\$ (61,446.62)	\$ (61,446.62)	\$ 4,972,565.96
30						
31	3,207.69	(3,639.66)		(366.77)	(366.77)	35,396.20
32						
33 TOTAL INDUSTRIALS	\$ 710,643.12	\$ (806,343.06)	\$ -	\$ (61,813.39)	\$ (61,813.39)	\$ 5,007,962.16
34						
35 GRAND TOTAL	\$ 2,238,683.87	\$ (2,540,159.94)	\$ (235,366.29)	\$ (61,813.39)	\$ (297,179.68)	\$ 19,397,704.53

**Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
April 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 April 2017						
2						
3 JP RURALS	91,201	41,009,391	\$ 1,259,029.81	\$ 1,845,422.60	\$ 3,104,452.41	\$ 5.00
4 KENERGY	152,818	73,737,670	2,109,652.49	3,318,195.15	5,427,847.64	-
5 MEADE CO. RURALS	55,490	28,423,412	766,039.45	1,279,053.54	2,045,092.99	-
6						
7 TOTAL RURALS	299,509	143,170,473	\$ 4,134,721.75	\$ 6,442,671.29	\$ 10,577,393.04	\$ 5.00
8						
9	5,284	2,078,800	\$ 56,618.06	\$ 79,098.34	\$ 135,716.40	\$ -
10	63	34,780	675.05	1,323.38	1,998.43	-
11	30,645	17,178,800	328,361.18	653,653.34	982,014.52	-
12	1,706	509,890	18,279.79	19,401.31	37,681.10	-
13	10,653	3,635,390	114,146.90	138,326.59	252,473.49	-
14	2,760	811,630	29,573.40	30,882.52	60,455.92	-
15	800	293,150	8,572.00	11,154.36	19,726.36	-
16	3,544	575,220	37,973.96	21,887.12	59,861.08	-
17	15,000	10,745,744	160,725.00	408,875.56	569,600.56	-
18	60	10,820	642.90	411.70	1,054.60	-
19	100	26,490	1,071.50	1,007.94	2,079.44	-
20	37,454	23,999,990	401,319.61	913,199.62	1,314,519.23	-
21	4,621	1,872,690	49,514.02	71,255.85	120,769.87	-
22	3,364	1,047,870	36,045.26	39,871.45	75,916.71	-
23	100	43,990	1,071.50	1,673.82	2,745.32	-
24	250	40,800	2,678.75	1,552.44	4,231.19	-
25	7,182	3,958,650	76,955.13	150,626.63	227,581.76	-
26	13,038	6,759,980	139,702.17	257,217.24	396,919.41	-
27	1,973	967,850	21,140.70	36,826.69	57,967.39	-
28						
29 Sub-Total Kenergy Industrials	138,597	74,592,534	\$ 1,485,066.88	\$ 2,838,245.90	\$ 4,323,312.78	\$ -
30						
31	1,793	555,581	19,212.00	21,139.86	40,351.86	-
32						
33 TOTAL INDUSTRIALS	140,390	75,148,115	\$ 1,504,278.88	\$ 2,859,385.76	\$ 4,363,664.64	\$ -
34						
35 GRAND TOTAL	439,899	218,318,588	\$ 5,639,000.63	\$ 9,302,057.05	\$ 14,941,057.68	\$ 5.00

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

Member Billing April 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 (m)	
1							
2							
3	JP RURALS	\$ -	\$ -	\$ 37,441.57	\$ 231,131.59	\$ 54,788.55	\$ 3,427,819.12
4	KENERGY	-	-	67,322.49	404,443.35	98,513.53	5,998,127.01
5	MEADE CO. RURALS	-	-	25,950.58	152,489.50	37,973.68	2,261,506.75
6							
7	TOTAL RURALS	\$ -	\$ -	\$ 130,714.64	\$ 788,064.44	\$ 191,275.76	\$ 11,687,452.88
8							
9		\$ -	\$ -	\$ 1,897.94	\$ 10,150.82	\$ 2,777.28	\$ 150,542.44
10		642.90	-	31.75	150.15	46.47	2,869.70
11		-	(20,232.06)	15,684.24	72,333.77	22,950.88	1,072,751.35
12		-	-	465.53	2,807.39	681.21	41,635.23
13		-	10,477.46	3,319.11	18,845.89	4,856.88	289,972.83
14		-	2,699.95	741.02	4,503.16	1,084.34	69,484.39
15		-	899.59	267.65	1,473.96	391.65	22,759.21
16		428.60	-	525.18	4,421.71	768.49	66,005.06
17		-	-	9,810.86	42,931.53	14,356.31	636,699.26
18		-	-	9.88	78.01	14.46	1,156.95
19		-	-	24.19	154.66	35.39	2,293.68
20		-	-	21,911.99	98,947.10	32,063.99	1,467,442.31
21		-	-	1,709.77	9,036.61	2,501.91	134,018.16
22		-	-	956.71	5,659.44	1,399.95	83,932.81
23		-	-	40.16	205.65	58.77	3,049.90
24		-	-	37.25	312.56	54.51	4,635.51
25		-	-	3,614.25	17,098.70	5,288.76	253,583.47
26		-	-	6,171.86	29,797.94	9,031.33	441,920.54
27		2,946.63	-	883.65	4,348.63	1,293.05	67,439.35
28							
29	Sub-Total Kenergy Industrials	\$ 4,018.13	\$ (6,155.06)	\$ 68,102.99	\$ 323,257.68	\$ 99,655.63	\$ 4,812,192.15
30							
31		-	-	507.25	3,007.93	742.26	44,609.30
32							
33	TOTAL INDUSTRIALS	\$ 4,018.13	\$ (6,155.06)	\$ 68,610.24	\$ 326,265.61	\$ 100,397.89	\$ 4,856,801.45
34							
35	GRAND TOTAL	\$ 4,018.13	\$ (6,155.06)	\$ 199,324.88	\$ 1,114,330.05	\$ 291,673.65	\$ 16,544,254.33

Big Rivers Electric Corporation
Monthly Billing Summary
Sales to Members
April 2017

Member Billing April 2017	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	\$ 369,084.52	\$ (418,787.89)	\$ (75,281.91)	\$ (75,281.91)	\$ 3,352,537.21	
4	KENERGY	663,639.03	(753,009.08)	(132,725.41)	(132,725.41)	5,865,401.60	
5	MEADE CO. RURALS	255,810.71	(290,259.87)	(50,354.66)	(50,354.66)	2,211,152.09	
6							
7	TOTAL RURALS	\$ 1,288,534.26	\$ (1,462,056.84)	\$ (258,361.98)	\$ -	\$ (258,361.98)	\$ 11,429,090.90
8							
9		\$ 18,709.20	\$ (21,228.71)	\$ (2,034.13)	\$ (2,034.13)	\$ 148,508.31	
10		313.02	(355.17)	(31.28)	(31.28)	2,838.42	
11		154,609.20	(175,429.91)	(15,196.86)	(15,196.86)	1,057,554.49	
12		4,589.01	(5,207.00)	(543.27)	(543.27)	41,091.96	
13		32,718.51	(37,124.60)	(3,710.05)	(3,710.05)	286,262.78	
14		7,304.67	(8,288.37)	(869.59)	(869.59)	68,614.80	
15		2,638.35	(2,993.65)	(292.78)	(292.78)	22,466.43	
16		5,176.98	(5,874.15)	(788.06)	(788.06)	65,217.00	
17		96,711.70	(109,735.54)	(9,182.76)	(9,182.76)	627,516.50	
18		97.38	(110.49)	(14.10)	(14.10)	1,142.85	
19		238.41	(270.52)	(29.45)	(29.45)	2,264.23	
20		215,999.91	(245,087.90)	(20,936.71)	(20,936.71)	1,446,505.60	
21		16,854.21	(19,123.91)	(1,817.40)	(1,817.40)	132,200.76	
22		9,430.83	(10,700.85)	(1,101.13)	(1,101.13)	82,831.68	
23		395.91	(449.23)	(41.76)	(41.76)	3,008.14	
24		367.20	(416.65)	(55.74)	(55.74)	4,579.77	
25		35,627.85	(40,425.73)	(3,562.01)	(3,562.01)	250,021.46	
26		60,839.82	(69,032.92)	(6,166.35)	(6,166.35)	435,754.19	
27		8,710.65	(9,883.68)	(894.36)	(894.36)	66,544.99	
28							
29	Sub-Total Kenergy Industrials	\$ 671,332.81	\$ (761,738.98)	\$ (67,267.79)	\$ (67,267.79)	\$ 4,744,924.36	
30							
31		5,000.23	(5,673.59)	(584.83)	(584.83)	44,024.47	
32							
33	TOTAL INDUSTRIALS	\$ 676,333.04	\$ (767,412.57)	\$ -	\$ (67,852.62)	\$ (67,852.62)	\$ 4,788,948.83
34							
35	GRAND TOTAL	\$ 1,964,867.30	\$ (2,229,469.41)	\$ (258,361.98)	\$ (67,852.62)	\$ (326,214.60)	\$ 16,218,039.73

**Big Rivers Electric Corporation
Monthly Billing Summary
Other Sales
November 2016**

1	November 2016 - Other Sales	KWH	AMOUNT
2			
3	SPECIAL SALES TO RUS BORROWERS:		
4	KENERGY-DOMTAR COGEN	4,659,080	\$ 161,649.53
5	HOOSIER ENERGY RURAL ELECTRIC COOPERATIVE - CAPACITY SALES		387,500.00
6			
7	TOTAL SPECIAL SALES TO RUS BORROWERS	4,659,080	\$ 549,149.53
8			
9	TO OTHER THAN RUS BORROWERS:		
10	ADM INVESTOR SERVICES		\$ (771,623.00)
11	INDIANA MUNICIPAL POWER AGENCY - CAPACITY SALES		75,000.00
12	MISO	352,903,028	9,055,738.78
13	MISO - CAPACITY SALES		330,897.00
14	MORGAN STANLEY CAPITAL GROUP		
15	NEXTERA ENERGY POWER MARKETING	177,600,000	5,563,440.00
16	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		37,500.00
17	PJM INTERCONNECTION		53.19
18			
19	TOTAL TO OTHER THAN RUS BORROWERS	530,503,028	\$ 14,291,005.97
20			
21	TOTAL	535,162,108	\$ 14,840,155.50

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**Big Rivers Electric Corporation
 Monthly Billing Summary
 Other Sales
 December 2016**

1	December 2016 - Other Sales	KWH	AMOUNT
2			
3	SPECIAL SALES TO RUS BORROWERS:		
4	KENERGY-DOMTAR COGEN	8,168,974	\$ 346,652.99
5	HOOSIER ENERGY RURAL ELECTRIC COOPERATIVE - CAPACITY SALES		387,500.00
6			
7	TOTAL SPECIAL SALES TO RUS BORROWERS	8,168,974	\$ 734,152.99
8			
9	TO OTHER THAN RUS BORROWERS:		
10	ADM INVESTOR SERVICES		\$ (760,040.00)
11	INDIANA MUNICIPAL POWER AGENCY - CAPACITY SALES		75,000.00
12	MISO	264,508,996	8,195,832.91
13	MISO-CAPACITY SALES		341,926.90
14	NEXTERA ENERGY POWER MARKETING	182,400,000	5,697,480.00
15	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		37,500.00
16			
17	TOTAL TO OTHER THAN RUS BORROWERS	446,908,996	\$ 13,587,699.81
18			
19	TOTAL	455,077,970	\$ 14,321,852.80

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

1	January 2017 - Other Sales	KWH	AMOUNT
2			
3	SPECIAL SALES TO RUS BORROWERS:		
4	KENERGY-DOMTAR COGEN	5,467,235	\$ 209,189.48
5	HOOSIER ENERGY RURAL ELECTRIC COOPERATIVE - CAPACITY SALES		\$ 387,500.00
6			
7	TOTAL SPECIAL SALES TO RUS BORROWERS	5,467,235	\$ 596,689.48
8			
9	TO OTHER THAN RUS BORROWERS:		
10	DTE ENERGY TRADING	18,600,000	\$ 574,740.00
11	EDF TRADING NORTH AMERICA	70,600,000	\$ 2,221,540.00
12	INDIANA MUNICIPAL POWER AGENCY - CAPACITY SALES		\$ 75,000.00
13	MISO	401,919,160	\$ 11,205,314.88
14	MISO - CAPACITY SALES		\$ 341,926.90
15	MORGAN STANLEY CAPITAL GROUP	130,200,000	\$ 3,950,640.00
16	MORGAN STANLEY CAPITAL GROUP - CAPACITY SALES		\$ 73,800.00
17	NEXTERA ENERGY POWER MARKETING	152,400,000	\$ 4,859,460.00
18	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		\$ 37,500.00
19			
20	TOTAL TO OTHER THAN RUS BORROWERS	773,719,160	\$ 23,339,921.78
21			
22	TOTAL	1,552,905,555	\$ 47,276,533.04

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

1	February 2017 - Other Sales	KWH	AMOUNT
2			
3	SPECIAL SALES TO RUS BORROWERS:		
4	KENERGY-DOMTAR COGEN	5,467,235	\$ 209,189.48
5	HOOSIER ENERGY RURAL-ELECTRIC COOPERATIVE - CAPACITY SALES		\$ 387,500.00
6			
7	TOTAL SPECIAL SALES TO RUS BORROWERS	5,467,235	\$ 596,689.48
8			
9	TO OTHER THAN RUS BORROWERS:		
10	DTE ENERGY TRADING	18,600,000	\$ 574,740.00
11	EDF TRADING NORTH AMERICA	70,600,000	\$ 2,221,540.00
12	INDIANA MUNICIPAL POWER AGENCY - CAPACITY SALES		\$ 75,000.00
13	MISO	401,919,160	\$ 11,205,314.88
14	MISO - CAPACITY SALES		\$ 341,926.90
15	MORGAN STANLEY CAPITAL GROUP	130,200,000	\$ 3,950,640.00
16	MORGAN STANLEY CAPITAL GROUP - CAPACITY SALES		\$ 73,800.00
17	NEXTERA ENERGY POWER MARKETING	152,400,000	\$ 4,859,460.00
18	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		\$ 37,500.00
19			
20	TOTAL TO OTHER THAN RUS BORROWERS	773,719,160	\$ 23,339,921.78
21			
22	TOTAL	779,186,395	23,936,611.26

