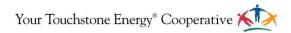
ORIGINAL





COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

ELECTRONIC EXAMINATION OF THE)	
APPLICATION OF THE FUEL ADJUSTMENT)	Casa Na
CLAUSE OF BIG RIVERS ELECTRIC)	Case No.
CORPORATION FROM)	2019-00007
NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018)	

Responses to Commission Staff's Request for Information dated
February 11, 2019

FILED: March 11, 2019

ORIGINAL

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

VERIFICATION

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

Christopher S. (Chris) Bradley

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Christopher S. (Chris) Bradley on this the 25 day of February, 2019.

Motary Public, Kentucky State at Large

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

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)

SUBSCRIBED AND SWORN TO before me by Jason C. Burden on this the day of February, 2019.

Notary Public, Kentucky State at Large

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

VERIFICATION

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 25 day of February, 2019.

Notary Public, Kentucky State at Large

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

VERIFICATION

I, Mark J. Eacret, 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 J. Eacret

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Mark J. Eacret on this the day of February, 2019.

Notary Public, Kentucky State at Large

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

VERIFICATION

	I,	Ro	nald	D.	(R	on)	$\operatorname{Gr}\epsilon$	gory	verify	, state,	and	affirm	that	the	data	reque	st
respon	nse	es fi	led v	with	th	is v	erif	icatio	n for w	hich I	am li	sted as	a wit	ness	are t	rue ar	ıd
accur	ate	to	the	be	st	of	my	knov	vledge,	inforn	nation	n, and	belief	f for	med	after	a
reason	nal	ole :	inqu	iry.													

Ronald D. (Ron) Gregory

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Ronald D. (Ron) Gregory on this the 25 day of February, 2019.

Notary Public, Kentucky State at Large

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

VERIFICATION

I, Roger D. Hickman, 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.

Roger D. Hickman

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Roger D. Hickman on this the day of February, 2019.

Notary Public, Kentucky State at Large

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

VERIFICATION

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

Mark W. McAdams

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Mark W. McAdams on this the day of February, 2019.

Notary Public, Kentucky State at Large

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

- 1 Item 1) For the period from May 1, 2018, to October 31, 2018 (the last
- 2 six months of the period under review), provide the amount of coal
- 3 purchased in tons, and the percentage of purchases that were spot versus
- 4 contract.

5

7

6 **Responses)** Please see the schedules below.

For the Period from May 1, 2018, through October 31, 2018

Purchase Vendor (Contract Number)	Fuel Type	Purchase Tonnage	Contract Type
Foresight Coal (BRE-15-005)	Coal	137,569.06	Contract
KenAmerican Resources (BRE-15-006)	Coal	202,121.62	Contract
Peabody COALSALES (BRE-15-018)	Coal	320,581.00	Contract
Rhino (BRE-15-009)	Coal	76,728.80	Contract
Rhino (BRE-18-001)	Coal	167,396.60	Contract
Sun Energy (BRE-18-002)	Coal	41,717.40	Contract
Alliance (BRE-18-003)	Coal	361,300.70	Contract
Total Tonnage		1,307,415.18	

For the Period from May 1, 2018, through October 31, 2018

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

8

10 Witness) Mark W. McAdams

11

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 2)	For the last six months of the period under review, list each
2	coal pur	rchase made under a long-term contract (one year or greater). For
3	each pu	rchase, list:
4		
5	a.	Contract or purchase order number;
6	b .	The supplier's name;
7	<i>c</i> .	The location(s) of production facilities from which the coal is
8		sourced;
9	d.	The method of delivery, (i.e., barge, truck, rail. other);
10	e.	The actual quantity received during the review period;
11	f.	The tonnage requirement for the review period; and
12	g.	Current price paid per ton.
13		
14	Respons	se) Please see the attached schedule.
15		
16		
17	Witness) Mark W. McAdams
18		

Foresight Coal Supply Agreement

A.	CONTRACT NUMBER:	BRE-15-	-005				
В.	SUPPLIER'S NAME / ADDRESS:	211 Nort	Foresight Coal Sales, LLC 211 North Broadway, Suite 2600 St. Louis, MO 63102				
С.	PRODUCTION FACILITY:	Shay No. 1 Mine, Macoupin County, Illinois; KenAmerican Paradise No. 9 Mine Western KY Consolidated Resources and Muhlenberg Coal Company's Genesis and Pride Mines Muhlenberg and Ohio Counties, Kentucky					
D.	METHOD OF DELIVERY:	Barge an	d/or truc	k			
E.	ACTUAL TONNAGE:	2017	- - -	200,318 239,969 239,421 223,350	Tons Tons Tons (through October)		
F.	ANNUAL TONNAGE REQUIREMENTS:	2016 2017 2018	- - -	200,000 240,000 240,000 240,000 240,000	Tons Tons Tons Tons Tons		
	PERCENT OF ANNUAL REQUIREMENTS:	2016	- - -	100.16 % 99.99 % 99.76 % 93.06 %	(through October)		
G.	CURRENT PRICE (Base):	2015 2016 2017 2018 2019	- ; - ;	\$ 34.0006 \$ 36.2491 \$ 38.4998 \$ 40.5497 \$ 42.3490	per Ton		
	CURRENT PRICE (Contract):	2015 2016 2017 2018	- <u> </u>	\$ 34.0006 \$ 36.2491 \$ 38.4998 \$ 40.5497	per Ton per Ton per Ton per Ton		

KenAmerican Resources Coal Supply Agreement

A.	CONTRACT NUMBER:	BRE-15	5-006				
В.	SUPPLIER'S NAME/ADDRESS:	46226 N	KenAmerican Resources, Inc. 46226 National Road St. Clairsville, OH 43950				
C.	PRODUCTION FACILITY:		Paradise #9 Mine Muhlenberg County, Kentucky				
D.	METHOD OF DELIVERY:	Truck					
Ε.	ACTUAL TONNAGE:	2015 2016 2017 2018	- - -	300,077 500,015 498,581 334,424	Tons Tons Tons Tons (through October)		
F.	ANNUAL TONNAGE REQUIREMENTS:	2015 2016 2017 2018 2019	- - - -	300,000 500,000 500,000 400,000 400,000	Tons Tons Tons Tons Tons		
	PERCENT OF ANNUAL REQUIREMENTS:	2015 2016 2017 2018	- - -	100.03 % 100.00 % 99.72 % 83.61 %	(through October)		
G.	CURRENT PRICE (Base):	2015 2016 2017 2018 2019	- - - -	\$ 49.2505 \$ 50.5000 \$ 51.7496 \$ 53.0506 \$ 54.4008	per Ton per Ton per Ton per Ton per Ton		
	CURRENT PRICE (Contract):	2015 2016 2017 2018	- - -	\$ 49.2505 \$ 50.5000 \$ 51.7496 \$ 53.0506	per Ton per Ton per Ton per Ton		

Rhino Energy LLC and Pennyrile Energy LLC Coal Sales

A.	CONTRACT NUMBER:	BRE-15- 0	BRE-15-009					
В.	SUPPLIER'S NAME / ADDRESS:	424 Lewis l	Rhino Energy LLC/Pennyrile Energy, LLC. 424 Lewis Hargett Circle, Suite 250 Lexington, KY 40503					
C.	PRODUCTION FACILITY:	Riveredge I	Pennyrile Energy LLC Riveredge Mine McLean County, Kentucky					
D.	METHOD OF DELIVERY:	Barge						
Е.	ACTUAL TONNAGE:	2015 - 2016 - 2017 - 2018 -		105,260 350,004 450,000 130,536	Tons Tons	hrough October)		
F.	ANNUAL TONNAGE REQUIREMENTS:	2015 - 2016 - 2017 - 2018 -		105,000 350,000 450,000 150,000				
	PERCENT OF ANNUAL REQUIREMENTS:	2015 - 2016 - 2017 - 2018 -		100.25 % 100.00 % 100.00 % 87.02 %	(throu	igh October)		
G.	CURRENT PRICE (Base):	Rivered Rivered Rivered Rivered	ge 2016 ge 2017	- - -	\$ 43.7494 \$ 45.7498 \$ 47.7500 \$ 47.0826	per Ton per Ton per Ton per Ton		
	CURRENT PRICE (Contract):	Rivereds Rivereds Rivereds	ge 2016 ge 2017	- - -	\$ 43.7494 \$ 45.7498 \$ 47.7500 \$ 47.0826	per Ton per Ton per Ton per Ton		

Peabody COALSALES

A	. CONTRACT NUMBER:	BRE-15	- 018	3		
В	. SUPPLIER'S NAME/ADDRESS:	Peabody 701 Mar St. Loui	ket S			
С	. PRODUCTION FACILITY:	Surface	Minir	d Wild Boar Ming Operations, Gibson Counties		
D	. METHOD OF DELIVERY:	Barge				
E	. ACTUAL TONNAGE:	2016	_	350,001	Tons	
		2017	_	525,046	Tons	
		2018	_	544,059	Tons	(through October)
F	. ANNUAL TONNAGE	2016	_	350,000	Tons	
	REQUIREMENTS:	2017	_	525,000	Tons	
		2018	_	625,000	Tons	
	PERCENT OF ANNUAL	2016	_	100.00 %		
	REQUIREMENTS:	2017	_	100.01 %		
		2018	-	87.05 %	(th	rough October)
G	. CURRENT PRICE (Base):	2016	_	\$ 40.4998	per Ton	L
		2017	_	\$ 40.4998	per Ton	L
		2018	-	\$ 40.4998	per Ton	l
	CURRENT PRICE (Contract):	2016	_	\$ 40.4998	per Ton	L
		2017	_	\$ 40.4998	per Ton	L
		2018	_	\$ 40.4998	per Ton	L