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

1	March 2017 - Other Sales	KWH	AMOUNT
2			
3	SPECIAL SALES TO RUS BORROWERS:		
4	KENERGY-DOMTAR COGEN	5,948,174	\$ 194,444.70
5	HOOSIER ENERGY RURAL ELECTRIC COOP-CAPACITY SALES		\$ 387,500.00
6			
7	TOTAL SPECIAL SALES TO RUS BORROWERS	5,948,174	\$ 581,944.70
8			
9	TO OTHER THAN RUS BORROWERS:		
10	ADM INVESTOR SERVICES		\$ (24,186.00)
11	DTE ENERGY TRADING	16,800,000	\$ 519,120.00
12	EDF TRADING NORTH AMERICA	65,800,000	\$ 2,073,820.00
13	INDIANA MUNICIPAL POWER AGENCY-CAPACITY SALES		\$ 75,000.00
14	MISO	141,041,628	\$ 3,566,458.34
15	MISO-CAPACITY SALES		\$ 308,837.20
16	MORGAN STANLEY CAPITAL GROUP	117,600,000	\$ 3,568,320.00
17	MORGAN STANLEY CAPITAL GROUP - CAPACITY SALES		\$ 73,800.00
18	NEXTERA ENERGY POWER MARKETING	136,000,000	\$ 4,343,440.00
19	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		\$ 37,500.00
20			
21	TOTAL TO OTHER THAN RUS BORROWERS	477,241,628	\$ 14,542,109.54
22			
23	TOTAL	483,189,802	\$ 15,124,054.24

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

1	April 2017 - Other Sales	KWH	AMOUNT
2			
3	SPECIAL SALES TO RUS BORROWERS:		
4	KENERGY-DOMTAR COGEN	3,223,051	\$ 133,646.37
5	HOOSIER ENERGY RURAL ELECTRIC COOPERATIVE - CAPACITY SALES		\$ 387,500.00
6			
7	TOTAL SPECIAL SALES TO RUS BORROWERS	3,223,051	\$ 521,146.37
8			
9	TO OTHER THAN RUS BORROWERS:		
10	ADM INVESTOR SERVICES		\$ 84,238.00
11	DTE ENERGY TRADING	18,000,000	\$ 556,200.00
12	EDF TRADING NORTH AMERICA	68,000,000	\$ 2,139,200.00
13	HENDERSON MUNICIPAL POWER & LIGHT	479,000	\$ 15,966.72
14	INDIANA MUNICIPAL POWER AGENCY - CAPACITY SALES		\$ 75,000.00
15	MISO	42,535,831	\$ 1,234,710.84
16	MISO - CAPACITY SALES		\$ 330,897.00
17	MORGAN STANLEY CAPITAL GROUP	126,000,000	\$ 3,823,200.00
18	NEXTERA ENERGY POWER MARKETING	68,000,000	\$ 2,219,000.00
19	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		\$ 37,500.00
20			
21	TOTAL TO OTHER THAN RUS BORROWERS	323,014,831	\$ 10,515,912.56
22			
23	TOTAL	326,237,882	\$ 11,037,058.93

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BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 7)** *List Big Rivers' scheduled, actual, and forced outages from*
2 *November 1, 2016, through April 30, 2017.*

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, 2016 thru April 30, 2017

Big Rivers Electric Corporation
Reid Station Unit #1 - Coal - 65MW Net
 November-1-2016 thru April-30-2017

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 2016		No Outages							Following MISO approval of the Attachment Y Suspension Notice, Reid Unit 1 was idled effective 1-Apr-2016 and has not yet been restarted.
December 2016		No Outages							
January 2017		No Outages							
February 2017		No Outages							
March 2017		No Outages							
April 2017		No Outages							

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017

Big Rivers Electric Corporation
Reid Station Unit #2 - Combustion Turbine - Oil/Gas - 65MW Net
 November-1-2016 thru April-30-2017

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 2016		No Outages								
December 2016	S, A	12/1/2017 08:00	12/1/2017 16:00	12/1/2016 8:15	12/1/2016 14:45	8:00		6:30	Unit taken off of Reserve Standby for a Maintenance Outage to make lube oil pump repairs	
	S, A	12/5/2017 09:00	12/7/2017 15:00	12/5/2016 9:00	12/7/2016 15:00	54:00		54:00	Unit taken off of Reserve Standby for a Maintenance Outage to repair bearings in lube oil pump motor.	
January 2017	F			1/3/2017 15:54	1/5/2017 16:50			48:56	48:56	Start signal issued at 15:52 and when the unit reached 3400rpm, the generator field grounding alarm tripped unit and a starting failure was called at 15:54. A start up was attempted at 10:00 on 1/5/17 and unit tripped, due to loss of flame. Repairs were made to faulty flame detectors and the unit was returned to Reserve Standby.
	F			1/6/2017 15:45	1/7/2017 8:27			16:42	16:42	Turbine tripped due to loss of oil pressure.
	F			1/11/2017 20:10	1/12/2017 14:30			18:20	18:20	Unit was placed into UO1, due to Generator Grounding Alarm. Electrical released unit back to Reserve Standby, after finding no problems that caused Grounding alarm.
February 2017	S, A	2/8/2017 07:00	2/8/2017 15:00	2/8/2017 7:00	2/8/2017 14:35	8:00		7:35	Unit removed from Reserve Standby for a Maintenance Outage to repair faulty wiring and flame detectors.	
March 2017		No Outages								
April 2017		No Outages								

**Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017**

Big Rivers Electric Corporation
Henderson Station Two - Unit #1 - Coal - 153MW Net
November-1-2016 thru April-30-2017

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 2016		No Outages							
December 2016	F			12/31/2016 0:42	=====>		23:18	23:18	Unit offline due to tube leak in the high temperature Reheat Section of boiler were caused by a combination of high temperature oxidation and fireside corrosion fatigue at elevation 565', panel 5 from the west wall, on tube #1 counting from south to north.
January 2017	F			=====>	1/5/2017 0:28		96:28	96:28	Unit offline due to tube leak in the high temperature Reheat Section of boiler were caused by a combination of high temperature oxidation and fireside corrosion fatigue at elevation 565', panel 5 from the west wall, on tube #1 counting from south to north.
February 2017		No Outages							
March 2017	F			3/6/2017 9:51	3/9/2017 7:08		69:17	69:17	Unit tripped on low drum level while drum level transmitter sensing line leak was being repaired.
	F			3/9/2017 7:08	3/9/2017 7:58		0:50	0:50	Leak in #4 Heater access door during startup extended startup length past allowed time.
	F			3/9/2017 8:29	3/9/2017 9:13		0:44	0:44	Unit tripped due to high drum level during start-up.
	F			3/16/2017 10:53	3/17/2017 20:01		33:08	33:08	Unit taken offline due to tube leak in Reheat Section of boiler at elevation 569', panel 6 from the west wall, on tube #2 counting from the south to north.
	S, A	3/17/2017 21:00	3/18/2017 9:00	3/17/2017 20:52	3/18/2017 3:48	12:00		6:56	Unit was removed from service to reseal #4 Heater
March 2017	S, A	3/24/2017 18:30	3/30/2017 18:30	3/24/2017 18:34	3/30/2017 5:57	144:00		131:23	Unit taken offline due to elevated mercury levels.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017

Big Rivers Electric Corporation
Henderson Station Two - Unit #1 - Coal - 153MW Net
 November-1-2016 thru April-30-2017

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 2017	F			3/30/2017 8:27	3/30/2017 12:13		3:46	3:46	Unit tripped on low turbine bearing oil pressure.
	F			3/30/2017 13:32	3/30/2017 14:42		1:10	1:10	Unit tripped offline due to high drum level.
April 2017	S, A	4/18/2017 23:00	4/22/2017 0:00	4/18/2017 23:03	4/22/2017 0:00	73:00		72:57	Maintenance Outage for external tube leak near the penthouse.
	S, A	4/22/2017 00:00	5/1/2017 0:00	4/22/2017 0:00	══════════>	216:00		216:00	43 day Planned Outage for "A" 4160 auxiliary bus replacement, SCR catalyst replacement, turbine valve overhaul, etc.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017

Big Rivers Electric Corporation
Henderson Station Two - Unit #2 - Coal - 159MW Net
 November-1-2016 thru April-30-2017

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 2016	F			=====>	11/1/2016 13:04		13:04		The unit was tripped off line on 10/31/2016 at 16:00 by the sudden pressure relay (63GT3) on the main generator step up transformer. The relay had failed and had to be replaced.
December 2016	F			12/29/2016 17:40	12/29/2016 20:15		2:35	2:35	Loss of O2 in boiler manual trip. O2 swing was likely caused by an influx of wet fuel into the boiler.
January 2017	F			1/5/2017 16:08	1/9/2017 17:08		97:00	97:00	Unit was removed from service, due to tube leak located in the high temperature Reheat Section of the boiler. Tube leak was caused by a combination of High Temperature Oxidation and Fireside Corrosion Fatigue. Tube leak located at elevation 565' - 6" panel 5 from the east wall on tube #7 counting from the south to north.
February 2017	F			2/9/2017 22:40	2/12/2017 23:20		72:40	72:40	Unit taken offline due to tube leak on the east side lower waterwall terminal tubes 13th tube from the south at elevation 438'-8". Failure was due to external corrosion because of the aggressive atmosphere above the ash hopper and seal trough caused by a gas leak in the seal skirt directly below the tube leak.
	F			2/16/2017 10:00	2/24/2017 14:00		196:00	196:00	Unit taken offline due to tube leak located in the high temperature Reheat Section of the boiler were caused by a combination of High Temperature Oxidation and Fireside Corrosion Fatigue. Tube leak located at elevation 565' - 6" panel 3 from the east wall on tube #9
March 2017	S, A	3/18/2017 06:00	3/20/2017 6:00	3/18/2017 6:27	3/19/2017 23:32	48:00		41:05	Unit was removed from service to make repairs to broken precipitator wire in 'B' Inlet field caused the grounding issue.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017

Big Rivers Electric Corporation
Henderson Station Two - Unit #2 - Coal - 159MW Net
November-1-2016 thru April-30-2017

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				
April 2017	F			4/3/2017 9:34	4/3/2017 18:45	9:11	9:11		Unit taken offline due to #18 observation port penetration allowing boiler flue gas and heat to exit the boiler.
	F			4/5/2017 16:04	4/8/2017 10:10	66:06	66:06		Unit taken offline due to tube leak located in the high temperature Reheat Section of the boiler were caused by a combination of High Temperature Oxidation and Fireside Corrosion Fatigue. Tube leaks located at elevation 565' - 6" panel 2 and panel 3 from the east wall.
	F			4/20/2017 16:01	4/20/2017 22:15	6:14	6:14		Tripped offline due to a generator Main Step-Up Transformer Sudden Pressure Relay (63GT3) Trip caused by a failed relay.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017

Big Rivers Electric Corporation
Green Station Unit #1 - Coal/Pet coke - 231MW Net
November-1-2016 thru April-30-2017

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 2016	S, A	11/21/2016 00:00	11/24/2016 0:00	11/21/2016 00:01	11/23/2016 17:20	72:00		65:19	While the unit was on maintenance outage to resolve a problem with the thickeners floating and a solids issue in FGD system, several items were inspected, repaired, if need. When the maintenance outage work was completed, the unit was released and placed on Reserve Standby.	
	F			11/27/2016 22:27	11/28/2016 1:11			2:44	2:44	A starting failure was declared, due to failure to meet 12 hour cold start limit caused by the turbine pre-warm
December 2016		No Outages								
January 2017		No Outages								
February 2017	F			2/10/2017 11:20	2/13/2017 15:28			76:08	76:08	Unit was removed from service via controlled shutdown, due to tube leaks in the reheater section. Three dutchman were installed in intermediate and outlet reheaters banks.
	F			2/19/2017 7:00	2/24/2017 11:00			124:00	124:00	Unit was placed on outage (U02) for state operating permit inspection. Upon opening the boiler drum, the west vortex eliminator was found to have one of the five blades missing. The bottom of the downcomer was cut off, missing metal removed and downcomer bottom welded back and the weld was stress relieved.
	S, A	2/24/2017 11:00	3/1/2017 0:00	2/24/2017 11:00	=====>	109:00		109:00	109:00	Maintenance outage for "A" air heater sector plate
March 2017	S, A	3/1/2017 00:00	3/5/2017 0:00	=====>	3/5/2017 15:00	96:00		111:00	111:00	Maintenance outage for "A" air heater sector plate

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017

Big Rivers Electric Corporation
Green Station Unit #1 - Coal/Pet coke - 231MW Net
 November-1-2016 thru April-30-2017

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 2017	F			3/12/2017 16:00	3/13/2017 1:13	9:13	9:13		A starting failure was declared (12 hour cold start limit exceeded) while coming from reserve standby after a maintenance outage, due to "A" air heater motor had to be replaced for vibration/alignment issues.
	F			3/22/2017 13:19	3/22/2017 16:01	2:42	2:42		Unit tripped on high drum level while removing #6 HPFWH from service.
	F			3/22/2017 16:36	3/22/2017 18:23	1:47	1:47		Unit tripped on low drum level during start-up.
April 2017	F			4/2/2017 16:02	4/3/2017 12:03	20:01	20:01		Unit was removed from service to check for condenser tube leaks indicated by high Silica. Found one leak in each condenser water box and those tubes were plugged.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017

Big Rivers Electric Corporation
Green Station Unit #2 - Coal/Pet coke - 223MW Net
 November-1-2016 thru April-30-2017

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 2016		No Outages							
December 2016		No Outages							
January 2017		No Outages							
February 2017	F			2/20/2017 18:32	2/22/2017 5:58	35:26	35:26		Unit was tripped from service due a high furnace pressure caused by a waterwall tube leak on the 5th floor at elevation 486.1', east side wall, 94th tube from the north wall. An 8 foot Dutchman was installed.
March 2017	S, A	3/25/2017 00:00	4/15/2017 0:00	3/25/2017 0:54	4/14/2017 18:00	504:00		497:06	21 day Planned Outage for turbine valve overhaul, WW panels, AH repairs, etc.
April 2017	F			4/20/2017 23:10	4/21/2017 12:44		13:34	13:34	A cold startup failure was declared while coming from reserve standby after a 21 day Maintenance Outage, due to 3 hour turbine soak not complete. After the 3 hour turbine soak was complete, the turbine tripped on overspeed and the turbine valves settings had to be adjusted.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017

Big Rivers Electric Corporation
Coleman Station Unit #1 - Coal - 150MW Net
 November-1-2016 thru April-30-2017

Schedule vs. Actual

		MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual					
MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Forced	Actual	
November 2016		No Outages							Coleman Unit 1 was idled on May 1, 2014, and has not yet been returned to service.
December 2016		No Outages							
January 2017		No Outages							
February 2017		No Outages							
March 2017		No Outages							
April 2017		No Outages							

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017

Big Rivers Electric Corporation
 Coleman Station Unit #2 - Coal - 138MW Net
 November-1-2016 thru April-30-2017

Schedule vs. Actual

		MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual					
MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Forced	Actual	
November 2016		No Outages							Coleman Unit 2 was idled on May 1, 2014, and has not yet been returned to service.
December 2016		No Outages							
January 2017		No Outages							
February 2017		No Outages							
March 2017		No Outages							
April 2017		No Outages							

**Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017**

Big Rivers Electric Corporation
Coleman Station Unit #3 - Coal - 155MW Net
November-1-2016 thru April-30-2017

Schedule vs. Actual

		MAINTENANCE				HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED MAINTENANCE OR REASON FOR FORCED OUTAGE AS APPROPRIATE
		Scheduled		Actual					
MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Forced	Actual	
November 2016	No Outages								Coleman Unit 3 was idled on May 8, 2014, and has not yet been returned to service.
December 2016	No Outages								
January 2017	No Outages								
February 2017	No Outages								
March 2017	No Outages								
April 2017	No Outages								

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017

Big Rivers Electric Corporation
Wilson Station - Unit #1 - Coal/Pet Coke - 417MW Net
November-1-2016 thru April-30-2017

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 2016	F			=====>	11/1/2016 15:18		15:18	15:18	Unit trip due to waterwall tube leak in the west wall on the 10th floor elevation.
	S, A	11/5/2016 00:00	11/6/2016 00:00	11/5/2016 01:00	11/5/2016 18:15	24:00		17:15	Leaks in 1st stage East superheat spray instrument line header and Platen root valve that could not be isolated for repair. The pressure gage tap was fractured at the top of the weld where the tap is inserted into the header connection. The pipe failed at the top of the fillet weld coming off the header.
	F			11/12/2016 00:48	11/12/2016 05:36		4:48	4:48	Unit tripped when ID Fan tripped.
	F			11/13/2016 16:44	11/14/2016 14:08		21:24	21:24	Unit tripped, due to failed electronics component indicating loss of SCR flow path and resulting in master fuel trip.
December 2016	F			12/24/2016 18:50	12/26/2016 19:03		48:13	48:13	Unit was removed from service in a forced shutdown, due to a waterwall tube leak on the 10 1/2th floor immediately above the tube weld overlay on the west waterwall.
	F			12/26/2016 19:03	12/27/2016 10:23		15:20	15:20	A Starting Failure was declared, due to a bad CCVT on B phase in switchyard preventing synchronization with the grid when bringing the unit online.
	F			12/28/2016 16:20	12/28/2016 23:06		6:46	6:46	Lightening strike in the switchyard blew a fuse for 48VDC power to the 63-1/AST trip circuit and Main Generator Breaker closed indication. When the fuse blew, the turbine controls saw a zero state on the generator breaker which told the breaker was open, so the turbine tripped.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017

Big Rivers Electric Corporation
Wilson Station - Unit #1 - Coal/Pet Coke - 417MW Net
November-1-2016 thru April-30-2017

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				
January 2017	S, A	1/2/2017 16:00	1/4/2017 00:00	1/2/2017 16:26	1/3/2017 11:30	32:00		19:04	Unit was removed from service in a controlled shutdown, due to leaking pressure gauge tap on the sensing line on 1st stage east superheat spray line that could not be isolated for repair.
	F			1/3/2017 11:30	1/4/2017 15:07		27:37	27:37	During the hydro at the end of the previous outage, a waterwall tube leak was discovered on the 11th floor west side wall in the 38th tube from corner tube.
February 2017	F			2/4/2017 14:48	2/8/2017 19:38		100:50	100:50	Platen superheater tube leak, due to an attachment lug pulling loose and causing tube failure.
	F			2/8/2017 19:52	2/8/2017 22:55		3:03	3:03	Unit tripped due to crossover differential pressure
	F			2/9/2017 04:05	2/9/2017 07:15		3:10	3:10	Unit tripped on low drum level due to #1 boiler feed pump turbine trip.
February 2017	F			2/12/2017 17:13	2/12/2017 21:02		3:49	3:49	Unit tripped off due to #1 boiler feed pump turbine high vibration.
	S, A	2/15/2017 23:00	2/19/2017 23:00	2/15/2017 23:00	2/19/2017 15:00	96:00		88:00	Unit taken offline to repair #2 and #3 module inlet damper seals and to inspect #1 boiler feed pump due to pump tripping off line due to vibration. After the inspection into vibration, it was determined to overhaul the pump.
March 2017	F			3/9/2017 21:28	3/10/2017 05:48		8:20	8:20	Unit tripped when lost #1 IDF, while #2 IDF was out of service. The drive Linkage to inlet damper came apart with no control of fan dampers.
	F			3/10/2017 05:49	3/10/2017 07:29		1:40	1:40	The unit experienced a no load trip, one minute after tie.
April 2017	F			4/15/2017 19:03	4/18/2017 06:08		59:05	59:05	Waterwall tube leak at floor 10 1/2 in tube #35 from north wall.

Big Rivers Electric Corporation
Scheduled ("S"), Actual ("A"), and Forced ("F") Outages
November 1, 2016 thru April 30, 2017

Big Rivers Electric Corporation
Wilson Station - Unit #1 - Coal/Pet Coke - 417MW Net
November-1-2016 thru April-30-2017

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				
April 2017	F			4/21/2017 07:27	4/21/2017 11:42	4:15	4:15		Lightening strike tripped the Generator and Startup Buses offline when the 86GP-1, 86ST-1 and 86ST-2 Lock-Out Relays (LOR) Tripped.
	F			4/29/2017 19:04	4/30/2017 17:46	22:42	22:42		Unit tripped while troubleshooting C-Phase coupling capacitor voltage transformer (CCVT) issue in the switchyard, because of a MISO MW discrepancy.

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

- 1 **Item 8)** *List all existing fuel contracts categorized as long-term (i.e.,*
2 *one year or more in length). Provide the following information for each*
3 *contract:*
4
5 *a. Supplier's name and address;*
6 *b. Name and location of production facility;*
7 *c. Date when contract was executed;*
8 *d. Duration of contract;*
9 *e. Date(s) of each contract revision, modification, or*
10 *amendment;*
11 *f. Annual tonnage requirements;*
12 *g. Actual annual tonnage received since the contract's*
13 *inception;*
14 *h. Percent of annual requirements received during the*
15 *contract's term;*
16 *i. Base price in dollars per ton;*
17 *j. Total amount of price escalations to date in dollars per*
18 *ton; and*
19 *k. Current price paid for coal under the contract in dollars*
20 *per ton (i + j).*
21
22

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1

2 **Response)** Please see the attached schedule.

3

4 **Witness)** Mark W. McAdam

5

Big Rivers Electric Corporation
Case No. 2017-00278
Long-Term Fuel Contract Information

Sebree Mining – BRE-11-002

A. NAME / ADDRESS:	Sebree Mining, LLC <i>(formerly Allied Resources)</i> 1717 South Boulder Avenue Tulsa, OK 74119		
B. PRODUCTION FACILITY:	Onton No. 9 Mine, Dotiki Mine, River View Mine Webster and Union Counties, Kentucky		
C. CONTRACT EXECUTED DATE:	June 18, 2010		
D. CONTRACT DURATION:	January 1, 2011 <i>through</i> December 31, 2016		
E. CONTRACT AMENDMENTS:	April 29, 2011		<i>(Amendment One)</i>
	November 17, 2011		<i>(Amendment Two)</i>
	March 29, 2012		<i>(Contract Assigned from Allied resources to Sebree Mining, LLC)</i>
	August 12, 2013		<i>(Amendment Three)</i>
	January 8, 2014		<i>(Amendment Four)</i>
	February 14, 2014		<i>(Amendment Five)</i>
	March 1, 2016		<i>(Amendment Six)</i>
F. ANNUAL TONNAGE REQUIREMENTS:	2011 –	250,000	tons
	2012 –	750,000	tons
	2013 –	960,000	tons
	2014 –	800,000	tons
	2015 –	838,000	tons <i>(176,700 tons Force Majeure)</i>
	2016 –	952,000	tons
G. ACTUAL TONNAGE:	2011 –	240,650	tons
	2012 –	748,127	tons
	2013 –	919,426	tons
	2014 –	838,340	tons
	2015 –	661,796	tons <i>(176,700 tons Force Majeure)</i>
	2016 –	952,029	tons <i>(through October)</i>
H. PERCENT OF ANNUAL REQUIREMENTS:	2011 –	96.26 %	
	2012 –	99.75 %	
	2013 –	95.77 %	
	2014 –	104.79 %	
	2015 –	100.08 %	<i>(176,700 tons Force Majeure)</i>
	2016 –	100.00 %	<i>(through December)</i>

Big Rivers Electric Corporation
Case No. 2017-00278
Long-Term Fuel Contract Information

Sebree Mining – BRE-11-002 (continued)

I. BASE PRICE:

	<u>Sebree Complex</u>		
Quality A 2011	–	\$ 50.5308	per ton
Quality B 2011	–	\$ 48.6790	per ton
Quality C 2011	–	\$ 47.1086	per ton
Quality D 2011	–	\$ 44.2420	per ton
Quality A 2012	–	\$ 52.5500	per ton
Quality B 2012	–	\$ 50.6259	per ton
Quality C 2012	–	\$ 48.9946	per ton
Quality D 2012	–	\$ 46.0108	per ton
Quality A 2013	–	\$ 54.9153	per ton
Quality B 2013	–	\$ 53.8668	per ton
Quality C 2013	–	\$ 52.1824	per ton
Quality D 2013	–	\$ 49.1854	per ton
Quality A 2014	–	\$ 57.6621	per ton
Quality B 2014	–	\$ 55.6405	per ton
Quality C 2014	–	\$ 53.8706	per ton
Quality D 2014	–	\$ 50.5978	per ton
Quality A 2015	–	\$ 61.6911	per ton
Quality B 2015	–	\$ 59.5694	per ton
Quality C 2015	–	\$ 57.7116	per ton
Quality D 2015	–	\$ 54.2146	per ton
Quality A 2016	–	No Price	
Quality B 2016	–	\$ 62.4897	per ton
Quality C 2016	–	\$ 60.7085	per ton
Quality D 2016	–	\$ 57.8600	per ton

Big Rivers Electric Corporation
Case No. 2017-00278
Long-Term Fuel Contract Information

Sebree Mining – BRE-11-002 (continued)

I. BASE PRICE: (continued)

Coleman Station

Quality A 2011 – \$ 59.4325 per ton

Steamport Dock

Quality A 2011 – \$ 49.9335 per ton
 Quality B 2011 – \$ 48.0800 per ton
 Quality C 2011 – \$ 46.5083 per ton
 Quality D 2011 – \$ 43.6414 per ton

Quality A 2012 – \$ 51.9551 per ton
 Quality B 2012 – \$ 50.0269 per ton
 Quality C 2012 – \$ 48.3943 per ton
 Quality D 2012 – \$ 45.4102 per ton

Quality A 2013 – \$ 54.3204 per ton
 Quality B 2013 – \$ 53.1133 per ton
 Quality C 2013 – \$ 51.4303 per ton
 Quality D 2013 – \$ 48.4308 per ton

Quality A 2014 – \$ 57.0672 per ton
 Quality B 2014 – \$ 55.0415 per ton
 Quality C 2014 – \$ 53.2703 per ton
 Quality D 2014 – \$ 49.9994 per ton

Quality A 2015 – \$ 61.0512 per ton
 Quality B 2015 – \$ 58.9399 per ton
 Quality C 2015 – \$ 57.0745 per ton
 Quality D 2015 – \$ 53.5832 per ton

Quality A 2016 – No Price
 Quality B 2016 – \$ 61.1910 per ton
 Quality C 2016 – \$ 59.4090 per ton
 Quality D 2016 – \$ 56.5598 per ton

Quality A – Dotiki Mine: Sebree Complex

2016 – \$ 61.3274 per 52k tons
 2016 – \$ 62.8570 per ton

Quality C – River View Dock

2016 – \$ 56.7594 per ton

Big Rivers Electric Corporation
Case No. 2017-00278
Long-Term Fuel Contract Information

Sebree Mining – BRE-11-002 (continued)

J. ESCALATIONS TO DATE: None

K. CURRENT CONTRACT PRICE:

Sebree Complex

Quality A 2013	–	\$ 54.9153	per ton
Quality B 2013	–	\$ 53.8668	per ton
Quality C 2013	–	\$ 52.1824	per ton
Quality D 2013	–	\$ 49.1854	per ton
Quality A 2014	–	\$ 57.6621	per ton
Quality B 2014	–	\$ 55.6405	per ton
Quality C 2014	–	\$ 53.8706	per ton
Quality D 2014	–	\$ 50.5978	per ton
Quality A 2015	–	\$ 61.6911	per ton
Quality B 2015	–	\$ 59.5694	per ton
Quality C 2015	–	\$ 57.7116	per ton
Quality D 2015	–	\$ 54.2146	per ton

Steamport Dock

Quality A 2013	–	\$ 54.3204	per ton
Quality B 2013	–	\$ 53.1133	per ton
Quality C 2013	–	\$ 51.4303	per ton
Quality D 2013	–	\$ 48.4308	per ton
Quality A 2014	–	\$ 57.0672	per ton
Quality B 2014	–	\$ 55.0415	per ton
Quality C 2014	–	\$ 53.2703	per ton
Quality D 2014	–	\$ 49.9994	per ton
Quality A 2015	–	\$ 61.0512	per ton
Quality B 2015	–	\$ 58.9399	per ton
Quality C 2015	–	\$ 57.0745	per ton
Quality D 2015	–	\$ 53.5832	per ton

Quality A – Dotiki Mine: Sebree Complex

2016	–	\$ 61.3274	per 52k tons
2016	–	\$ 62.8570	per ton

Quality C – River View Dock

2016	–	\$ 56.7594	per ton
------	---	------------	---------

Big Rivers Electric Corporation
Case No. 2017-00278
Long-Term Fuel Contract Information