Rhino Energy LLC and Pennyrile Energy LLC Coal Sales

-						
A. CONTRACT NUMBER:	BRE-18-001					
B. SUPPLIER'S NAME/ADDRESS:	Rhino Energy LLC/Pennyrile Energy, LLC. 424 Lewis Hargett Circle, Suite 250 Lexington, KY 40503					
C. PRODUCTION FACILITY:	Pennyrile Energy LLC Riveredge Mine McLean County, Kentucky					
D. METHOD OF DELIVERY:	Barge					
E. ACTUAL TONNAGE:	2018 - 293,730	Tons (through October)				
F. ANNUAL TONNAGE	2018 - 350,000	Tons				
REQUIREMENTS:	2019 - 150,000 min. 350,000 max.	Tons				
	2020 – 150,000 min. 350,000 max.	Tons				
PERCENT OF ANNUAL REQUIREMENTS:	2018 - 83.92 %	(through October)				
G. CURRENT PRICE (Base):	2018 - \$ 37.5002	per Ton				
	2019 - \$ 38.6302	per Ton				
	2020 - \$ 39.7896	per Ton				

2018 -

CURRENT PRICE (Contract):

\$ 37.5002 per Ton

Sun Energy Group LLC

Sun Energy Group EDC								
A. CON	TRACT NUMBER:	BRE-18	- 0	02				
B. SUPI	PLIER'S NAME/ADDRESS:	2701 We	Sun Energy Group LLC 2701 West 1100 South Huntingburg, Indiana 47542					
C. PRO	DUCTION FACILITY:	-		‡1 Surface Mine ubois Counties, Ir	ıdiana			
D. MET	HOD OF DELIVERY:	Barge						
E. ACTU	JAL TONNAGE:	2018	-	67,733	Tons	(through October)		
	UAL TONNAGE UIREMENTS:	2018 2019 2020 2021	- - -	80,000 165,000 240,000 220,000	Tons Tons	(Amendment One)		
	CENT OF ANNUAL UIREMENTS:	2018	-	84.67 %	(t	hrough October)		
G. CUR	RENT PRICE (Base):	2018 2019 2020 2021 2018 2019 2020 2021	- - - -	\$ 35.0000 \$ 35.9990 \$ 35.9990 \$ 37.3498 \$ 37.3498 Quality B (10,600 \$ 32.8791 \$ 33.8161 \$ 33.8161 \$ 35.0839	per Ton	(first 145,000 tons) (next 20,000 tons) (first 20,000 tons) (next 220,000 tons) er lb.) (first 145,000 tons) (next 20,000 tons) (first 20,000 tons) (next 220,000 tons) (next 220,000 tons)		
CUR:	RENT PRICE (Contract):	2018 2018	_	Quality A (11,20 \$ 35.0000 Quality B (10,60 \$ 32.8791	per Ton	<u>er lb.)</u>		

Case No. 2019-000007 Attachment for Response to PSC 1-2 Witness: Mark W. McAdams Page 6 of 7

Alliance Coal, LLC

A.	CONTRACT NUMBER:	BRE-18-0	003				
В.	SUPPLIER'S NAME/ADDRESS:	Alliance Coal, LLC 1717 South Boulder, Suite 400 Tulsa, OK 74119					
C.	PRODUCTION FACILITY:	Riverview Coal, LLC – River View Mine Union County, Kentucky					
D.	METHOD OF DELIVERY:	Barge					
E.	ACTUAL TONNAGE:	2018 -	447,596	Tons (through October)			
F.	ANNUAL TONNAGE REQUIREMENTS:	2018 -	585,000	Tons (effective date – February 12, 2018)			
		2019 -	300,000 min. 800,000 max.	Tons			
		2020 -	300,000 min. 800,000 max.	Tons			
	PERCENT OF ANNUAL REQUIREMENTS:	2018 -	76.51 %	(through October)			
G.	CURRENT PRICE (Base):	2018 -	\$ 36.5010	per Ton			
		2019 -	\$ 37.7499	per Ton			
		2020 -	\$ 39.0034	per Ton			
	CURRENT PRICE (Contract):	2018 -	\$ 36.5010	per Ton			

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 3)	
2	a.	As of the last day of the review period, state the coal inventory
3		level in tons, and in number of days' supply. Provide this
4		information by generating station and in the aggregate.
5	b.	Describe the criteria used to determine number of days' supply.
6	c.	State the target coal inventory level for each generating station,
7		and for the total system.
8	d.	If actual coal inventory exceeds the target inventory by ten days'
9		supply, state the reasons for the excess inventory.
10	e.	
11		(1) State whether any significant changes in the current coal
12		inventory target are expected within the next 12 months.
13		(2) If so, state the expected change, and the reasons for this
14		change.
15		
16	Respon	se)
17	a.	As of October 31, 2018, Big Rivers' generating stations individually and
18		in the aggregate had the inventory levels and days' supply shown in the
19		table at the top of the following page.
20		
21		

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	
1	
_	

Total System/Station	Inventory Level (Tons) ¹	Number of Days' Supply ²	Preceding Six-Month Operating Duration (In Days)	Preceding 6 Months Burn (In Tons)
Big Rivers Electric	403,056.46	34	121	1,446,460.14
System	,	-		, -,
Reid Station ³	0.00	0	0	0.00
Station Two ⁴	49,204.60	5 3	60	$55,\!251.28$
Green Station ⁵	87,681.24	20	172	784,256.18
Coleman Station ⁶	0.00	0	0	0.00
Wilson Station ⁷	266,170.62	62	145	629,952.68

2

3

b. Number of Days' Supply =

Current Inventory (Tons)		D
Preceding 6 Months Burn (Tons)	- X	Duration (In Days)

4

5

6

c. Big Rivers Electric Corporation's Target Supply is the following range for each Station in days based on the projected annual fuel burn

Big Rivers Electric Corporation Coal Inventory Target Ranges

Coar inventor,	y rarget hanges
Total System	30-60 Days
Reid Station	$0~\mathrm{Days}$
Station Two	$30-60 \mathrm{\ Days}$
Green	30-60 Days
Coleman	0 Days
Wilson	30-60 Days

7

8

9

d. The inventory by system or by station does not exceed the inventory target(s) in excess of ten days.

10

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	e.		
2		(1)	Yes.
3		(2)	Big Rivers continued its coal inventory reduction plans and procured
4			new coal supply in consideration of achieving its goal of returning all
5			Stations and System inventory levels to its Inventory Policy. Big
6			Rivers did not enter into any spot contractual agreements for
7			delivery of coal for the review period; however, it did enter into a spot
8			coal agreement for delivery of truck coal to Green Station from mid-
9			November through December 31, 2018, to bolster inventory at the
10			Green Station. Since the prior FAC review, Big Rivers has
11			continued to work toward its inventory targets and has reduced
12			overall coal inventory during 2018 by 191,779 tons. While outside of
13			the review period, inventory at Wilson Station increased beyond the
14			60 day's maximum over the course of the fourth quarter due to an
15			extended outage of the unit. The Company is focused in 2019 on
16			balancing and managing inventory and on returning, as quickly as
17			possible, to its Inventory Policy of 30 to 60 days during the first
18			quarter of 2019. Station Two Units 1 and 2 were retired on February
19			1, 2019 and, consequently, Big Rivers will no longer be procuring coal
20			for those units.

¹ See In The Matter Of: Electronic Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2017 through April 30, 2018 – Case No. 2018-00221.

21

Case No. 2019-00007 Response to PSC 1-3 Witness: Mark W. McAdams Page 3 of 4

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1

Footnotes to table in sub-part a. above -

- Green Station and Wilson Stations each had a pet coke inventory of zero tons as of October 31, 2018.
- 2.- Number of days' supply is rounded to reflect whole days.
- **3.-** Reid Station Unit 1 was placed in Inactive Reserve Status effective April 1, 2016. Change in the status of this unit is unknown at this time. The duration of generation was reduced to zero days.
- **4.-** Station Two Units 1 and 2 had 431.20 unscheduled and scheduled maintenance hours. Station Two Units 1 and 2 had 5,542.00 Reserve hours during the review period. All of these hours were equivalent to 124.44 days. The duration of generation was reduced to 59.56 days. Station Two Units 1 and 2 were retired on February 1, 2019.
- **5.-** Green Station Units 1 and 2 had 592.80 unscheduled and scheduled maintenance hours and zero Reserve hours during the period under review. These hours were equivalent to 12.35 days. The duration of generation was reduced to 171.65 days.
- **6.-** Coleman Station Units 1 and 2 were placed on Inactive Reserve Status on May 1, 2014, and Coleman Station Unit 3 was placed on Inactive Reserve Status on May 8, 2014. The duration of generation was reduced to zero days. Change in the status of these units is unknown at this time.
- 7.- Wilson Station had 192.80 scheduled and unscheduled maintenance hours and 744.00 planned outage hours during the period under review. These hours were equivalent to 39.03 days. The duration of generation was reduced to 144.97 days.