Foresight – BRE-15-005

A. NAME / ADDRESS:	Foresight Coal Sales, LLC 211 North Broadway, Suite 2600 St. Louis, MO 63102
B. PRODUCTION FACILITY:	Deer Run and/or Shay No. 1 in Montgomery and Macoupin, Illinois.
C. CONTRACT EXECUTED DATE:	March 6, 2015
D. CONTRACT DURATION:	February 6, 2015 <i>through</i> December 31, 2019
E. CONTRACT AMENDMENTS:	None
F. ANNUAL TONNAGE REQUIREMENTS:	2015 – 200,000 tons 2016 – 240,000 tons 2017 – 240,000 tons 2018 – 240,000 tons 2019 – 240,000 tons
G. ACTUAL TONNAGE:	2015 – 200,318 tons 2016 – 239,969 tons (<i>through December</i>) 2017 – 71,615 Tons (<i>through April</i>)
H. PERCENT OF ANNUAL REQUIREMENTS:	2015 – 100.16 % 2016 – 99.99 % (<i>through December</i>) 2017 – 29.84% (<i>through April</i>)
I. BASE PRICE:	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
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	2015 – \$ 34.0006 per ton 2016 – \$ 36.2491 per ton

Big Rivers Electric Corporation
Case No. 2017-00278
Long-Term Fuel Contract Information

KenAmerican Resources – BRE-15-006

A. NAME / ADDRESS:	KenAmerican Resources, Inc. 46226 National Road St. Clairsville, OH 43950
B. PRODUCTION FACILITY:	Paradise #9 Mine Muhlenberg County, Kentucky
C. CONTRACT EXECUTED DATE:	January 30, 2015
D. CONTRACT DURATION:	January 1, 2015 <i>through</i> December 31, 2019
E. CONTRACT AMENDMENTS:	None
F. ANNUAL TONNAGE REQUIREMENTS:	2015 – 300,000 tons 2016 – 500,000 tons 2017 – 500,000 tons 2018 – 400,000 tons 2019 – 400,000 tons
G. ACTUAL TONNAGE:	2015 – 300,077 tons 2016 – 500,015 tons (<i>through December</i>) 2017 – 194,954 tons (<i>through April</i>)
H. PERCENT OF ANNUAL REQUIREMENTS:	2015 – 100.03 % 2016 – 100.00 % (<i>through December</i>) 2017 – 38.99% (<i>through April</i>)
I. BASE PRICE:	2015 – \$ 49.2505 per ton 2016 – \$ 50.5000 per ton 2017 – \$ 51.7496 per ton 2018 – \$ 53.0506 per ton 2019 – \$ 54.4080 per ton
J. ESCALATIONS TO DATE:	None
K. CURRENT CONTRACT PRICE:	2015 – \$ 49.2505 per ton 2016 – \$ 50.5000 per ton

Big Rivers Electric Corporation
Case No. 2017-00278
Long-Term Fuel Contract Information

Rhino Energy LLC and Pennyrile Energy LLC Coal Sales – BRE-15-009

A. NAME / ADDRESS:	Rhino Energy LLC/Pennyrile Energy, LLC. 424 Lewis Hargett Circle, Suite 250 Lexington, KY 40503		
B. PRODUCTION FACILITY:	Pennyrile Energy LLC Riveredge Mine McLean County, Kentucky		
C. CONTRACT EXECUTED DATE:	March 16, 2015		
D. CONTRACT DURATION:	March 16, 2015 <i>through</i> December 31, 2018		
E. CONTRACT AMENDMENTS:	June 1, 2016	<i>(Amendment One)</i>	
F. ANNUAL TONNAGE REQUIREMENTS:	2015 –	105,000 tons	<i>(Start date for tonnage delivery June 1, 2015)</i>
	2016 –	350,000 tons	
	2017 –	450,000 tons	
	2018 –	150,000 tons	
G. ACTUAL TONNAGE:	2015 –	105,260 tons	
	2016 –	350,004 tons	<i>(through December)</i>
	2017 –	185,362 tons	<i>(through April)</i>
H. PERCENT OF ANNUAL REQUIREMENTS:	2015 –	100.25 %	
	2016 –	100.00 %	<i>(through December)</i>
	2017 –	41.19%	<i>(through April)</i>
I. BASE PRICE:	Riveredge 2015 –	\$ 43.7490	per ton
	Riveredge 2016 –	\$ 45.7498	per ton
	Riveredge 2017 –	\$ 47.7500	per ton
	Riveredge 2018 –	\$ 47.0826	per ton
J. ESCALATIONS TO DATE:	None		
K. CURRENT CONTRACT PRICE:	Riveredge 2015 –	\$ 43.7490	per ton
	Riveredge 2016 –	\$ 45.7498	per ton

Big Rivers Electric Corporation
Case No. 2017-00278
Long-Term Fuel Contract Information

Alliance Coal, LLC – BRE-15-010

A. NAME / ADDRESS: Alliance Coal, LLC
1717 South Boulder, Suite 400
Tulsa, OK 74119

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

C. CONTRACT EXECUTED DATE: August 10, 2015

D. CONTRACT DURATION: September 1, 2015 *through* December 31, 2017

E. CONTRACT AMENDMENTS: None

F. ANNUAL TONNAGE REQUIREMENTS:

2015	–	75,000	tons	(Option tons)
2016	–	250,000	tons	
2017	–	575,000	tons	

G. ACTUAL TONNAGE:

2015	–	0	tons	(Option not exercised)
2016	–	249,968	tons	(through December)
2017	–	192,861	tons	(through April)

H. PERCENT OF ANNUAL REQUIREMENTS:

2015	–	0.00 %	(Option not exercised)
2016	–	99.99 %	(through December)
2017	–	33.54%	(through April)

I. BASE PRICE:

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

Quality D (11,250 BTU/lb.) – Onton No. 9
2015 – \$ 45.8000 per ton
2016 – \$ 47.5505 per ton
2017 – \$ 49.4000 per ton

Big Rivers Electric Corporation
Case No. 2017-00278
Long-Term Fuel Contract Information

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

I. BASE PRICE: (continued)	<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
J. ESCALATIONS TO DATE:	2015 – None
	2016 – None
K. CURRENT CONTRACT PRICE:	2015 – N/A (No option tons)
	<u>Quality A (11,900 BTU/lb.) – Hopkins Elk Creek</u>
	2016 – N/A
	<u>Quality B (11,800 BTU/lb.) – Onton No. 9,</u>
	<u>Warrior Coal, & Webster Coal</u>
	2016 – \$ 52.7649 per ton
	<u>Quality C (11,500 BTU/lb.) – Onton No. 9 &</u>
	<u>River View Coal</u>
	2016 – \$ 47.2006 per ton
	<u>Quality D (11,250 BTU/lb.) – Onton No. 9</u>
	2016 – \$ 47.5505 per ton
	<u>Quality E (11,000 BTU/lb.) – Onton No. 9</u>
	2016 – \$ 45.8002 per ton

Big Rivers Electric Corporation
Case No. 2017-00278
Long-Term Fuel Contract Information

Peabody CoalSales – BRE-15-018

A. NAME / ADDRESS: Peabody COALSALES, LLC
701 Market Street
St. Louis, MO 63101

B. PRODUCTION FACILITY: Somerville and Wild Boar Mining Complex,
Surface Mining Operation,
Warrick and Gibson Counties, Indiana

C. CONTRACT EXECUTED DATE: October 1, 2015

D. CONTRACT DURATION: January 1, 2016 *through* December 31, 2018

E. CONTRACT AMENDMENTS: None

F. ANNUAL TONNAGE REQUIREMENTS:

2016	–	350,000	tons
2017	–	525,000	tons
2018	–	625,000	tons

G. ACTUAL TONNAGE:

2016	–	350,001	tons	<i>(through December)</i>
2017	–	143,199	tons	<i>(through April)</i>

H. PERCENT OF ANNUAL REQUIREMENTS:

2016	–	100.00 %	<i>(through December)</i>
2017	–	27.28%	<i>(through April)</i>

I. BASE PRICE:

2016	–	\$ 40.4998	per ton
2017	–	\$ 40.4998	per ton
2018	–	\$ 40.4998	per ton

J. ESCALATIONS TO DATE: None

K. CURRENT CONTRACT PRICE: 2016 – \$ 40.4998 per ton

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 9)**

2 **a. *State whether Big Rivers regularly compares the price of***
3 ***its coal purchases to those paid by other electric utilities.***

4 **b. *If so, state:***

5 ***(1) How Big Rivers' prices compare with those of other***
6 ***utilities. If the comparison includes months outside***
7 ***of the review period, a comparison limited to the***
8 ***review period should be provided separately.***
9 ***Provide a copy of the source documents and***
10 ***calculations used to support the amounts used in***
11 ***the comparison and include all prices used in the***
12 ***comparison in cents per MMBtu.***

13 ***(2) The utilities that are included in this comparison***
14 ***and their locations.***

15

16 **Response)**

17 **a. Yes, Big Rivers has compared the price of its coal purchases**
18 **with those paid by other electric utilities.**

19 **b. The tables and the charts accompanying this response reflect**
20 **one non-Big Rivers event. In mid-2015, Kentucky Power's Big**
21 **Sandy Unit # 2 was retired and Unit #1 was converted to**
22 **natural gas.**

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

- 1 (1) Big Rivers' coal pricing is competitive with that of its
2 comparison group for the review period. Attached hereto
3 are tables and charts on a ¢ per MMBTU and showing Big
4 Rivers with and without petcoke.
5 (2) Utilities that are included in this comparison are Kentucky-
6 based companies. These utilities are identified on the
7 attached tables and charts.

8

9

10 Witness) Mark W. McAdams

11

**Big Rivers Electric Corporation
Case No. 2017-00286**

Cents per MMBTU (Big Rivers without Pet Coke)						
Company	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17
Big Rivers Electric Corporation	229.74	239.64	212.51	197.00	220.33	220.76
Duke Energy - Kentucky	193.30	200.05	201.26	196.60	189.27	189.47
Louisville Gas and Electric Company	203.59	207.82	199.93	199.05	194.92	196.62
Kentucky Utilites Company	212.28	211.47	206.25	202.60	194.40	202.48
East Kentucky Power Cooperative	226.70	224.10	201.20	195.80	194.70	194.10
Kentucky Power ^a	0.00	0.00	0.00	0.00	0.00	0.00

Cents per MMBTU (Big Rivers with Pet Coke)						
Company	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17
Big Rivers Electric Corporation	225.14	233.43	206.77	191.34	209.33	212.77
Duke Energy - Kentucky	193.30	200.05	201.26	196.60	189.27	189.47
Louisville Gas and Electric Company	203.59	207.82	199.93	199.05	194.92	196.62
Kentucky Utilites Company	212.28	211.47	206.25	202.60	194.40	202.48
East Kentucky Power Cooperative	226.70	224.10	201.20	195.80	194.70	194.10
Kentucky Power ^a	0.00	0.00	0.00	0.00	0.00	0.00

Note(s) -

a.- In mid-2015, Kentucky Power's Big Sandy Unit # 2 was retired and Unit #1 was converted to natural gas.

Source: Utilities' Monthly FAC Filings w/ Kentucky Public Service Commission

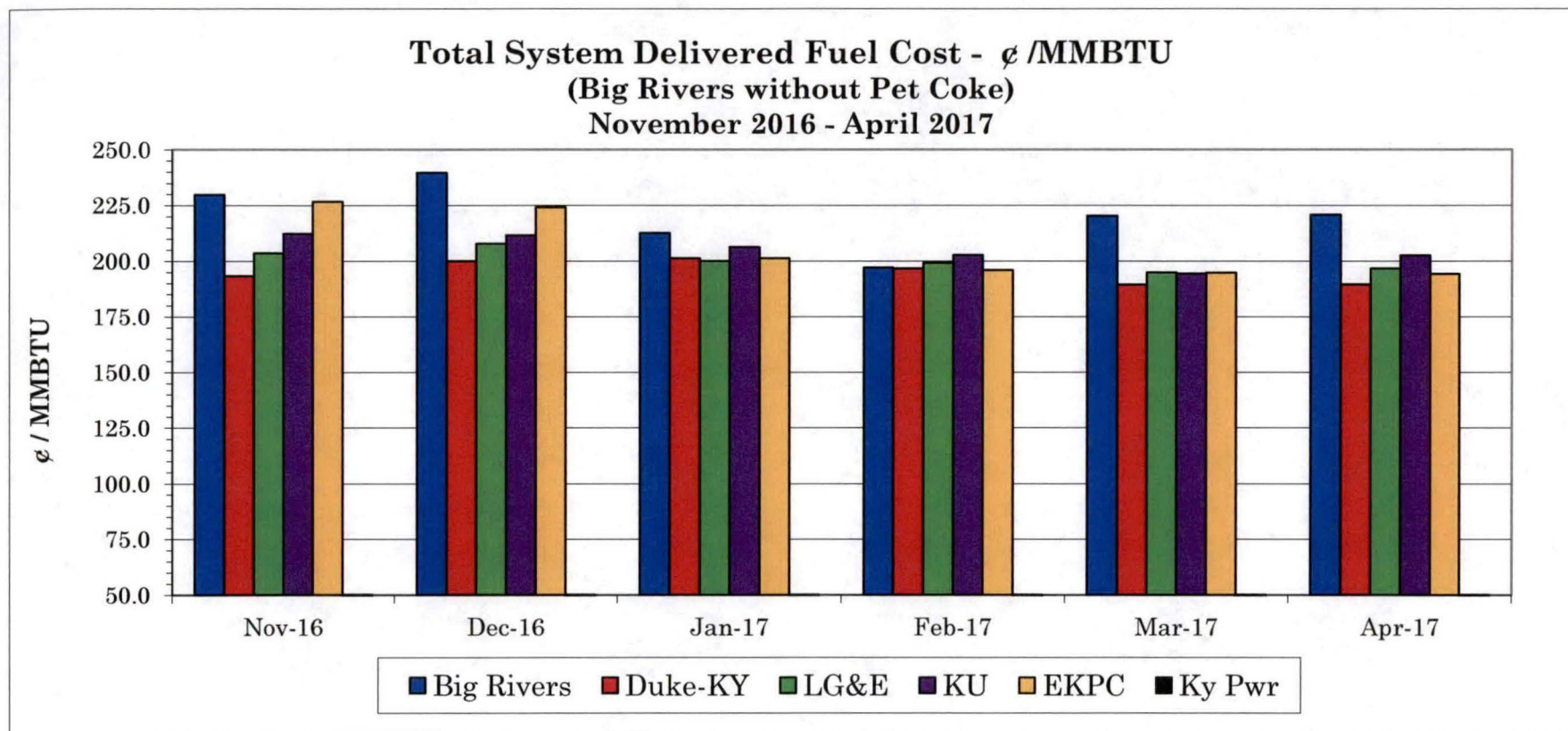
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Witness: Mark W. McAdams