2

3

4 Witness) Mark W. McAdams

5

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 4)	List each written coal-supply solicitation issued during the
2	last six	months of the period under review.
3		
4	a.	For each solicitation, provide the date of the solicitation, the type
5		of solicitation (contract or spot), the quantities solicited, a
6		general description of the quality of coal solicited, the time
7		period over which deliveries were requested, and the generating
8		unit(s) for which the coal was intended.
9	b .	For each solicitation, state the number of vendors to whom the
10		solicitation was sent, the number of vendors who responded, and
11		the selected vendor(s). Provide the bid tabulation sheet or
12		corresponding document that ranks the proposals. (This
13		document shall identify all vendors who made offers.) State the
14		reasons for each selection. For each lowest-cost bid not selected,
15		explain why the bid was not selected.
16		
17	Respon	se)
18		BREC 19-01 (Spot and Term Solicitation)
19	a.	
20		i. Date solicitation was issued: July 2, 2018.
21		Date solicitation was returned: July 25, 2018.
22		ii. Type of solicitation: Spot 2018 and term (2019 - 2023) written bid
23		solicitation (web-based distribution).

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	iii.	Quantities solicited: Spot up to 300,000 tons; Term – up to 500,000
2		tons per year.
3	iv.	Quality of coal and petroleum coke solicited:
4		(a) BTU/lb.: 10,500 to 13,500;
5		(b) Ash (lbs./MMBTU): 0.74 to 14.29;
6		(c) Moisture (lbs./MMBTU): 8.89 to 11.90;
7		(d) Sulfur (lbs. SO2): 5.50 to 6.50 (coal); and
8		(e) Sulfur (lbs. SO2): up to 8.50 (petroleum coke).
9	v.	Time period over which deliveries were requested:
10		(a) Spot solicitation: August 1 – December 31, 2018;
11		(b) Term solicitation: Years 2019 through 2023.
12	vi.	Generating units for which coal was intended include:
13		R. D. Green, Henderson Station Two, and D. B. Wilson.
14	b.	
15	i.	Number of vendors solicited: The coal solicitation was posted to Big
16		Rivers' web site for supplier review, print-out, and written bid
17		proposal submission. Big Rivers also notified coal and petroleum
18		coke newsletters and journals for industry notification of the
19		solicitation and its placement on the web site, referring the web
20		address for review and download. For bid BREC 19-01, there were

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

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1		forty (40) unique page views of the bid. Responding vendors: Twelve
2		(12) vendors replied to the spot and term bid solicitation.
3	ii.	Selected vendors:
4		(a) Spot fuel supply:
5		Alliance Coal, LLC (BRE-18-005).
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ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	(b)	<u>Term fuel supply</u> :
2		
3		
4		
5		<u>Selected Vendor</u> : Western Kentucky Consolidated Resources
6		(BRE-19-002) ("WKCR") is
7		
8		
9		
10		
11		
12		
13		
14		
15		Selected Vendor: Rhino Energy, Riveredge Mine (BRE-19-003),
16		is a
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18		
19		
20		
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22		
23		

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

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8	<u>Selected Vendor</u> : Hartshorne Mining Group LLC, Poplar Grove
9	Mine (BRE-19-004), is a
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ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

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1		<u>Selected Vendor</u> : Alliance Coal, LLC Warrior Coal (BRE-19-
2		005).
3		
4		
5		
6		
7		
8		
9	iii.	The bid tabulation spreadsheet is being provided with a Petition for
10		Confidential Treatment.
11		
12		
13	Witness)	Mark W. McAdams

14

In the Matter of:

ELECTRONIC EXAMINATION OF THE)	
APPLICATION OF THE FUEL ADJUSTMENT)	Cara Na
CLAUSE OF BIG RIVERS ELECTRIC)	Case No.
CORPORATION FROM)	2019-00006
NOVEMBER 1, 2016 THROUGH OCOBER 31, 2018)	

CONFIDENTIAL RESPONSE

to PSC 1-4.b.iii of the Commission Staff's Data Request dated February 11, 2019
FILED: February 25, 2019

INFORMATION SUBMITTED UNDER PETITION FOR CONFIDENTIAL **TREATMENT**

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 5)	List each oral coal-supply solicitation issued during the last
2	six mon	ths of the period under review.
3		
4	a.	For each solicitation, state why the solicitation was not written,
5		the date(s) of the solicitation, the quantities solicited, a general
6		description of the quality of coal solicited, the time period over
7		which deliveries were requested, and the generating unit(s) for
8		which the coal was intended.
9	b .	For each solicitation, state the number of vendors to whom the
10		solicitation was sent, the number of vendors who responded, and
11		the selected vendor(s). Provide the bid tabulation sheet or
12		corresponding document that ranks the proposals. (This
13		document shall identify all vendors who made offers.) State the
14		reasons for each selection. For each lowest-cost bid not selected,
15		explain why the bid was not selected.
16		
17	Respons	se)
18	a. a:	nd b.
19		Big Rivers issued no oral coal supply solicitations during the last six
20		months of the period under review.
21		
22	Witness) Mark W. McAdams

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	Item 6) For the last six months of the period under review, list each
2	vendor from whom natural gas was purchased for generation and the
3	quantities and the nature of each purchase (i.e., spot or contract). Provide
4	the percentage of purchases that were spot versus contract
5	
6	Response) Please see the listing on the following page for vendors from whom
7	natural gas was purchased for generation and the quantity and nature of each
8	purchase for the last six months of the period under review, i.e., May 1, 2018,
9	through October 31, 2018. Also on the following page please see the percentage of
10	purchases that were either spot versus contract for the period under review in
11	total.
12	Starting in July 2010, Big Rivers began purchasing natural gas under a
13	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	
22	

Case No. 2019-00007 Response to PSC 1-6 Witness: Mark J. Eacret

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ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

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February 25, 2019

1

For the Period	from Ma	v 1. 2018	through	October	31	2018
TOI ME LETION	II OIII MIA	y 1, 4010.	uniougn	OCTOBEL	υт,	2010

Purchase Vendor	Fuel Type MCF		Contract Type	
CIMA Energy, LTD	Natural Gas	30,953	Spot	

For the Period from May 1, 2018, through October 31, 2018

Percentage Contract	0.00 %
Percentage Spot	100.00 %
Percentage Total	100 00 %

2

3

Witness) Mark J. Eacret

5

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ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

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February 25, 2019

1	Item 7) For the last six months of the period under review, state if
2	there were any instances in which a natural gas generating unit could not
3	be operated when it otherwise would have run, due to pipeline constraints
4	or natural gas being unavailable.
5	
6	Response) There were no instances during the last six months of the period
7	under review, $\it i.e.$, May 1, 2018, through October 31, 2018, that Big Rivers' gas
8	generating unit could not be operated when it otherwise would have run, due to
9	pipeline constraints or natural gas being unavailable.
10	
11	
12	Witness) Mark J. Eacret
13	

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

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February 25, 2019

1	Item 8) State if there have been any changes to hedging activities for
2	coal or natural gas purchases used for generation since the previous FAC
3	review proceeding. If so, describe the changes in detail.
4	
5	Response) Big Rivers does not engage in financial hedging activities regarding
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. There have been no changes to these hedging
9	activities since the previous FAC review.
10	
11	
12	Witnesses) Mark W. McAdams (Coal) and
13	Mark J. Eacret (Natural Gas)
14	

Case No. 2019-00007 Response to PSC 1-8 Witnesses: Mark W. McAdams (Coal) and Mark J. Eacret (Natural Gas) Page 1 of 1

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 9)	
2	a.	State whether Big Rivers has audited any of its fuel or
3		transportation contracts during the last six months of the period
4		under review.
5	b .	If so, for each audited contract:
6		(1) Identify the contract;
7		(2) Identify the auditor; and
8		(3) State the results of the audit and describe the actions that
9		Big Rivers took as a result of the audit.
10		
11	Respons	se)
12	a.	Big Rivers has audited several of its coal contracts during the last six
13		months of the period under review, i.e., May 1, 2018, through October
14		31, 2018. There were no audits of Big Rivers' natural gas contracts in
15		those months.
16	b.	Audited contracts:
17		(1) <u>Peabody COALSALES (BRE-15-018)</u> – Wild Boar Mine & Warrick
18		Dock sampling system;
19		Rhino Energy (BRE-18-001) - Riveredge Mine; and
20		Sun Energy (BRE-18-002) – Hilsmeyer #1 Mine and Yellow Banks
21		dock sampling system.