Attachment for Response to Staff Item 9

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**Big Rivers Electric Corporation
Case No. 2017-00286**



Source: Utilities' Monthly FAC Filings w/ Kentucky Public Service Commission

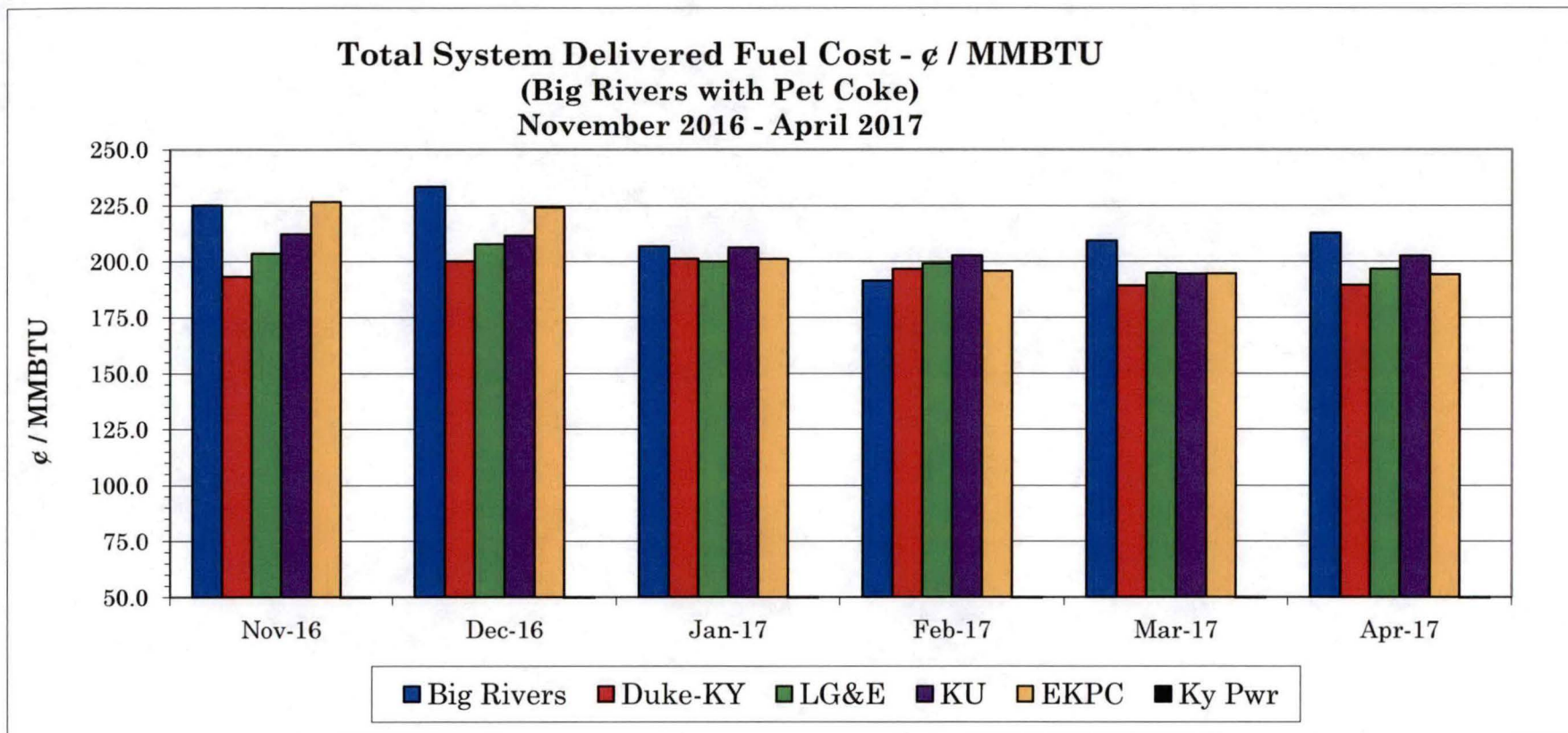
Case No. 2017-00287

Witness: Mark W. McAdams

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**Big Rivers Electric Corporation
Case No. 2017-00286**



Source: Utilities' Monthly FAC Filings w/ Kentucky Public Service Commission

Case No. 2017-00287

Witness: Mark W. McAdams

Attachment for Response to Staff Item 9

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Big Rivers Electric Corporation
Case No. 2017-00286

Dollars per Ton (Big Rivers without Pet Coke)						
Company	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17
Big Rivers Electric Corporation	53.23	55.54	48.64	49.35	50.63	50.97
Duke Energy - Kentucky	46.95	48.57	48.31	48.10	46.83	47.15
Louisville Gas and Electric Company	47.03	47.69	46.16	45.92	45.08	45.39
Kentucky Utilites Company	48.36	49.09	48.21	46.21	45.18	46.61
East Kentucky Power Cooperative	52.15	53.31	46.18	45.00	44.54	44.49
Kentucky Power ^a	0.00	0.00	0.00	0.00	0.00	0.00

Dollars per Ton (Big Rivers with Pet Coke)						
Company	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17
Big Rivers Electric Corporation	52.56	54.65	47.98	48.55	49.39	50.07
Duke Energy - Kentucky	46.95	48.57	48.31	48.10	46.83	47.15
Louisville Gas and Electric Company	47.03	47.69	46.16	45.92	45.08	45.39
Kentucky Utilites Company	48.36	49.09	48.21	46.21	45.18	46.61
East Kentucky Power Cooperative	52.15	53.31	46.18	45.00	44.54	44.49
Kentucky Power ^a	0.00	0.00	0.00	0.00	0.00	0.00

Note(s) -

a.- In mid-2015, Kentucky Power's Big Sandy Unit # 2 was retired and Unit #1 was converted to natural gas.

Source: Utilities' Monthly FAC Filings w/ Kentucky Public Service Commission

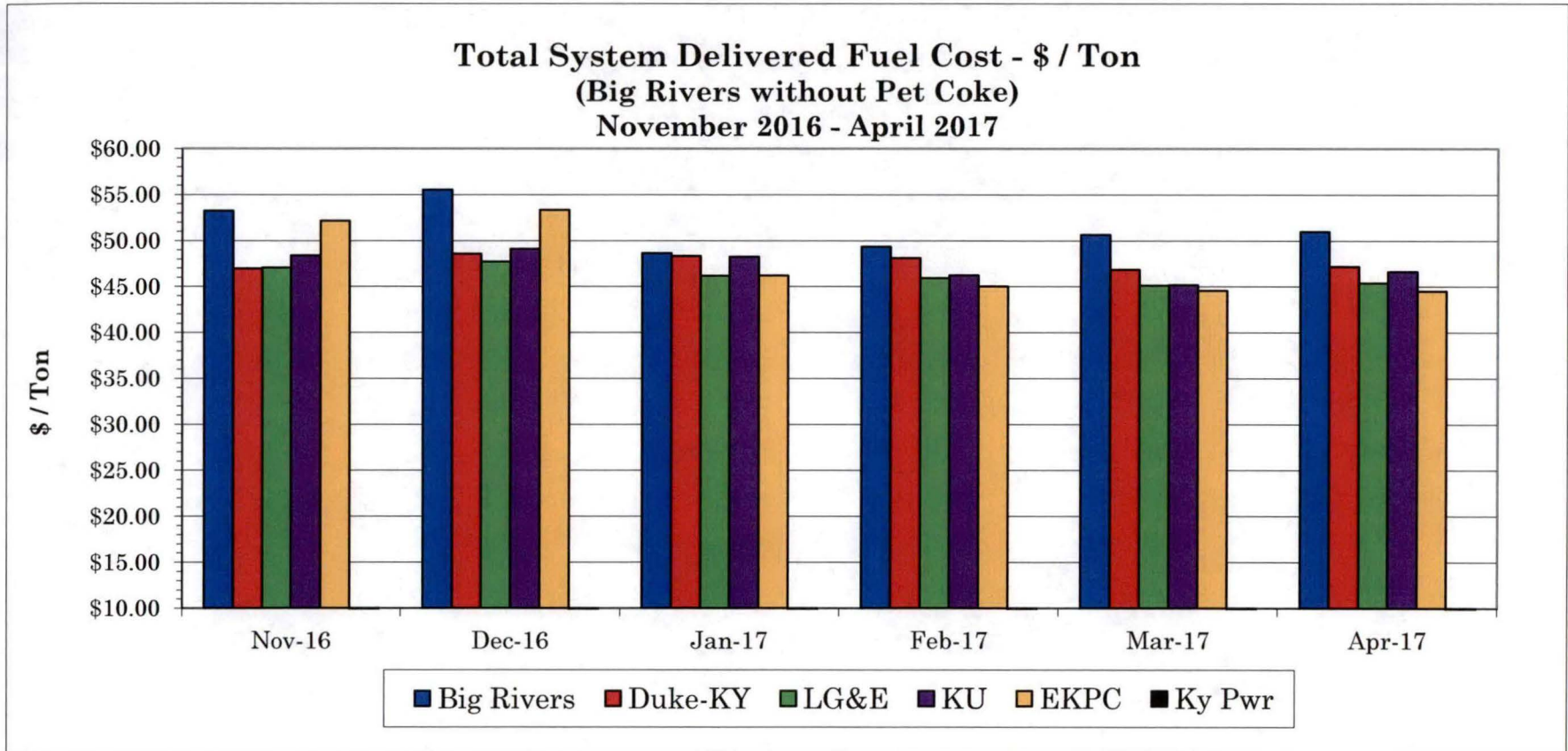
Case No. 2017-00287

Witness: Mark W. McAdams

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**Big Rivers Electric Corporation
Case No. 2017-00286**



Source: Utilities' Monthly FAC Filings w/ Kentucky Public Service Commission

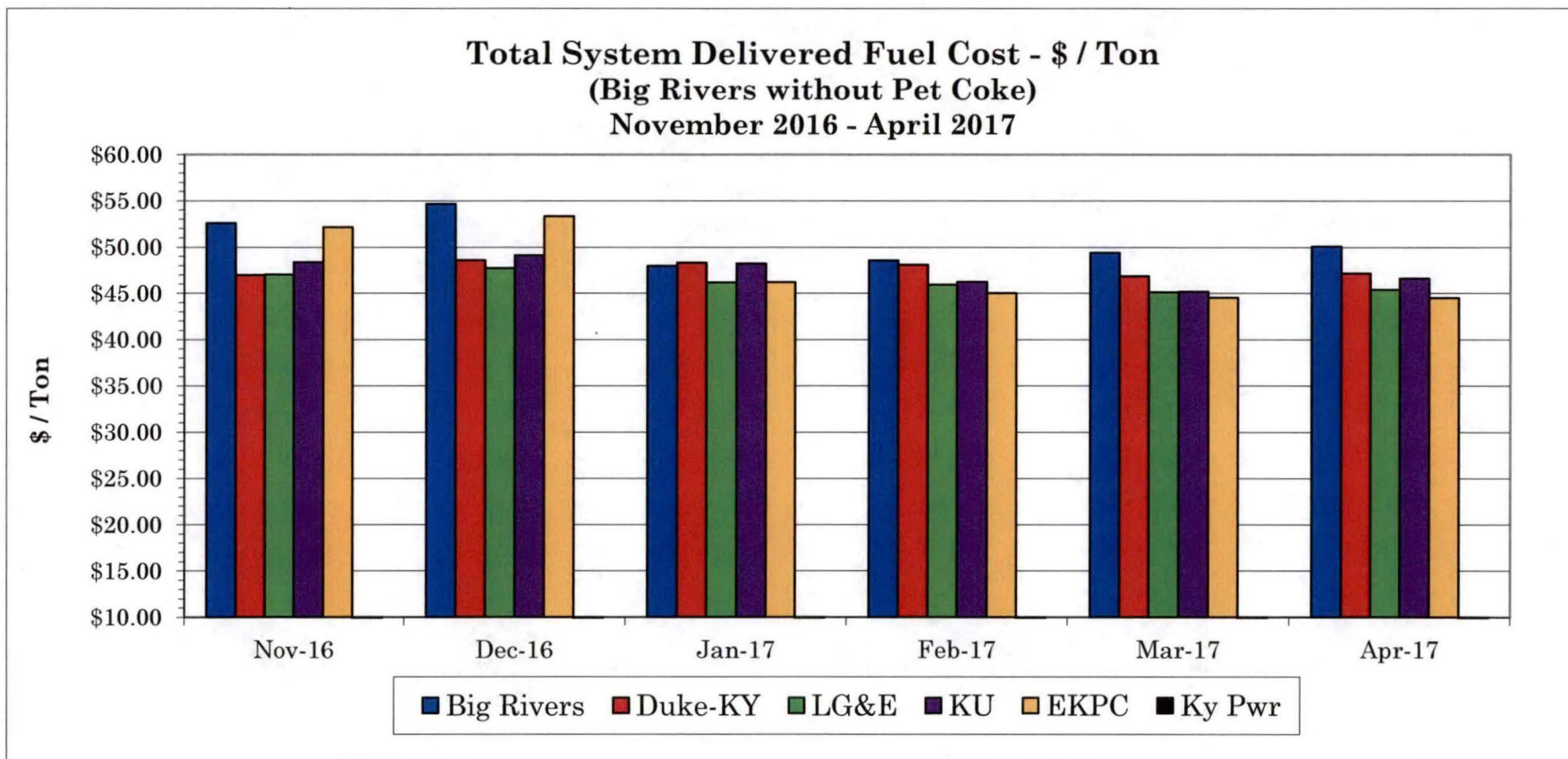
Case No. 2017-00287

Witness: Mark W. McAdams

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**Big Rivers Electric Corporation
Case No. 2017-00286**



Source: Utilities' Monthly FAC Filings w/ Kentucky Public Service Commission

Case No. 2017-00287

Witness: Mark W. McAdams

Attachment for Response to Staff Item 9

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BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 10) State the percentage of Big Rivers' coal, as of the date of this**
2 **Order, that is delivered by:**

3

4

a. Rail;

5

b. Truck; or

6

c. Barge.

7

8 **Response) For the period from November 1, 2016, through April 30, 2017, Big**
9 **Rivers' coal delivery percentages are as follows:**

10

11

a. Rail – None;

12

b. Truck – 32.17 % (Coal *only*);

13

c. Barge – 67.83 % (Coal *plus* Pet Coke).