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

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1 (2)	Auditor: Mine evaluations: Associated Engineers, Inc. (Associated
2	Engineers");
3	Auditor: Sampling systems: SGS North America Mineral Service
4	("SGS").
5 (3)	Audit results and actions:
6	Peabody COALSALES (BRE-15-018) - Associated Engineers, at
7	the request of Big Rivers, completed a mine inspection of Peabody's
8	Wild Boar Mine in regard to compliance with the quantity and
9	quality obligations of the Coal Supply Agreement. Associated
10	Engineers concluded that the facility had the production capability
11	and could provide the required coal quality to meet the terms and
12	conditions of the contractual Agreement with Big Rivers. SGS
13	provided a sampling system evaluation at the Warrick Dock in
14	which they recommended some minor repairs. Upon notice of such
15	findings by Big Rivers, Peabody timely completed all suggested
16	minor repairs.
17	Rhino Energy (BRE-18-001) – Associated Engineers, at the request
18	of Big Rivers, completed a mine inspection of Rhino Energy's
19	Riveredge Mine in regard to compliance with the quantity and
20	quality obligations of the Coal Supply Agreement. Associated
21	Engineers concluded that Riveredge Mine had the production
22	capability, could provide the required coal quality, and had an

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

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adequate reserve base to meet the terms and conditions of the
contractual Agreement with Big Rivers under the current
Agreement and for additional forward years of coal supply.
Riveredge Mine shared information with Associated Engineers
that revealed it has reserve base to carry production through 2030.
Sun Energy (BRE-18-002) - Associated Engineers, Inc., at the
request of Big Rivers, completed a mine inspection following notice
by Sun Energy of a force majeure condition at its Hilsmeyer #1
mine. Based upon the review by Associated Engineers, the mine
experienced unanticipated geologic conditions which could not
have been determined or discovered by the exercise of reasonable
engineering prudence; thus meeting the criteria of a valid force
majeure pursuant to the Coal Supply Agreement. Sun Energy is
pursuing permits to extend its mining operations and a subsequent
contractual amendment (Amendment One) was executed to
provide alternative quality and lower pricing, along with extension
of term in order for Sun Energy to pursue and obtain permits for
additional coal properties and complete the entirety of the quantity
pursuant to the Agreement. SGS provided a sampling system
evaluation at the Yellow Banks Terminal in which SGS
recommended some minor repairs. Upon notice of such findings by

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1		Big Rivers, Yellow Banks Terminal timely completed all suggested
2		minor repairs.
3		
4		
5	Witnesses)	Mark W. McAdams (Coal) and
6		Mark J. Eacret (Natural Gas)
7		

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

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1	Item 10)	
2	a.	State whether Big Rivers is currently involved in any litigation
3		with its current or former fuel suppliers or transportation
4		vendors.
5	<i>b</i> .	If yes, for each litigation:
6		(1) Identify the supplier or vendor;
7		(2) Identify the contract involved;
8		(3) State the potential liability or recovery to Big Rivers;
9		(4) List the issues presented; and
10		(5) Provide a copy of the complaint or other legal pleading that
11		initiated the litigation and any answers or counterclaims.
12		If a copy has previously been filed with the Commission,
13		provide the date on which it was filed and the case in
14		which it was filed.
15	<i>c</i> .	State the current status of all litigation with suppliers or vendor.
16		The second secon
17	Respons	se)
18	a.	Big Rivers is not currently involved in any litigation with its current or
19	a.	former fuel suppliers or transportation vendors.
20		Tormer rue suppliers of transportation vehiculs.
2.1		

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

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1		
2	b.	(1) - (5)
3		Not applicable.
4	c.	Not applicable.
5		
6		
7	Witness	ses) Mark W. McAdams (<i>Coal</i>) and
8		Mark J. Eacret (Natural Gas)
9		

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	Item 11	
2	a.	For the last six months of the period under review, state if there
3		have been any changes to Big River's written policies and
4		procedures regarding its fuel procurement.
5	b.	If yes:
6		(1) Describe the changes;
7		(2) Provide the written policies and procedures as changed;
8		(3) State the date(s) the changes were made; and
9		(4) Explain why the changes were made.
10	c.	If no, provide the date Big River's current fuel procurement
11		policies and procedures were last changed, when they were last
12		provided to the Commission, and identify the proceeding in which
13		they were provided.
14		
15	Respon	se)
16	a.	Yes. During the last six months of the period under review, i.e., May 1,
17		2018 through October 31, 2018, Big Rivers made changes to Policy No.
18		111 - Hedge Policy and to Policy No. 120 - Fuel Procurement Policies
19		and Procedures.
20		
21		

Case No. 2019-00007 Response to PSC 1-11 Witnesses: Mark W. McAdams (*Coal*) and Mark J. Eacret (*Natural Gas*) Page 1 of 3

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	b.	(1) through (4)
2		Policy No. 111 – Hedge Policy
3		On August 10, 2018, Big Rivers removed, from sub-section 2.e $-$
4		Resource Diversity Management, language limiting capacity resources
5		to no more than 30% from a single resource.
6		
7		Policy No. 120 – Fuel Procurement Policy and Procedures
8		On August 10, 2018, Big Rivers removed, from sub-section D.6 $-$
9		Contract Awards, language which included a negotiating team from the
10		process of preparing award recommendations.
11	c.	Big Rivers' other fuel procurement policies and procedures were
12		not changed during the last six months of the period under review, i.e.,
13		May 1, 2018 through October 31, 2018. In the table on the following
14		page, Big Rivers lists those unchanged policies and procedures, the
15		dates of their last changes, and the proceedings in which Big Rivers
16		provided them to the Commission.
17		
18		
19		

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

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1

Big Rivers Electric Corporation							
	Policies and Procedures for Fuel Procurement						
		Date					
		Last	Provided	Date			
Number	Name	Change	In	Provided			
105	Energy–Related Transaction Authority Policy	2016-12-16	Case No. 2017-00287	2017-09-13			
105	Energy–Related Transaction Authority Policy – Appendix A	2017-12-18	Case No. 2018-00221	2018-08-24			
121	Solid Fuel Inventory Policy	2017-08-18	Case No. 2018-00023	2018-03-01			
122	Energy–Related Transaction Credit Policy	2017-11-17	Case No. 2018-00221	2018-08-24			

2

4

Witnesses) Mark W. McAdams (Coal) and

5 Mark J. Eacret (Natural Gas)

6

7

Case No. 2019-00007 Response to PSC 1-11

Witnesses: Mark W. McAdams (*Coal*) and Mark J. Eacret (*Natural Gas*)

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Policy No. 111 - Hedge Policy



Policy Number: <u>111</u>

Hedge Policy							
Original Effective Date	Original Effective Date 07/16/2009 Date Last Reviewed 08/10/2018 Approved by						
Original Approval Date 06/15/2007 Date Last Revised 08/10/2018 BOARD							

1. Objective

The Big Rivers Electric Corporation ("Big Rivers") Hedge Policy will guide disciplined hedging of forward natural gas, solid fuel, fuel oil and purchased power resources ("Commodity/Commodities"). This Hedge Policy is designed to reduce Member-Owners' wholesale rate volatility and to maintain rates within desired tolerances. The primary purpose of this policy is to identify specific time and volume (as a percent of total projected generation) criteria for procuring projected Commodity-related needs.

This policy largely employs a price-averaging strategy of declining percentage of Commodity supply positions held over forward time periods. This strategy protects Big Rivers from potential adverse impacts that could result in either significant Commodity price increases or decreases. The strategy also maintains some elements of procurement flexibility. For example, during times of extremely attractive market conditions, this policy allows for increasing the amount of forward Commodities hedged above the stated ranges with the concurrence of the Board of Directors ("Board"). A key component of the policy is a monthly compliance report for the Board, which is outlined herein.

Although this document is primarily concerned with managing Commodity costs and risks, a limited amount of discussion on capacity adequacy, transmission congestion risk, emission allowances and fuel transportation based on similar principles is included.

2. Hedge Policy Criteria

The hedging criteria identified within this policy address the primary Commodity supply portfolio components that affect rates and reliability the most. Accordingly, the hedge criteria in the following sections represent the risk tolerance of Big Rivers and identify the processes Big Rivers will employ to manage these key Commodity supply risks.

a. Volumetric and Lead Time Criteria for Hedging

This policy employs a total Commodity hedging methodology whereby the MWh equivalent of all Commodity hedges are compared to the expected generation of Big Rivers. To apply as a Commodity hedge, fuel purchases must be combined with physical generation ownership or contracted capacity. The MWh equivalent hedge from fuel purchases will be the volume of mmBTUs of fuel procured for the unit or contract divided by the expected average heat rate of the generation unit or contract divided by 1,000. The total Commodity hedge is the MWh equivalent of the sum of fuel purchases and electricity purchases.

Rolling Monthly Hedge Ranges

One criteria of this policy is to have Commodities procured within defined volumetric ranges during the following rolling timeframes. These ranges identify the percentage of Big Rivers' projected total Commodity needs that will be procured with fixed price Commodities over a given time period. For purposes of this policy, Commodity needs are considered hedged or procured to the extent that the projected need is met by 1) authorized purchase transactions as defined in the Big Rivers Energy Related Transaction Authority Policy (Board Policy 105), or 2) authorized fuel transactions combined with physical generation unit ownership, heat rate transactions, or physical capacity transactions.



Policy Number: 111

Hedge Policy							
Original Effective Date	Original Effective Date 07/16/2009 Date Last Reviewed 08/10/2018 Approved by						
Original Approval Date	06/15/2007	Date Last Revised	08/10/2018	BOARD			

Additionally, Commodity option transactions with out of the money strike prices may be used to hedge forward volumes, provided that they do not account for more than 15 percent of the projected Commodity needs in any given month, and they are not more than 50 percent out of the money at the time of the transaction.

Lead Time	Months 1 thru 3	Months 4 thru 12	Quarters 5 thru 8	Quarters 9 thru 12	Years 4 thru 5
Measurement Period	Rolling	Rolling	Rolling	Rolling	Calendar Year
Hedging Frequency	Monthly	Monthly	Quarterly	Quarterly	Annual
Range (%)	80-100	75-100	50-85	25-75	0-50

For the above table, Big Rivers will hedge projected Commodity needs based on the following criteria:

- <u>Lead Time</u>: The amount of time from the current period. Defined in months, quarters, or years.
- Measurement Period: This is the mechanism under which this volumetric range is measured. There are two measures rolling, where the measurement period changes monthly and calendar year, where the measurement period is only changed at the change of a calendar year. In the case of conflict, the rolling criterion has precedence over calendar year.
- <u>Hedging Frequency</u>: This is primarily useful in conjunction with the rolling measurement period. This is the frequency that the rolling measurement period changes for policy compliance reporting purposes. The hedging frequency period prevents, for example, a situation where the transaction execution staff would have to hedge month 36 (the last month of quarter 12) at a time where monthly purchases are very illiquid (not readily available).
- Range: This is the range of overall Commodity needs that will be hedged with fixed price Commodities, of which up to 15 percent may be covered with options...

Commodity procurements that deviate from the stated range will require approval of the Board, and will be part of the regular reporting to the Board.

Commodity hedging will be a complementary hedging activity since Big Rivers has natural gas and coal-fired generation. Big Rivers may also hedge with Commodities if it enters a transaction that uses a natural gas, fuel oil, or coal index price to derive its electricity cost. Such natural gas, fuel oil, and coal-related generation or purchase transactions, while considered capacity, would not be considered Commodity hedges until the projected Commodity volumes are procured. In order to allow flexibility in overall Commodity hedging decisions, specific sub-targets for natural gas hedging are not set within this policy.



Policy Number: 111

Hedge Policy							
Original Effective Date	Original Effective Date 07/16/2009 Date Last Reviewed 08/10/2018 Approved by						
Original Approval Date	Original Approval Date 06/15/2007 Date Last Revised 08/10/2018 BOARD						

b. MISO Resource Adequacy Requirements

Big Rivers will comply with all MISO capacity requirement rules.

c. Congestion Hedging with Financial Transmission Rights (FTR)

It will be Big Rivers' policy to actively participate in the MISO FTR allocation and auction process with a prudent and predetermined strategy for addressing the planning year congestion risk.

Big Rivers will target to mitigate a minimum of 50% of congestion risk (measured by annual native load and non-member sales requirements) prior to or by the end of the MISO annual FTR auction.

Big Rivers will target to mitigate a minimum of 70% of congestion risk prior to the month of delivery.

d. Emission Allowance Hedging

This hedging policy calls for the establishment of an emission allowance procurement process to meet expected future requirements. Fixed price hedges for emission allowances include 1) actual or expected emission allowances allocated to Big Rivers from the EPA, 2) fixed price allowance purchases and sales, and 3) projected, budgeted, and Board-approved emission control equipment additions. Big Rivers will price average into its emission allowance position when purchasing emission allowances. Emission allowance needs will be managed similar to its approach for Commodities. Big Rivers will maintain fixed price allowance hedges based on the following table.

Lead Time	Current Calendar Year	Calendar Year Two	Calendar Year Three
Minimum (%)	80	70	60

Per applicable regulatory requirements, Big Rivers will hold enough allowances in all compliance accounts to cover emissions for the current reporting period. Specifically, all compliance accounts shall be populated with sufficient allowances to cover emissions for the current reporting period prior to the accounts being closed by the EPA, which is currently two (2) consecutive calendar months after the end of the reporting period. Furthermore, the Designated Representative will ensure that all compliance accounts have an adequate number of allowances prior to running "Final Compliance True up" after the accounts have been closed by the EPA.

Big Rivers will not buy emission allowances from the market for any given year if it results in emission allowances that exceed 105 percent of its expected needs without prior CEO approval.

e. Resource Diversity Management

Big Rivers will manage its resource diversity concentration risks on a rolling 12-month basis by diversifying its Commodity supply resources as follows:



Policy Number: 111

Hedge Policy							
Original Effective Date	Original Effective Date 07/16/2009 Date Last Reviewed 08/10/2018 Approved by						
Original Approval Date	06/15/2007	Date Last Revised	08/10/2018	BOARD			

Fuel supply contracts will be diversified such that no more than 40 percent (but not more than 1.5 million tons) will be from a single supplier that has the ability to source coal from multiple coal mining operations to supply Big Rivers for any rolling 12-month period. For fuel suppliers that have the ability to source coal from a single mining operation, no more than 25% (but not more than 1.0 million tons) will be from such supplier to supply Big Rivers for any rolling 12-month period.

Exceptions to these limits shall require approval of Big Rivers' Board.

f. Risk Measurement and Compliance Reporting

Risk measurement and policy compliance within the volumetric and lead time criteria will be provided to Big Rivers' Board monthly. This report will generally cover five years of projections.

Responsibility

It shall be the responsibility of the Board, CEO and IRMC to ensure compliance with this policy. Implementation of this policy shall adhere to the authority granted in the Energy Related Transaction Authority Policy (Board Policy 105).

Number	Date	Notes	Approved by
Original	06/15/2007	Approved to be effective at close of unwind	Board
Rev 1	03/16/2012	Update out-of-date language (joining MISO, old policy reference), general cleanup	Board
Rev 2	09/18/2015	Update terminology (I.E. energy to Commodity, coal to solid fuel, electricity to purchased power), removed Appendix A (out-of-date examples) and Appendix B (no longer applicable), updated emission allowance section to be more concise and clarified resource diversity language.	Board
Rev 3	09/16/2016	Clarified Policy Reference	Board
Rev 4	08/10/2018	Removed capacity resources from resource diversity management	Board

Policy No. 111 - Hedge Policy



Policy Number: 111

Hedge Policy				
Original Effective Date	07/16/2009	Date Last Reviewed	08/18/2017	Approved by
Original Approval Date	06/15/2007	Date Last Revised	09/16/2016	BOARD

1. Objective

The Big Rivers Electric Corporation ("Big Rivers") Hedge Policy will guide disciplined hedging of forward natural gas, solid fuel, fuel oil and purchased power resources ("Commodity/Commodities"). This Hedge Policy is designed to reduce Member-Owners' wholesale rate volatility and to maintain rates within desired tolerances. The primary purpose of this policy is to identify specific time and volume (as a percent of total projected generation) criteria for procuring projected Commodity-related needs.

This policy largely employs a price-averaging strategy of declining percentage of Commodity supply positions held over forward time periods. This strategy protects Big Rivers from potential adverse impacts that could result in either significant Commodity price increases or decreases. The strategy also maintains some elements of procurement flexibility. For example, during times of extremely attractive market conditions, this policy allows for increasing the amount of forward Commodities hedged above the stated ranges with the concurrence of the Board of Directors ("Board"). A key component of the policy is a monthly compliance report for the Board, which is outlined herein.

Although this document is primarily concerned with managing Commodity costs and risks, a limited amount of discussion on capacity adequacy, transmission congestion risk, emission allowances and fuel transportation based on similar principles is included.

2. Hedge Policy Criteria

The hedging criteria identified within this policy address the primary Commodity supply portfolio components that affect rates and reliability the most. Accordingly, the hedge criteria in the following sections represent the risk tolerance of Big Rivers and identify the processes Big Rivers will employ to manage these key Commodity supply risks.

a. Volumetric and Lead Time Criteria for Hedging

This policy employs a total Commodity hedging methodology whereby the MWh equivalent of all Commodity hedges are compared to the expected generation of Big Rivers. To apply as a Commodity hedge, fuel purchases must be combined with physical generation ownership or contracted capacity. The MWh equivalent hedge from fuel purchases will be the volume of mmBTUs of fuel procured for the unit or contract divided by the expected average heat rate of the generation unit or contract divided by 1,000. The total Commodity hedge is the MWh equivalent of the sum of fuel purchases and electricity purchases.

Rolling Monthly Hedge Ranges

One criteria of this policy is to have Commodities procured within defined volumetric ranges during the following rolling timeframes. These ranges identify the percentage of Big Rivers' projected total Commodity needs that will be procured with fixed price Commodities over a given time period. For purposes of this policy, Commodity needs are considered hedged or procured to the extent that the projected need is met by 1) authorized purchase transactions as defined in the Big Rivers Energy Related Transaction Authority Policy (Board Policy 105), or 2) authorized fuel transactions combined with physical generation unit ownership, heat rate transactions, or physical capacity transactions.



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Additionally, Commodity option transactions with out of the money strike prices may be used to hedge forward volumes, provided that they do not account for more than 15 percent of the projected Commodity needs in any given month, and they are not more than 50 percent out of the money at the time of the transaction.

Lead Time	Months 1 thru 3	Months 4 thru 12	Quarters 5 thru 8	Quarters 9 thru 12	Years 4 thru 5
Measurement Period	Rolling	Rolling	Rolling	Rolling	Calendar Year
Hedging Frequency	Monthly	Monthly	Quarterly	Quarterly	Annual
Range (%)	80-100	75-100	50-85	25-75	0-50

For the above table, Big Rivers will hedge projected Commodity needs based on the following criteria:

- <u>Lead Time</u>: The amount of time from the current period. Defined in months, quarters, or years.
- Measurement Period: This is the mechanism under which this volumetric range is measured.
 There are two measures rolling, where the measurement period changes monthly and calendar
 year, where the measurement period is only changed at the change of a calendar year. In the case
 of conflict, the rolling criterion has precedence over calendar year.
- Hedging Frequency: This is primarily useful in conjunction with the rolling measurement period.
 This is the frequency that the rolling measurement period changes for policy compliance reporting purposes. The hedging frequency period prevents, for example, a situation where the transaction execution staff would have to hedge month 36 (the last month of quarter 12) at a time where monthly purchases are very illiquid (not readily available).
- Range: This is the range of overall Commodity needs that will be hedged with fixed price Commodities, of which up to 15 percent may be covered with options...