14

15

16 **Witness) Mark W. McAdams**

17

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 11)**

- 2 **a. State Big Rivers' coal inventory level in tons and in**
3 **number of days' supply as of April 30, 2017. Provide this**
4 **information by generating station and in the aggregate.**
- 5 **b. Describe the criteria used to determine number of days'**
6 **supply.**
- 7 **c. Compare Big Rivers' coal inventory as of April 30, 2017, to**
8 **its inventory target for that date for each plant and for**
9 **total inventory.**
- 10 **d. If actual coal inventory exceeds inventory target by ten**
11 **days' supply, state the reasons for excessive inventory.**
- 12 **e. (1) State whether Big Rivers expects any significant**
13 **changes in its current coal inventory target within**
14 **the next 12 months.**
- 15 **(2) If yes, state the expected change and the reasons for**
16 **this change.**

17

18 **Response)**

- 19 **a. As of April 30, 2017, Big Rivers' generating stations individually**
20 **and in the aggregate had the following inventory levels and**
21 **days' supply.**
- 22
- 23

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
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September 13, 2017

1

<u>Total System/Station</u>	<u>Inventory Level (Tons) ¹</u>	<u>Number of Days' Supply ²</u>	<u>Duration (In Days)</u>	<u>Preceding 6 Months Burn (In Tons)</u>
Big Rivers Electric System	1,064,822.20	114	149	1,390,206.53
Reid Station ³	0.00	0	0	0.00
Station Two ⁴	225,517.97	177	155	197,800.29
Green Station ⁵	229,148.90	55	139	580,840.18
Coleman Station ⁶	0.00	0	0	0.00
Wilson Station ⁷	610,155.33	158	158	611,566.06

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

6

7

**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

8

9

d. The actual inventory for Station Two exceeds the target range by 117 days. Reduced demand for electricity and the planned outage on Station Two Unit 1 in 2017, plus unscheduled outages and other scheduled maintenance outages caused Station Two to

10

11

12

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
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**Response to Commission Staff's Request for Information
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September 13, 2017

1 exceed its target range. Station Two Unit 1 had a Planned
2 Outage beginning April 18, 2017, and ending June 3, 2017; April
3 hours were 289. There were unscheduled outages on Station
4 Two Unit 1 and Unit 2, during the period under review, totaling
5 179 hours, and reserve shutdown (economic) totaling 96 hours.
6 Wilson Station exceeded its target range by 98 days due to the
7 impact of electricity market conditions and demand. Wilson had
8 unscheduled outages during the period under review of 426
9 hours, other scheduled outages of 45 hours, and reserve outages
10 of 73 hours. Big Rivers' Total System exceeded its target range
11 by 54 days.

12 e.

13 (1) Yes.

14 (2) Big Rivers, as part of its continuing solid fuel procurement
15 and inventory reduction plans, has reduced its solid fuel
16 procurement to a nominal amount of spot petroleum coke
17 and its existing coal supply contracts in order to reclaim
18 coal held in inventory during the course of 2016 and
19 forward into 2017. Since the prior FAC review,³ Big Rivers
20 has experienced reduced generation demand and market

³ See *In The Matter Of: An Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2014 through October 31, 2016* – Case No. 2017-00006.

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
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September 13, 2017

1 opportunities hindering the pace previously targeted for
2 more rapid inventory reduction. Big Rivers remains
3 focused on inventory reductions at Station Two and Wilson
4 generating stations. Focused inventory reduction is
5 planned, and is to occur, at both stations particularly
6 during the fourth quarter of 2017, which includes greatly
7 reduced deliveries into the stations, resulting in reclaiming
8 from its coal stockpiles much of the stations' fuel
9 requirements. Projections indicate that Big Rivers will
10 experience a reduced generation situation for the
11 remainder of 2017, pushing achievement of inventory goals
12 into early 2018 (barring any further reduced generation as
13 a result of unplanned outages or market conditions).
14 Market conditions are, and will, continue to play a
15 significant role in the pace and overall quantity of
16 inventory reduction.
17
18

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
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September 13, 2017

1

Footnotes to table in sub-part a. above -

¹ Green Station had a pet coke inventory of 51,133.42 tons as of April 30, 2017, and had a target blend of 18% with Green coal. Wilson Station had a pet coke inventory of 36,335.10 tons as of April 30, 2017, 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 in standby reserve 181 days. Reid 1 was put in Idled 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 unscheduled and scheduled maintenance hours of 870.9. Unit 1 had a Planned outage that started on April 18 and continued through June 3, 2017, April outage hours were 289. Station Two Units 1 and 2 had reserve hours of 95.8 during the review period. All of these hours were equivalent to 26 days. The duration of generation was reduced to 155 days. Inventory is being reduced to meet the new target; however, due to existing inventory and contract coal, the reduction target will probably require the remainder of 2017, and perhaps into 2018.

⁵ Green Station Units 1 and 2 had unscheduled and scheduled maintenance hours of 570.7 hours, reserve hours of 945.5 during the period under review. There were Planned Outage hours of 497.1. These hours were equivalent to 42 days. The duration of generation was reduced to 139 days.

⁶ Coleman Station Units 1, 2 and 3 were placed on Inactive Reserve Status on May 8, 2014, and this totaled 13,248 hours which is equivalent to 184 days. The duration of generation was reduced to 0 days. Change in the status of this unit is unknown at this time.

⁷ Wilson Station had 470.7 scheduled and unscheduled maintenance hours and 73.2 reserve outage hours during the period under review. These hours were equivalent to 23 days. The duration of generation was reduced to 158 days.

2

3

4 Witness) Mark W. McAdams

5

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 12)**

2 *a. State whether Big Rivers has audited any of its coal*
3 *contracts during the period from November 1, 2016,*
4 *through April 30, 2017.*

5 *b. If yes, for each audited contract:*

6 *(1) Identify the contract;*

7 *(2) Identify the auditor;*

8 *(3) State the results of the audit; and*

9 *(4) Describe the actions that Big Rivers took as a result*
10 *of the audit.*

11

12 **Response)**

13 a. Big Rivers has not audited any of its coal supply agreements
14 during the period from November 1, 2016, through April 30,
15 2017.

16 b. (1) – (4)

17 Not Applicable.

18

19

20 **Witness)** Mark W. McAdams

21

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 13)**

2 *a. State whether Big Rivers has received any customer*
3 *complaints regarding its FAC during the period from*
4 *November 1, 2016, through April 30, 2017.*

5 *b. If yes, for each complaint, state:*

6 *(1) The nature of the complaint; and*

7 *(2) Big Rivers' response.*

8

9 **Response)**

10 a. Big Rivers has received no customer complaints regarding
11 its FAC during the period from November 1, 2016, through April
12 30, 2017.

13 b. Not Applicable.

14

15

16 **Witness)** Nicholas R. Castlen

17

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 14)**

- 2 *a. State whether Big Rivers is currently involved in any*
3 *litigation with its current or former coal suppliers.*
4 *b. If yes, for each litigation:*
5 *(1) Identify the coal supplier;*
6 *(2) Identify the coal contract involved;*
7 *(3) State the potential liability or recovery to Big*
8 *Rivers;*
9 *(4) List the issues presented; and*
10 *(5) Provide a copy of the complaint or other legal*
11 *pleading that initiated the litigation and any*
12 *answers or counterclaims. If a copy has previously*
13 *been filed with the Commission, provide the date on*
14 *which it was filed and the case in which it was filed.*
15 *c. State the current status of all litigation with coal*
16 *suppliers.*

17
18 **Response)**

- 19 a. No.
20 b. (1) – (5)
21 Not applicable.
22 c. Not Applicable.

BIG RIVERS ELECTRIC CORPORATION

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1

2

3 **Witness)** Mark W. McAdams

4

BIG RIVERS ELECTRIC CORPORATION

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**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 15)**

2 *a. During the period from November 1, 2016, through April*
3 *30, 2017, have there been any changes to Big Rivers'*
4 *written policies and procedures regarding its fuel*
5 *procurement?*

6 *b. If yes,*

7 *(1) Describe the changes;*

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

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

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

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

16

17 **Response)**

18 *a. Yes. During the period November 1, 2016, through April 30, 2017,*
19 *Big Rivers made changes to the following fuel-related policies and*
20 *procedures:*

21 *i. Policy No. 105 – Energy-Related Transaction Authority*
22 *Policy;*

BIG RIVERS ELECTRIC CORPORATION

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CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
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September 13, 2017

1 ii. Policy No. 105 – Appendix A: Energy-Related Transaction
2 Authority Policy.

3 b. (1) through (4)

4

5 Policy No. 105 – Energy-Related Transaction Authority Policy

6 On December 16, 2016, Big Rivers made the following
7 changes –

8 i. Altered 'Board of Directors' reference to 'Board' in tables
9 and narrative;

10 ii. Clarified policy language related to speculation so that Big
11 Rivers' policy would align its treatment of physical and
12 financial transactions;

13 iii. Eliminated daily limits for both bilateral energy, capacity
14 and transmission purchases and sales transactions and
15 natural/synthetic gas and transportation transactions and,
16 thereby, removed the duplication of risk mitigation
17 represented by having both daily and aggregate limits for
18 these transactions;

19 iv. Updated the following tables to reflect these changes –

20 (1) Bilateral Energy, Capacity and Transmission
21 Purchases Transaction Authority – Section 4,

Case No. 2017-00287

Response to Staff Item 15

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

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BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
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**Response to Commission Staff's Request for Information
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September 13, 2017

- 1 (2) Bilateral Energy, Capacity and Transmission Sales
2 Transaction Authority – Section 4, and
3 (3) Natural/Synthetic Gas and Transportation Trans-
4 action Authority – Section 7;
5 v. Minor wording and formatting changes.
6

7 Policy No. 105 – Appendix: Energy-Related Transaction Authority
8 Policy

9 On December 21, 2016, Big Rivers made the following
10 changes –

- 11 i. Reflected Policy No. 105 changes, as outlined above, and
12 adopted by Big Rivers' Board of Directors December 16,
13 2016;
14 ii. Updated the following tables to reflect these changes –
15 (1) Bilateral Energy and Capacity Sales Transaction
16 Authority – Section 4 and
17 (2) Natural/Synthetic Gas and Transportation Trans-
18 action Authority – Section 7;
19 iii. Minor wording and formatting changes.
20 c. Big Rivers' other fuel procurement policies and procedures were
21 not changed during the period of November 1, 2016, through April
22 30, 2017. In the table at the top of the following page, Big Rivers

BIG RIVERS ELECTRIC CORPORATION

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September 13, 2017

1 lists those unchanged policies and procedures, the dates of their
2 last changes, and the proceedings in which Big Rivers provided
3 them to the Commission.
4

Big Rivers Electric Corporation Policies and Procedures for Fuel Procurement				
Number	Name	Date Last Change	Provided In	Date Provided
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	2015-08-21	Case No. 2016-00006	2016-02-19
122	Energy-Related Transaction Credit Policy ⁴	2015-11-15	Case No. 2016-00235	2016-08-26
122	Addendum: Energy-Related Transaction Credit Policy ⁵	2015-11-06	Case No. 2016-00235	2016-08-26

5
6
7 **Witnesses) Mark W. McAdams (Coal) and**

⁴ In its response, filed on February 20, 2017, to Item 32 of Commission Staff's Initial Request for Information, dated February 6, 2017, in Case No. 2017-00006, Big Rivers inadvertently misstated the 'Date Last Change' for this policy as 2016-11-15. That date, shown correctly here, should have been 2015-11-15.

⁵ In its response, filed on February 20, 2017, to Item 32 of Commission Staff's Initial Request for Information, dated February 6, 2017, in Case No. 2017-00006, Big Rivers inadvertently misstated the 'Date Last Change' for this policy as 2016-11-15. That date, shown correctly here, should have been 2015-11-06.

BIG RIVERS ELECTRIC CORPORATION

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ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
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CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
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September 13, 2017

1 Wayne O'Bryan (*Natural Gas*)

2

3

**Policy No. 105 –
Energy-Related Transaction Authority Policy**

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	

1. Policy Purpose

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

2. Objective

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

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

3. Procedural Requirements

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

Execution Authority

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

The transaction limits apply to both purchases and sales.

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

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	

Contract Requirements

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

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

Credit Requirements

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

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

Credit Slewing

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

Contract Slewing

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

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

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

Transaction Communications

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

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
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Deal Capture

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

Speculation

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

Non-Standard Products

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

Transactions Requiring Board Approval

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

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

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

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

Energy Related Transaction Authority Policy

Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	

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

Energy Related Transaction Authority Policy							
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD			
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016				

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

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

Purchases		Per Transaction Limits (up to)				Aggregate Limits (up to)	
Title	Product	Term	Lead Time	MW Size	Max. \$/MWH	Total Volume MWH	Total \$
Board	Energy, Capacity and Transmission	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
CEO	Energy	≤ 2 Years	≤ 3 Years	≤ 400	≤ \$150	7,008,000	\$350.4 million
	Capacity	≤ 3 Years	≤ 3 Years	≤ 100	≤ \$8	1,752,000	\$14.016 million
	Transmission	≤ 2 Years	≤ 3 Years	≤ 100	Tariff	1,752,000	Tariff

Sales		Per Transaction Limits (up to)				Aggregate Limits (up to)	
Title	Product	Term	Lead Time	MW Size	Min. \$/MWH	Total Volume MWH	Total \$
Board	Energy, Capacity and Transmission	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
CEO	Energy	≤ 2 Years	≤ 3 Years	≤ 400	No Limit	11,100,000	No Limit
	Capacity	≤ 2 Years	≤ 3 Years	≤ 500	No Limit	13,140,000	No Limit
	Transmission	≤ 2 Years	≤ 3 Years	≤ 100*	No Limit	2,628,000	No Limit

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

Energy, Capacity and Transmission Authority Matrix Explanations

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

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	

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

Delivery Locations

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

Unrestricted Delivery Locations

- SERC Reliability Region
- MISO
- PJM
- RFC Reliability Region
- SPP

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

Restricted Delivery Locations

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

Firmness of Energy

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

Transmission Firmness and Volume

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

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	

5. MISO Transaction Authority

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

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

MISO Authority Matrix Explanations

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

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

Energy Related Transaction Authority Policy					
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by	
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	BOARD	

6. PJM Transaction Authority (Non-Bilateral)

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

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

PJM Authority Matrix Explanations

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

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

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	

7. Natural/Synthetic Gas and Transportation Transaction Authority

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

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Physical Volume per Day MMBtu	\$/ MMBtu	Total Physical Volume MMBtu	Total \$
Board	Gas Products	No Limit	No Limit	No Max.	No Max.	No Max.	No Max.
CEO	Physical	> 1 Year	≤ 2 Years	25,000	\$15	1.2 million	\$18 million
		≤ 2 Years		≤ 1 Year	No Max.		