Commodity procurements that deviate from the stated range will require approval of the Board, and will be part of the regular reporting to the Board.

Commodity hedging will be a complementary hedging activity since Big Rivers has natural gas and coalfired generation. Big Rivers may also hedge with Commodities if it enters a transaction that uses a natural gas, fuel oil, or coal index price to derive its electricity cost. Such natural gas, fuel oil, and coal-related generation or purchase transactions, while considered capacity, would not be considered Commodity hedges until the projected Commodity volumes are procured. In order to allow flexibility in overall Commodity hedging decisions, specific sub-targets for natural gas hedging are not set within this policy.



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b. MISO Resource Adequacy Requirements

Big Rivers will comply with all MISO capacity requirement rules.

c. Congestion Hedging with Financial Transmission Rights (FTR)

It will be Big Rivers' policy to actively participate in the MISO FTR allocation and auction process with a prudent and predetermined strategy for addressing the planning year congestion risk.

Big Rivers will target to mitigate a minimum of 50% of congestion risk (measured by annual native load and non-member sales requirements) prior to or by the end of the MISO annual FTR auction.

Big Rivers will target to mitigate a minimum of 70% of congestion risk prior to the month of delivery.

d. Emission Allowance Hedging

This hedging policy calls for the establishment of an emission allowance procurement process to meet expected future requirements. Fixed price hedges for emission allowances include 1) actual or expected emission allowances allocated to Big Rivers from the EPA, 2) fixed price allowance purchases and sales, and 3) projected, budgeted, and Board-approved emission control equipment additions. Big Rivers will price average into its emission allowance position when purchasing emission allowances. Emission allowance needs will be managed similar to its approach for Commodities. Big Rivers will maintain fixed price allowance hedges based on the following table.

Lead Time	Current Calendar Year	Calendar Year Two	Calendar Year Three
Minimum (%)	80	70	60

Per applicable regulatory requirements, Big Rivers will hold enough allowances in all compliance accounts to cover emissions for the current reporting period. Specifically, all compliance accounts shall be populated with sufficient allowances to cover emissions for the current reporting period prior to the accounts being closed by the EPA, which is currently two (2) consecutive calendar months after the end of the reporting period. Furthermore, the Designated Representative will ensure that all compliance accounts have an adequate number of allowances prior to running "Final Compliance True up" after the accounts have been closed by the EPA.

Big Rivers will not buy emission allowances from the market for any given year if it results in emission allowances that exceed 105 percent of its expected needs without prior CEO approval.

e. Resource Diversity Management

Big Rivers will manage its resource diversity concentration risks on a rolling 12-month basis by diversifying its Commodity supply resources as follows:



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Fuel supply contracts will be diversified such that no more than 40 percent (but not more than 1.5 million tons) will be from a single supplier that has the ability to source coal from multiple coal mining operations to supply Big Rivers for any rolling 12-month period. For fuel suppliers that have the ability to source coal from a single mining operation, no more than 25% (but not more than 1.0 million tons) will be from such supplier to supply Big Rivers for any rolling 12-month period.

Exceptions to these limits shall require approval of Big Rivers' Board.

f. Risk Measurement and Compliance Reporting

Risk measurement and policy compliance within the volumetric and lead time criteria will be provided to Big Rivers' Board monthly. This report will generally cover five years of projections.

Responsibility

It shall be the responsibility of the Board, CEO and IRMC to ensure compliance with this policy. Implementation of this policy shall adhere to the authority granted in the Energy Related Transaction Authority Policy (Board Policy 105).

Number	Date	Notes	Approved by
Original	06/15/2007	Approved to be effective at close of unwind	Board
Rev 1	03/16/2012	Update out-of-date language (joining MISO, old policy reference), general cleanup	Board
Rev 2	09/18/2015	Update terminology (I.E. energy to Commodity, coal to solid fuel, electricity to purchased power), removed Appendix A (out-of-date examples) and Appendix B (no longer applicable), updated emission allowance section to be more concise and clarified resource diversity language.	Board
Rev 3	09/16/2016	Clarified Policy Reference	Board
Rev 4	08/10/2018	Removed capacity resources from resource diversity management	Board

Deleted: Capacity resources (generation and purchased power contracts) shall not exceed 30 percent concentration from a single resource or supplier.

Policy No. 120 - Fuel Procurement Policies and Procedures



Policy Number: 120

Fuel Procurement Policies and Procedures					
Original Effective Date 07/16/2009 Date Last Reviewed 08/10/2018 Approved by					
Original Approval Date 12/20/2007 Date Last Revised 08/10/2018 BOARD					

Policy Purpose

The purpose of Big Rivers Electric Corporation ("Big Rivers") Fuel Procurement Policies and Procedures is to present the principles that govern the procurement of fuel, reagent, and associated transportation. This policy is not intended to provide a step-by-step procedural flow, but place an emphasis on procurement policies and a concise overview of appropriate procurement practices. The awarding of Contracts and Purchase Orders will comply with business controls including corporate governance, authority limit matrices, auditing recommendations, and other established practices and limitations.

FUEL PROCUREMENT POLICIES AND PROCEDURES

A. Definitions:

- 1. "Agreement" means a legally binding document, in which one party agrees to sell and the other agrees to buy fuel, reagent, or transportation services for such, which is executed by both Buyer and Seller.
- 2. "Award Recommendation" means Big Rivers' approval process for the review and approval by Senior Management of a recommended fuel, reagent, or transportation purchase that fall outside the limits established in Big Rivers' granted authority limits outlined in the Energy Related Transaction Authority Policy (Board Policy 105).
- 3. "Contract" is an Agreement, Letter Agreement, Purchase Order, or Spot Contract for fuel supply, reagent, or such transportation with certain terms and conditions that describe the business transaction under which the Company procures fuel, reagent, and related transportation.
- 4. "Contract purchase" means any purchase of fuel, reagent, or transportation on behalf of the Company under a contract, typically more than one year's duration.
- 5. "Department" means the Big Rivers' Fuels Procurement Department.
- 6. "Director" means the Big Rivers' Director Fuels Procurement.
- 7. "Emergency" means extraordinary conditions affecting fuel production, transportation, or usage, including but not limited to strikes, lockouts or other labor problems, embargoes, mining impediments and other problems affecting the production or transportation of fuel, existing and/or forecasted extreme weather conditions, or any other conditions or circumstances that could be reasonably foreseen as impairing the continued supply of fuel to Big Rivers facilities.
- 8. "Environmental standards" mean the legal requirements for compliance with emission levels or other environmental requirements applicable to one or more of the Big Rivers' generating units.
- 9. "Fuel" means combustibles purchased by Big Rivers for one or more of its generating stations.
- 10. "VP Production" means Big Rivers' principal individual responsible for power generation and fuel procurement, among other duties.



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- 11. "Solicitation" means the process of soliciting bids (written or oral) for the supply of fuel, reagent, and/or related transportation services.
- 12. "Spot Contract" is a type of agreement that may be issued by Big Rivers for the supply of fuel, reagent, or related transportation of such with a term of typically one year or less.
- 13. "Spot Purchase" means any purchase of fuel, reagent, or related transportation on behalf of Big Rivers where the terms and conditions are incorporated in the Letter Agreement, Purchase Order or Spot Contract and the term is typically of one year or less.
- 14. "Station" means one of Big Rivers' generating facilities.
- 15. "Supplier" means the seller or counterparty to an agreement who is obligated to comply with and fulfill the agreement's terms and conditions.
- 16. "Unit" means a generating unit at a station.
- 17. "Unit bus bar cost" is the total variable production cost including the maintenance cost associated with burning the fuel.

B. Fuel Procurement Policies:

This policy provides guidance to ensure an adequate supply of fuel and reagent of sufficient quality at the most competitive overall evaluated cost on a unit bus bar basis consistent with Big Rivers' obligations to provide adequate and reliable service to its customers, to meet operational and environmental standards, and to meet any other applicable legal requirements. Big Rivers will use its best efforts to secure its fuel and reagent supply at competitive prices through solicitation for such.

Implementation of this policy is of highest priority to Big Rivers. The Department shall be organized and staffed, and fuel procurement procedures and administration shall be conducted, in an efficient and practical manner consistent with this policy. Fuel, reagent, and related transportation shall be purchased at competitive prices considering all material factors. The factors include but are not limited to: quantity needed to maintain an adequate supply, quality necessary to ensure generating unit operating and maintenance characteristics and environmental standards, reliability of the supplier, creditworthiness, and forward planning to meet projected system requirements, and meeting emergency or other unusual circumstances that might affect operating conditions. From time to time, the Director will review this policy and recommend updates as appropriate.

C. Organization:

1. <u>Department Structure.</u> The Department shall be organized and staffed to effectively administer Big Rivers' fuel procurement function.



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- 2. <u>Organizational Responsibility</u>. The VP Production to whom the Director reports, has the responsibility for fuel procurement. The Director is responsible for the Department. Other departments may be called upon by the Department to the extent the Director or VP Production considers advisable in the execution of the functions of the Department.
- 3. <u>Approval Authority (Award Recommendation)</u>. An Award Recommendation will be prepared for all fuel purchases that exceed the term, tenor, or notional amount of authority of the Director which is specified in the Energy Related Transaction Authority Policy (Board Policy 105). The Award Recommendation will be drafted by the Director. Contractual agreements and amendments for procurement shall be reviewed by Fuels legal counsel, and executed by the VP Production within the authority granted by the Energy Related Transaction Authority Policy (Board Policy 105). Greater expenditures shall require the signature of Big Rivers' President and Chief Executive Officer when such expenditure is within his trading authority as established by the Board of Directors ("Board"). These levels of authority may be amended, supplemented, or superseded as dictated by Big Rivers.
- 4. <u>Reports.</u> The Director will instruct the Department to prepare, maintain and distribute reports to management and others as deemed necessary for business operations and regulatory requirements.
- 5. <u>Records.</u> The Department shall maintain the following records:
 - a. <u>Open Contract Files.</u> The Department shall maintain the following on open status for at least one-year or longer as the contract term or other conditions warrant:
 - 1. For each current contract supplier, the files will contain:
 - a) Contract documents, amendments, purchase orders and escalation documentation;
 - b) General correspondence:
 - c) Invoices and invoice verification data;
 - d) Delivery records and quality analyses data;
 - e) Inspection reports and other data.
 - 2. A record of transportation equipment owned or leased by Big Rivers (as applicable).
 - 3. A list containing current suppliers and known potential Suppliers of fuel.
 - b. <u>Closed Contract Files.</u> The Department shall maintain its files according to Big Rivers' record retention plan.
- 6. <u>General Administrative Duties.</u> The Department shall subscribe to and have membership in appropriate trade and industry publications and/or associations, to include reports of governmental or consulting agencies concerning fuel, reagent, and related transportation market information, to include fuel prices and/or projections. Department personnel shall use their best efforts to keep current with fuel market conditions, prices and availability, and other developments relating to fuel procurement.



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D. <u>Fuel Supply Procedures</u>:

- 1. <u>Projections.</u> In conjunction with other departments of Big Rivers, the Department shall prepare annually a projection of fuel usage and cost at each Station for the number of years required for use in Big Rivers' planning process.
- 2. <u>Contract/Spot Mix.</u> Subject to the approval of the VP Production, the Director shall determine whether a contract purchase is advisable, considering the following factors: (a) the availability of adequate supplies from qualified suppliers, (b) the advisability or need to have an adequate supply committed for an existing or planned unit (subject to inventory limits specified by Big Rivers), (c) the desire to maintain practical flexibility as to market conditions and other factors affecting price and availability, (d) existing and anticipated environmental standards, (e) such other factors as may reasonably affect the implementation of this policy and (f) fuel impact on generation facilities' operation and maintenance.
- 3. <u>Current Requirements.</u> The Department shall review and analyze the data available to the Department for purposes of conducting fuel and reagent purchases in a timely manner to meet the requirements of Big Rivers.
- 4. <u>Supplier Qualifications.</u> Big Rivers shall select potential suppliers on the basis of evaluation, market intelligence, performance information (as available), industry research, and creditworthiness, as determined by the Director and his staff. No potential qualified supplier shall be preferred or discriminated against because of race, religion, color, sex, age or marital status of the supplier or any of its representatives.

A supplier evaluation (to include site visit and mine engineering and/or performance report) may be performed to determine if a supplier has the ability to deliver in the time frame requested the quantity and quality of coal or reagent bid at the offered price.

5. <u>Solicitations.</u> The Department shall maintain a current list of Suppliers and shall review that list from time to time to ensure that it remains current. Normally, Big Rivers shall purchase its fuel and reagent through sealed bid solicitations; however, Big Rivers reserves the right to utilize its market intelligence to seize opportunity purchases of fuels and reagent, request oral, written, or electronic offers, potentially followed by negotiations, when in its judgment market conditions provide an opportunity to obtain fuel or reagent more advantageously than through mailed bid solicitations and usual procedures. When Big Rivers foregoes the solicitation process, documentation shall be appended to the resulting purchase order file describing the conditions. A notice of a request for quotation ("RFQ") shall be provided to normal industry newsletters and information postings. The normal solicitation process shall require that potential suppliers be notified in writing as to the general quantities, terms and quality specifications required. An RFQ number will be assigned to for the quotation package. An RFQ will include: instructions to bidders (date and time due); scope of supply (quantity and quality); potential term; standard terms and conditions of typical agreements.

Offers from potential suppliers shall be returned by the requested date and time or they will be rejected. A bid log shall be kept for logging in receipt of bid offers. Attendees viewing the



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opening of the bid shall initial the bid document as opened and the log as at the completion of the opening. Offers shall be opened and logged in the presence of the VP Production and Director or their representative in their absence, and another selected representative outside of the Department.

All appropriate bid data shall be documented and electronically categorized for the process of evaluation of the various offerings of fuel and reagent. The documents shall be maintained in a secured area and shall be kept pursuant to normal record keeping practices.

6. <u>Contract Awards.</u> The Department shall review and analyze each Contract offer. The Director, or his/her representative, may engage in preliminary negotiations to determine which offers warrant further consideration. The Director and/or representative shall investigate the potential supplier and proposed source of supply; and, as to any offer for fuel, the Department shall verify the adequacy of the proposed source of supply as to quantity, quality, and timely deliverability.

The evaluation shall include, but not necessarily be limited to, the response to the RFQ (items required by the RFQ for satisfactory operational, environmental, and economic criteria); diversity of supply; supplier credit assessment; transportation mode and cost; and diversity of suppliers to provide the lowest evaluated cost of electrical energy to the Unit bus bar over the long term.

From this initial evaluation, a select group of potential suppliers (a "short-list") of suppliers shall be developed for more in-depth evaluation. The Department may then engage in preliminary discussions to ensure that the offer warrants further evaluation and consideration. The objective of the negotiating discussions is to ensure that Big Rivers achieves balanced terms and conditions and the lowest evaluated electrical energy delivered to the Unit bus bar and reliable supply consistent with other qualifiers related to supplier reliability, environmental restraints, transportation options, etc.

The recommended Supplier(s) shall be selected based upon the evaluation criteria and the results of the negotiating discussions. The Department shall prepare a detailed Award Recommendation for approval. The Award Recommendation shall document the selection criteria and pertinent factors, and in circumstances where more than one company is selected, the recommendation shall describe the tonnage requirements and other responsibilities of each of the other recommended Suppliers.

All contracts for which the term, tenor or notional amount exceed the limits specified for the Director must be approved and signed by individual(s) authorized per the Energy Related Transaction Authority Policy (Board Policy 105).

- 7. <u>Spot Purchases</u>. Spot purchases may be made by Big Rivers whenever considered advisable by the Director in furtherance of Big Rivers' fuel and reagent needs, subject to the limit of authority as outlined by Energy Related Transaction Authority Policy (Board Policy 105).
- 8. <u>Documentation</u>. Contracts shall be signed by a duly appointed officer of the Supplier and an Officer of Big Rivers. A purchase order may be issued for a spot purchase. A purchase order shall contain all terms of that purchase. Further, the Department shall maintain documentation of



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the final list (log) of bidders, a copy of the entire bid package; bidder's responses; and the bid evaluation summary used for decision support.

9. <u>Fuel Oil</u>. Fuel Supply Procedures principally address procurement of solid fuel. Fuel oil is procured on an "as-needed" basis due to the infrequency of use of this fuel and the nature of the oil markets. When the need for oil arises, the Department shall act to solicit vendors for offers. Orders are assigned on the basis of lowest delivered cost per gallon and ability to fill the order. Solicitation results shall be documented and purchase orders issued in the Department for those purchases initiated and completed by the Department.

E. Fuel Supply and Reagent Agreement Administration:

- 1. <u>Compliance.</u> The Department shall review and analyze daily business and operational reports to properly administer all fuel and transportation agreements.
- 2. <u>Coal weights.</u> Coal weights shall be obtained by either Big Rivers or by Supplier, upon agreement by Big Rivers. Coal weight is obtained by scale or draft method, depending upon Big Rivers' site or methodology employed by Supplier to ascertain weights. In either event, coal weights are obtained by industry-accepted standards, and in cases where scales are utilized, are duly tested and maintained in proper order for such purpose. In cases where draft weights are utilized, Big Rivers employs processes to verify actions to obtain draft weights and that such measures are by industry-accepted standards. Coal quantity is obtained by Station personnel and reported through the fuels information system or is provided by the Supplier pursuant to the contract agreement.
- 3. <u>Coal sampling.</u> Coal sampling and analysis shall be performed by either Big Rivers or the Supplier, upon agreement by Big Rivers. Coal sampling and analysis shall be performed according to procedures adopted by Big Rivers' laboratory in accordance with A.S.T.M. standards for coal sampling, coal sample preparation, coal sample identification, handling of sample, and coal analysis. Coal quality is assessed and reported through the fuels information system by Big Rivers' laboratory personnel or is provided by the Supplier pursuant to the contract agreement.
- 4. <u>Amendments.</u> A contract shall not be materially amended except after analysis by the Department and recommendation of the Director or the VP Production. No material contract or purchase order addendum shall be made except upon legal review of such amendment, recommendation of the Director and the approval of the VP Production pursuant to the limits of the Energy Related Transaction Authority Policy (Board Policy 105). Amendments to contracts that were originally approved by the Board shall also be approved by the Board.
- 5. <u>Contract Administration.</u> The Director and the Department shall remain informed as to the terms and conditions of each current contract, and maintain the necessary data to administer the contracts. Every supplier request for a change in terms, conditions, or prices must be written and supported by adequate data in conformity with the contract. Each such request shall be analyzed by the Department against the contract provisions, and reported with recommendations to the



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Director. After review by the Director, the supplier request and Department's recommendations shall be approved as required by Big Rivers. If any request is not approved in whole or in part, the Director shall advise the supplier, specifying Big Rivers' objections with an adequate explanation. If the supplier's request is not approved, negotiation between the supplier and Big Rivers as dictated by contract terms shall be the primary method of resolving the issue.