Gas Authority Matrix Explanations

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

Gas Firmness

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

Transportation Firmness and Volume

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

Energy Related Transaction Authority Policy

Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	

Delivery Locations

Gas transactions may only be executed at the following locations:

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

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

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	

8. Fuel Oil Transaction Authority

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

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

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

Fuel Oil Authority Matrix Explanations

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

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	

9. Solid Fuel Transaction Authority

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

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/MMBtu	Total Volume Tons	Total \$
Board	Physical Solid Fuel	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Solid Fuel	> 3 Months	≤ 2 Years	2,500,000	\$2.50	4 million	\$240 million
		≤ 3 Months		200,000	\$2.85		

Solid Fuel Authority Matrix Explanations

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

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	

10. Transportation Transaction Authority

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

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

Transportation Authority Matrix Explanations

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

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	

11. Emission Allowances Transaction Authority*

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

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

Emission Allowance Authority Matrix Explanations

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

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by BOARD
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	

12. Limestone Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements 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 \$
Board	Physical Limestone Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Limestone Reagent	> 3 Months ≤ 3 Years	≤ 2 Years	750,000	\$20	1.50 million	\$30 million
		≤ 3 Months		No Max	No Max		

Limestone Reagent Authority Matrix Explanations

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

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13. Bulk Lime and Lime Hydrate Reagent Transaction Authority

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

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

Bulk Lime and Lime Hydrate Reagent Authority Matrix Explanations

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

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14. MATS Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements 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 \$
Board	MATS Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	MATS Reagent	> 3 Months ≤ 3 Years	≤ 2 Years	25,000	\$4,000	25,000	\$100 million
		≤ 3 Months		No Max	No Max		

MATS Reagent Authority Matrix Explanations

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

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15. Acknowledgements

Clear Authority and Staff and ACES Authority Delegations

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

Violations and Sanctions

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

Policy Effective

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

Responsibility

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

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Number	Date	Notes	Approved by
		Replaced Risk Management Policy for Power Supply	Board
Original	06/15/2007	Trading Authority Policy w/o matrices	Board
Rev 1	10/16/2009	Name change to Energy Related Transaction Authority Policy with matrices	Board
Rev 2	11/19/2010	MISO Transaction Authority added	Board
Rev 3	12/17/2010	Updated Solid Fuel Transaction Authority	Board
Rev 4	03/18/2011	Added limestone and lime, general cleanup	Board
Rev 5	02/21/2012	Made revisions to account for retirement of Senior VP Energy Services	Board
Rev 6	02/14/2013	Changed VP Production to Chief Operating Officer. Changed Vice President of Governmental Relations and Enterprise Risk Management to Director Enterprise Risk Management/Strategic Planning. Under MISO, changed Aggregate Planning Resource Credits to Zonal Resource Credits.	
Rev 7	03/21/2014	Add date last reviewed line and correct section 4 to comply with Appendix	Board
Rev 8	08/15/2014	Remove reference to Chief Operating Officer	Board
Rev 9	02/20/2015	Added MATS reagents transaction authority; updated transaction authority for bilateral electric power and transmission and lime reagent; general clean up.	Board
Rev 10	02/23/2016	Made changes to clarify transaction authority for purchases and sales for energy, capacity and transmission. Changes implemented to be inclusive of transportation for items shipped in bulk by barge, rail and truck. Updated transaction authority amounts for various lime and MATS reagents.	Board
Rev 11	12/16/2016	Made changes to clarify language for speculation. Eliminated daily limits for both bilateral energy, capacity and transmission purchases and sales transactions and natural/synthetic gas and transportation transactions.	Board



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1. Policy Purpose

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

2. Objective

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

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

3. Procedural Requirements

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

Execution Authority

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

The transaction limits apply to both purchases and sales.

Deleted: Daily limits are applied to gross amounts transacted in total for the day, and not to purchases and sales netted together.

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



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Contract Requirements

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

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

Credit Requirements

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

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

Credit Sleeving

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

Contract Sleeving

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

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

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

Transaction Communications

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

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Deal Capture

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

Speculation

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

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Non-Standard Products

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

Transactions Requiring Board Approval

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

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

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

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



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



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

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

Purchases		Per Transaction Limits (up to)				Aggregate Limits (up to)			
Title	Product	Term	Lead Time	MW Size	Max. \$/MWH	Total Volume MWH	Total \$		
Board	Energy, Capacity and Transmission	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
CEO	Energy	≤ 2 Years	≤ 3 Years	≤ 400	≤ \$150	7,008,000	\$350.4 million		
	Capacity	≤ 3 Years	≤ 3 Years	≤ 100	≤ \$8	1,752,000	\$14.016 million		
	Transmission	≤ 2 Years	≤ 3 Years	≤ 100	Tariff	1,752,000	Tariff		

Sales		Per Transaction Limits (up to)				Aggregate Limits (up to)			
Title	Product	Term	Lead Time	MW Size	Min. \$/MWH	Total Volume MWH	Total \$		
Board	Energy, Capacity and Transmission	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
CEO	Energy	≤ 2 Years	≤ 3 Years	≤ 400	No Limit	11,100,000	No Limit		
	Capacity	≤ 2 Years	≤ 3 Years	≤ 500	No Limit	13,140,000	No Limit		

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Transmission	≤ 2 Years	≤ 3 Years	≤ 100*	No Limit						2,628,000	No Limit
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*Lesser of 100 MW or rights to transmission capacity owned by Big Rivers.

Energy, Capacity and Transmission Authority Matrix Explanations

- Transaction limits represent the MW volume per hour and dollars/MWH for each transaction executed.
- Aggregate Limits represent the sum total MWH volume and dollars for all physical and financial forward transactions, excluding options.
- Lead time represents the time period from the date the transaction is executed to the start of the transaction.
- Authorized products include energy both forwards and options, transmission and capacity, including both physical and financial derivatives. Options may only be entered into by the Big Rivers CEO or his designee.
- Authority for PJM and MISO products is defined in the authority matrices below.

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Delivery Locations

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

Unrestricted Delivery Locations

- SERC Reliability Region
- MISO
- PJM
- RFC Reliability Region
- SPP

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

Restricted Delivery Locations

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

Firmness of Energy

The product firmness of all transactions must be provided for in an executed agreement between Big Rivers and the appropriate counterparty. Sales commitments must never be more firm than the supply source, including the purchase side of back-to-back sales, swaps, sleeves or spreads unless the Big Rivers



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CEO gives explicit written authority to sell power that is more firm than the supply source. Energy purchased as firm liquidated damages may be resold as such.

Transmission Firmness and Volume

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



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5. MISO Transaction Authority

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

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

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MISO Authority Matrix Explanations

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

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



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6. PJM Transaction Authority (Non-Bilateral)

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

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

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PJM Authority Matrix Explanations

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

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



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7. Natural/Synthetic Gas and Transportation Transaction Authority

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

Title	Product	Per Transaction Limits (up to)			Aggregate Limits (up to)					
		Term	Lead Time	Physical Volume per Day MMBtu	\$/MMBtu	Total Physical Volume MMBtu	Total \$			
Board	Gas Products	No Limit	No Limit	No Max.	No Max.	No Max.	No Max.			
CEO	Physical	> 1 Year	≤ 2 Years	25,000	\$15	1.2 million	\$18 million			
		≤ 1 Year		No Max.	No Max.					

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Deleted: <#>Per delivery day limits represent the total physical MMBtu volume and dollars for all transactions delivered in a given day.¶

Gas Authority Matrix Explanations

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

Gas Firmness

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



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Transportation Firmness and Volume

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

Delivery Locations

Gas transactions may only be executed at the following locations:

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

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



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8. Fuel Oil Transaction Authority

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

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

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

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Fuel Oil Authority Matrix Explanations

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



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9. Solid Fuel Transaction Authority

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

Title	Product	Per Transaction Limits (up to)				Aggregate Limits (up to)	
		Term	Lead Time	Volume Tons	\$/MMBtu	Total Volume Tons	Total \$
Board	Physical Solid Fuel	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Solid Fuel	> 3 Months	≤ 2 Years	2,500,000	\$2.50	4 million	\$240 million
		≤ 3 Years		200,000			

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Solid Fuel Authority Matrix Explanations

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



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10. Transportation Transaction Authority

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

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

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Transportation Authority Matrix Explanations

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



BOARD POLICY

Policy Number: 105

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	BOARD

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11. Emission Allowances Transaction Authority*

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

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

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Emission Allowance Authority Matrix Explanations

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



BOARD POLICY

Policy Number: 105

Energy Related Transaction Authority Policy

Original Effective Date	06/15/2007	Date Last Reviewed	<u>12/16/2016</u>	Approved by	BOARD
Original Approval Date	06/15/2007	Date Last Revised	<u>12/16/2016</u>		

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12. Limestone Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements 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 \$
Board	Physical Limestone Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	Physical Limestone Reagent	> 3 Months	≤ 2 Years	750,000	\$20	1.50 million	\$30 million
		≤ 3 Years		No Max			

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Limestone Reagent Authority Matrix Explanations

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



BOARD POLICY

Policy Number: 105

Energy Related Transaction Authority Policy

Original Effective Date	06/15/2007	Date Last Reviewed	<u>12/16/2016</u>	Approved by	BOARD
Original Approval Date	06/15/2007	Date Last Revised	<u>12/16/2016</u>		

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13. Bulk Lime and Lime Hydrate Reagent Transaction Authority

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

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

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Bulk Lime and Lime Hydrate Reagent Authority Matrix Explanations

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



BOARD POLICY

Policy Number: 105

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	<u>12/16/2016</u>	Approved by
Original Approval Date	06/15/2007	Date Last Revised	<u>12/16/2016</u>	BOARD

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14. MATS Reagent Transaction Authority

The following outlines transaction limits, definitions, and procedural requirements 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 \$
Board	MATS Reagent	No Limit	No Limit	No Max	No Max	No Max	No Max
CEO	MATS Reagent	> 3 Months	≤ 2 Years	25,000	\$4,000	25,000	\$100 million
		≤ 3 Months		No Max	No Max		

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MATS Reagent Authority Matrix Explanations

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



BOARD POLICY

Policy Number: 105

Energy Related Transaction Authority Policy				
Original Effective Date	06/15/2007	Date Last Reviewed	12/16/2016	Approved by
Original Approval Date	06/15/2007	Date Last Revised	12/16/2016	BOARD

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15. Acknowledgements

Clear Authority and Staff and ACES Authority Delegations

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

Violations and Sanctions

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

Policy Effective

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

Responsibility

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



BOARD POLICY

Policy Number: 105

Energy Related Transaction Authority Policy

Original Effective Date	06/15/2007	Date Last Reviewed	<u>12/16/2016</u>	Approved by	Deleted: 02/23
Original Approval Date	06/15/2007	Date Last Revised	<u>12/16/2016</u>	BOARD	Deleted: 02/23

Number	Date	Notes	Approved by
		Replaced Risk Management Policy for Power Supply	Board
Original	06/15/2007	Trading Authority Policy w/o matrices	Board
Rev 1	10/16/2009	Name change to Energy Related Transaction Authority Policy with matrices	Board
Rev 2	11/19/2010	MISO Transaction Authority added	Board
Rev 3	12/17/2010	Updated Solid Fuel Transaction Authority	Board
Rev 4	03/18/2011	Added limestone and lime, general cleanup	Board
Rev 5	02/21/2012	Made revisions to account for retirement of Senior VP Energy Services	Board
Rev 6	02/14/2013	Changed VP Production to Chief Operating Officer. Changed Vice President of Governmental Relations and Enterprise Risk Management to Director Enterprise Risk Management/Strategic Planning. Under MISO, changed Aggregate Planning Resource Credits to Zonal Resource Credits.	Board
Rev 7	03/21/2014	Add date last reviewed line and correct section 4 to comply with Appendix	Board
Rev 8	08/15/2014	Remove reference to Chief Operating Officer	Board
Rev 9	02/20/2015	Added MATS reagents transaction authority; updated transaction authority for bilateral electric power and transmission and lime reagent; general clean up.	Board
Rev 10	02/23/2016	Made changes to clarify transaction authority for purchases and sales for energy, capacity and transmission. Changes implemented to be inclusive of transportation for items shipped in bulk by barge, rail and truck. Updated transaction authority amounts for various lime and MATS reagents.	Board
Rev 11	<u>12/16/2016</u>	<u>Made changes to clarify language for speculation. Eliminated daily limits for both bilateral energy, capacity and transmission purchases and sales transactions and natural/synthetic gas and transportation transactions.</u>	Board

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**Policy No. 105 –
Appendix A – Energy-Related Transaction Authority Policy**

Appendix A to Policy 105 - Energy Related Transaction Authority

Original Effective Date	11/4/2009	Date Last Reviewed	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

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	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

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	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

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	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

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				
	Financial Transmission Rights	≤ 1 Year	≤ 1 Year	210	\$20
	Virtual Transaction Awards	As Required by PJM	1 Operating Day	No Max	PJM Price Cap
Imports/Exports	No Max				
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				
	Financial Transmission Rights	≤ 1 Year	≤ 3 months	105	\$12
	Virtual Transaction Awards	As Required by PJM	1 Operating Day	400	PJM Price Cap
Imports/Exports	500				
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				
	Financial Transmission Rights	Not Authorized	Not Authorized	Not Authorized	Not Authorized
	Virtual Transaction Awards	As Required by PJM	1 Operating Day	400	PJM Price Cap
Imports/Exports	450				
ACES	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted
	Demand Awards				
	Ancillary Service Awards				
	Capacity				
	Financial Transmission Rights	Not Authorized	Not Authorized	Not Authorized	Not Authorized
	Virtual Transaction Awards	As Required by PJM	1 Operating Day	400	PJM Price Cap
Imports/Exports	400				

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

7. 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.		
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.

Appendix A to Policy 105 - Energy Related Transaction Authority				
Original Effective Date	11/4/2009	Date Last Reviewed	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

8. 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				
Original Effective Date	11/4/2009	Date Last Reviewed	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

9. 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				
Original Effective Date	11/4/2009	Date Last Reviewed	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

10. 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		

Appendix A to Policy 105 - Energy Related Transaction Authority

Original Effective Date	11/4/2009	Date Last Reviewed	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

11. 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

Original Effective Date	11/4/2009	Date Last Reviewed	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

12. 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

Appendix A to Policy 105 - Energy Related Transaction Authority

Original Effective Date	11/4/2009	Date Last Reviewed	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

13. 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

Original Effective Date	11/4/2009	Date Last Reviewed	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

14. 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				
Original Effective Date	11/4/2009	Date Last Reviewed	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

15. 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.

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

Appendix A to Policy 105 - Energy Related Transaction Authority

Original Effective Date	11/4/2009	Date Last Reviewed	12/21/2016	Approved by CEO
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	

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
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

Approved by CEO

CEO Signature: _____

Approval Date: _____



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	<u>12/21/2016</u>	Approved by	
Original Approval Date	11/4/2009	Date Last Revised	<u>12/21/2016</u>	CEO	

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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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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	12/21/2016	Approved by	
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	CEO	

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4. Bilateral Energy and Capacity Sales Transaction Authority

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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		

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* ≤ 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



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	12/21/2016	Approved by	Deleted: 04/15
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	CEO	Deleted: 04/15

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.



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Appendix A to Policy 105 - Energy Related Transaction Authority

Original Effective Date	11/4/2009	Date Last Reviewed	12/21/2016	Approved by	Deleted: 04/15
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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	≤ 2 Years	≤ 2Years	425	MISO Price Cap
	Capacity			425	
	Financial Transmission Rights			≤ 1 Year	
	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	≤ 1 Year	≤ 1Year	425	MISO Price Cap
	Capacity			425	
	Financial Transmission Rights			≤ 6 months	
	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	< 6 Months	< 6 Months	425	MISO Price Cap
	Financial Transmission Rights			425	
	Virtual Transaction Awards			As Required by MISO	
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	≤ 6 Months	≤ 6 Months	425	MISO Price Cap
	Financial Transmission Rights			425	
	Virtual Transaction Awards			As Required by MISO	
	Imports/Exports		400		

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CEO POLICY

Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority

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Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	CEO	Deleted: 04/15

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)				Formatted Table
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	Formatted: Centered
	Demand Awards					
	Ancillary Service Awards					
	Capacity	≤ 1 Year	≤ 1 Year	210	\$20	Formatted: Centered
	Financial Transmission Rights					
	Virtual Transaction Awards					
Imports/Exports	As Required by PJM	1 Operating Day	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	Formatted: Centered
	Demand Awards					Deleted: of
	Ancillary Service Awards					
	Capacity	≤ 1 Year	≤ 3 months	105	\$12	Formatted: Centered
	Financial Transmission Rights					
	Virtual Transaction Awards					
Imports/Exports	As Required by PJM	1 Operating Day	400	PJM Price Cap		
Senior Power Portfolio Optimization Analyst	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Formatted: Centered
	Demand Awards					
	Ancillary Service Awards					
	Capacity	Not Authorized	Not Authorized	Not Authorized	Not Authorized	Formatted: Centered
	Financial Transmission Rights					
	Virtual Transaction Awards					
Imports/Exports	As Required by PJM	1 Operating Day	400	PJM Price Cap		
ACES	Generation Awards	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Not Presently Transacted	Formatted: Centered
	Demand Awards					
	Ancillary Service Awards					
	Capacity	Not Authorized	Not Authorized	Not Authorized	Not Authorized	Formatted: Centered
	Financial Transmission Rights					
	Virtual Transaction Awards					
Imports/Exports	As Required by PJM	1 Operating Day	400	PJM Price Cap		



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	12/21/2016	Approved by
Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	CEO

7. 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)		
		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*			-20,000	-\$15	100,000	\$1.5 million

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CEO POLICY

Policy Number: 105 Appendix A

Appendix A to Policy 105 - Energy Related Transaction Authority

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	Pipeline Payback	≤ 1 Week	≤ 1 Week	60,000	\$15	60,000	\$90,000		
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***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.



CEO POLICY

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Appendix A to Policy 105 - Energy Related Transaction Authority

Original Effective Date	11/4/2009	Date Last Reviewed	<u>12/21/2016</u>	Approved by
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8. 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		

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Original Approval Date	11/4/2009	Date Last Revised	<u>12/21/2016</u>	CEO	

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9. 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		

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Original Approval Date	11/4/2009	Date Last Revised	<u>12/21/2016</u>	CEO	Deleted: 04/15

10. 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		

Appendix A to Policy 105 - Energy Related Transaction Authority

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Original Approval Date	11/4/2009	Date Last Revised	<u>12/21/2016</u>	CEO	

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11. 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	As directed	As directed

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12. 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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Original Approval Date	11/4/2009	Date Last Revised	12/21/2016	CEO	Deleted: 04/15

13. 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

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14. 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

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15. 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.

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



CEO POLICY

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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
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
<u>Rev. 12</u>	<u>12-21-2016</u>	<u>Updated to reflect changes in Policy 105 adopted by the Board on December 16, 2016.</u>	<u>Robert W. Berry</u>

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BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 16)**

2 *a. State whether Big Rivers is aware of any violations of its*
3 *policies and procedures regarding fuel procurement that*
4 *occurred prior to or during the period from November 1,*
5 *2016, through April 30, 2017.*

6 *b. If yes, for each violation:*

7 *(1) Describe the violation;*

8 *(2) Describe the action(s) that Big Rivers took upon*
9 *discovering the violation; and*

10 *(3) Identify the person(s) who committed the violation.*

11

12 **Response)**

13 a. Big Rivers is unaware of any violations of its policies and
14 procedures regarding fuel procurement that occurred during the
15 period November 1, 2016, through April 30, 2017. Big Rivers is
16 also unaware of any unreported violation prior to the current
17 period under review.

18 b.

19 (1) - (3)

20 Not Applicable.

21

22

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1

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

3 Wayne O'Bryan (*Natural Gas*)

4

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 17)** *Identify and explain the reasons for all changes in the*
2 *organizational structure and personnel of the departments or divisions*
3 *that are responsible for Big Rivers' fuel procurement activities that*
4 *occurred during the period from November 1, 2016, through April 30, 2017.*

5

6 **Response)** During the period from November 1, 2016, through April 30, 2017,
7 there have been no changes in the organizational structure and personnel of the
8 departments or divisions that are responsible for Big Rivers' fuel procurement
9 activities.

10

11

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

13 Wayne O'Bryan (*Natural Gas*)

14

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Witnesses) Ronald D. Gregory (*a. only*) and**
2 **Jason C. Burden (*b. only*)**
3
4

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

1 **Item 19) *List each written coal supply solicitation issued during the***
2 ***period from November 1, 2016, through April 30, 2017.***

3

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

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

18

19 **Response)**

20 **BREC-17-01 (Spot and Term Solicitation)**

21

a.

22

i. Date solicitation was issued: November 1, 2016.

23

Date solicitation was returned: November 22, 2016.

BIG RIVERS ELECTRIC CORPORATION

**AN EXAMINATION OF THE APPLICATION OF THE FUEL
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017
CASE NO. 2017-00287**

**Response to Commission Staff's Request for Information
dated August 30, 2017**

September 13, 2017

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- ii. Type of solicitation: Spot 2017 and term (2018 – 2021) written bid solicitation (web-based distribution).
- iii. Quantities solicited: Spot up to 300,000 tons; Term – up to 500,000 tons per year.
- iv. Quality of coal and pet coke solicited:
 - (a) BTU/lb.: 10,500 to 13,500;
 - (b) Ash (lbs/MMBTU): 0.74 to 14.29;
 - (c) Moisture (lbs/MMBTU): 8.89 to 11.90;
 - (d) Sulfur (lbs SO₂): 5.50 to 6.50 (coal); and
 - (e) Sulfur (lbs SO₂): up to 8.50 (petroleum coke)
- v. Time period over which deliveries were requested:
 - (a) Spot solicitation: January 1 – December 31, 2017.
 - (b) Term solicitation: Years 2018 through 2021.
- vi. Generating units for which the coal was intended include: Green, Station Two, and Wilson.
- b.
 - i. Number of vendors solicited: The coal solicitation was posted to Big Rivers' web site for supplier review, print-out, and written bid proposal submission. Big Rivers also notified coal and petroleum coke newsletters and journals for industry notification of the placement of the solicitation on the web site and referral to the web address for review and download. For

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1 bid BREC-17-01 there were seventeen (17) unique page views
2 of the bid. Responding vendors: Ten (10) vendors replied to the
3 spot and term bid solicitation (excluding no bid responses).

4 ii. Selected vendors:

5 (a) *Spot fuel supply*: Oxbow Energy Solutions, LLC (BRE-17-
6 001) and TCP PetCoke Corporation (BRE-17-002). [REDACTED]

7 [REDACTED]
8 [REDACTED].

9 (b) *Term fuel supply*: No term contract awards were made
10 pursuant to this bid.

11 iv. The bid tabulation spreadsheet is being provided under a
12 Petition for Confidential Treatment.

13 v. The rationale for each selection is as follows:

14 (a) *Selected spot coal vendors*:

15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]

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1

[REDACTED]

2

[REDACTED].

3

(b) *Selected term coal vendors:*

4

No term contract awards were made pursuant to this bid

5

(Bid BRE 17-01).

6

7

8

Witness) Mark W. McAdams

9

In the Matter of:

AN EXAMINATION OF THE APPLICATION)
OF THE FUEL ADJUSTMENT CLAUSE OF)
BIG RIVERS ELECTRIC CORPORATION) Case No. 2017-00287
FROM)
NOVEMBER 1, 2016 THROUGH APRIL 30, 2017)

CONFIDENTIAL RESPONSE to
Item 19.b.iv of the Commission Staff's Data Request
dated August 30, 2017
FILED: September 13, 2017

**INFORMATION SUBMITTED UNDER PETITION FOR CONFIDENTIAL
TREATMENT**

BIG RIVERS ELECTRIC CORPORATION

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1 **Item 20)** *List each oral coal supply solicitation issued during the*
2 *period from November 1, 2016, through April 30, 2017.*

3

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

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

16

17 **Response)**

18 a. and b.

19 Big Rivers issued no oral coal supply solicitations during the
20 period from November 1, 2016, through April 30, 2017.

21

22

23 **Witness)** Mark W. McAdams

BIG RIVERS ELECTRIC CORPORATION

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1 **Item 21)**

- 2 a. *List all intersystem sales during the period under review*
3 *in which Big Rivers used a third party's transmission*
4 *system.*
- 5 b. *For each sale listed above:*
- 6 (1) *Describe the effect on the FAC calculation of line*
7 *losses related to intersystem sales when using a third*
8 *party's transmission system; and*
- 9 (2) *State the line-loss factor used for each transaction*
10 *and describe how that line-loss factor was*
11 *determined.*

12

13 **Response)**

- 14 a. Big Rivers had no intersystem sales during the period under
15 review in which Big Rivers used a third party's transmission
16 system.
- 17 b.
- 18 (1) Not Applicable.
- 19 (2) Not Applicable.
- 20
- 21
- 22

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1

2 **Witnesses)**

3 a. Wayne O'Bryan

4 b.(1) Nicholas R. Castlen

5 b.(2) Wayne O'Bryan

6

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1 **Item 22)**

- 2 *a. Describe the effect on the FAC calculation of line losses*
3 *related to intersystem sales when not using a third party's*
4 *transmission system.*
- 5 *b. Describe each change that Big Rivers made to its*
6 *methodology for calculating intersystem sales line losses*
7 *during the period under review*

8

9 **Response)**

- 10 a. Line losses related to intersystem sales are included in Big Rivers'
11 total System Losses reported on page 3 of its monthly Form A
12 filing. Big Rivers calculates an overall system average fuel cost
13 per kWh each month by dividing (1) the total cost of fuel for
14 generation by (2) the net kWh generated minus total System
15 Losses. The overall system average fuel cost per kWh (which
16 accounts for total System Losses, including line losses related to
17 intersystem sales) is multiplied by the intersystem sales volume
18 to calculate the cost of fuel allocated to intersystem sales in Big
19 Rivers' monthly Form A filing.
- 20 b. Big Rivers made no changes to its methodology for calculating
21 intersystem sales line losses during the period under review

22

BIG RIVERS ELECTRIC CORPORATION

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1

2

3 **Witnesses)**

4

a. Nicholas R. Castlen

5

b. Wayne O'Bryan

6

BIG RIVERS ELECTRIC CORPORATION

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1 **Item 23)** *State whether, during the period under review, Big Rivers has*
2 *solicited bids for coal with the restriction that it was not mined through*
3 *strip mining or mountain top removal. If so, explain the reasons for the*
4 *restriction on the solicitation, the quantity in tons and price per ton of the*
5 *coal purchased as a result of this solicitation, and the difference between*
6 *the price of this coal and the price it could have obtained for the coal if*
7 *the solicitation had not been restricted.*

8

9 **Response)** Big Rivers has not solicited any bids for coal with the restrictions
10 that it was not mined through strip mining or mountain top removal.

11

12

13 **Witness)** Mark W. McAdams

14

BIG RIVERS ELECTRIC CORPORATION

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1 **Item 24)** *Provide a detailed discussion of any specific generation*
2 *efficiency improvements Big Rivers has undertaken during the period*
3 *under review.*

4

5 **Response)** During the period under review, Big Rivers completed a planned
6 outage on Green Station Unit 1 with a duration of 497 hours and 6 minutes
7 compared to a planned duration of 504 hours. Both, the #5 high-pressure
8 feedwater heater and the air preheater cold-end baskets were identified in the
9 outage plan to be replaced, due to less than desirable performance. The #5 high-
10 pressure feedwater heater had roughly 100 tubes (11%) plugged, due to internal
11 tube leaks, which negatively affected heat rate. The air preheater cold-end
12 baskets were also performing with less than desired heat transfer, which had a
13 negative effect on heat rate. Both the feedwater heater and the air preheater
14 baskets were replaced with equipment that met the original design criteria. Post
15 outage, Big Rivers realized an approximate 200 BTU/kW recovery on Green Unit 1
16 efficiency.

17

18

19 **Witness)** Jason C. Burden

20

BIG RIVERS ELECTRIC CORPORATION

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1 **Item 25)** *State whether all fuel contracts related to commodity and/or*
2 *transportation have been filed with the Commission. If any contracts*
3 *have not been filed, explain why they have not been filed and provide a*
4 *copy.*

5

6 **Response)** All of Big Rivers' long-term fuel and transportation contracts have
7 been filed with the Commission. Also, please see Big Rivers' response to Item 2.

8

9

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

12

13