- 6. <u>Force Majeure.</u> A supplier's claim for relief from compliance with fuel supply agreement terms due to force majeure conditions must be in writing with an adequate description of conditions warranting nonperformance. Each force majeure claim shall be reviewed by the Director and Big Rivers' legal counsel.
- 7. <u>Inspections.</u> The Director shall request inspections of mining and other facilities of a contract fuel and/or reagent supplier or other facilities as required or deemed necessary to manage the performance and contractual relationship (Contract Administration).

F. Fuel and Reagent Supply Agreement Enforcement:

- 1. <u>General Enforcement Policy.</u> Supplier obligations under Fuel or Reagent Supply Agreements shall be enforced by Big Rivers in a reasonable, fair, and practical manner to achieve supplier compliance with Big Rivers' overall procurement policy and the continuing supply of fuel to meet current and anticipated system requirements.
- 2. <u>Director Responsibility</u>. Whenever it is determined that a shipment does not meet Fuel Supply or Reagent Agreement terms, the Director, or his/her designee, shall inform the supplier and direct that subsequent shipments be in compliance. When necessary the VP Production and the Director may determine, or receive advice, as to further action needed to assure fuel or reagent supply agreement compliance.
- 3. <u>Legal Assistance.</u> The Department shall have access to, and shall receive advice from, legal counsel as provided by Big Rivers on any matter relating to fuel, reagent, and related transportation procurement, contracts and amendments thereto, administration, and enforcement. Should a dispute as to a supplier's performance fail to be satisfactorily resolved by the Director, the matter shall be referred to legal counsel. Legal counsel may consider further negotiation, arbitration (if provided by the contract), or litigation. No arbitration or litigation shall commence except on the advice of said counsel with approval by Senior Management.

G. <u>Inventory Levels</u>:

Big Rivers has an obligation to ensure continuous low cost, reliable service to its Member-Owners. Decisions affecting fuel inventory shall consider these obligations.

Big Rivers shall maintain an adequate inventory while allowing for enough flexibility to permit inventory levels to be responsive to known and anticipated changes in conditions in an attempt to avoid risks and stoppages due to unforeseen conditions. Inventory shall be recommended based upon, but not limited to, supplier performance, environmental conditions, labor matters, logistical issues and concerns, and generation requirements and dispatch. The general level of inventory



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shall be monitored for such matters and recommendations to adjust inventory to meet anticipated conditions shall be made from time to time. Such inventory recommendations shall be made by the Director for approval by Senior Management and shall be in accordance with or modify concurrently Solid Fuel Inventory Policy (Board Policy 121).

Solid fuel inventories and reagent shall be monitored and reported regularly via Big Rivers' fuel information system(s).

H. <u>Emergency Procurement:</u>

Any one or more of the procedures described herein may be waived by the VP Production, when, in the informed judgment of the Director, and on his recommendation, fuel must be purchased without complying with one or more of such provisions due to extraordinary conditions including strikes, lockouts or other labor problems affecting fuel production, embargoes, mining or other problems affecting production or transportation, existing and/or forecasted extreme weather conditions, or any other conditions or circumstances that can be reasonably foreseen as impairing the continued supply of fuel and reagent to Big Rivers from its existing suppliers. When such a purchase is made, documentation of circumstances will be appended to the purchase order and/or contract file.

I. <u>Transportation Services Contracts:</u>

Transportation services bids shall be requested and Contracts negotiated whenever appropriate. Consideration shall be given to plant requirements, supplier loading capabilities, relative location of supplier to Stations, transportation mix, unloading capabilities and capacities at Stations, logistic constraints, transportation provider economics, Station material handling economics, and any other factor which might affect the delivery of Fuel and reagent to the Stations.

Unless otherwise dictated by Emergency situations, the Solicitation process will be utilized for transportation services. The selection of transportation provider will generally be based upon, but not necessarily limited to cost, reliability, insurance, past / current performance, container availability and suitability for purpose, material handling capacities and constraints, transportation mix, and any other mitigating factors in terms of logistics.

All transportation service agreements shall be in written contractual form duly executed by an authorized supplier of service and Big Rivers.

J. Ethics and Conduct:

Big Rivers recognizes the importance of following appropriate business ethics to guide the conduct of the Department in the performance of its duties and responsibilities. Fuels staff shall adhere to the ethical standards and policies of Big Rivers including, but not limited to, the Board of Directors Ethics Policy (Board Policy 102) and the Conflicts of Interest Policy (Board Policy 108) for Big Rivers' Employees. Also, each contractual document shall denote that the contract was prepared and executed in ethical dealing.



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Fuels staff shall endeavor to serve the best interests of Big Rivers, its Member-Owners, and stakeholders in the performance of their duties and responsibilities.

Number	Date	Notes	Approved by
Original	12/21/2007	Approved to be effective at close of unwind	Board
Rev 1	03/16/2012	Update out of date language and staffing changes	Board
Rev 2	03/14/2013	Update due to title change	
Rev 3	03/21/2014	Add date last reviewed line, section header and change "mmBTU" to "gallon"	Board
Rev 4	09/19/2014	Change Chief Operating Officer to VP Production	Board
Rev 5	08/21/2015	Add reference to Board Policy 105 – Energy Related Transaction Authority and Board Policy 121 – Solid Fuel Inventory; general clean up	Board
Rev 6	09/16/2016	Unified all references to Big Rivers Electric Corporation to Big Rivers, clarified policy references, minor wording change	Board
Rev 7	08/10/2018	Removed negotiating team from the process for preparing Award Recommendations	Board

Policy No. 120 - Fuel Procurement Policies and Procedures



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Policy Purpose

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FUEL PROCUREMENT POLICIES AND PROCEDURES

A. <u>Definitions</u>:

- "Agreement" means a legally binding document, in which one party agrees to sell and the other agrees to buy fuel, reagent, or transportation services for such, which is executed by both Buyer and Seller.
- "Award Recommendation" means Big Rivers' approval process for the review and approval by Senior Management of a recommended fuel, reagent, or transportation purchase that fall outside the limits established in Big Rivers' granted authority limits outlined in the Energy Related Transaction Authority Policy (Board Policy 105).
- 3. "Contract" is an Agreement, Letter Agreement, Purchase Order, or Spot Contract for fuel supply, reagent, or such transportation with certain terms and conditions that describe the business transaction under which the Company procures fuel, reagent, and related transportation.
- 4. "Contract purchase" means any purchase of fuel, reagent, or transportation on behalf of the Company under a contract, typically more than one year's duration.
- 5. "Department" means the Big Rivers' Fuels Procurement Department.
- 6. "Director" means the Big Rivers' Director Fuels Procurement.
- 7. "Emergency" means extraordinary conditions affecting fuel production, transportation, or usage, including but not limited to strikes, lockouts or other labor problems, embargoes, mining impediments and other problems affecting the production or transportation of fuel, existing and/or forecasted extreme weather conditions, or any other conditions or circumstances that could be reasonably foreseen as impairing the continued supply of fuel to Big Rivers facilities.
- 8. "Environmental standards" mean the legal requirements for compliance with emission levels or other environmental requirements applicable to one or more of the Big Rivers' generating units.
- 9. "Fuel" means combustibles purchased by Big Rivers for one or more of its generating stations.
- "VP Production" means Big Rivers' principal individual responsible for power generation and fuel procurement, among other duties.



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- "Solicitation" means the process of soliciting bids (written or oral) for the supply of fuel, reagent, and/or related transportation services.
- 12. "Spot Contract" is a type of agreement that may be issued by Big Rivers for the supply of fuel, reagent, or related transportation of such with a term of typically one year or less.
- 13. "Spot Purchase" means any purchase of fuel, reagent, or related transportation on behalf of Big Rivers where the terms and conditions are incorporated in the Letter Agreement, Purchase Order or Spot Contract and the term is typically of one year or less.
- 14. "Station" means one of Big Rivers' generating facilities.
- 15. "Supplier" means the seller or counterparty to an agreement who is obligated to comply with and fulfill the agreement's terms and conditions.
- 16. "Unit" means a generating unit at a station.
- 17. "Unit bus bar cost" is the total variable production cost including the maintenance cost associated with burning the fuel.

B. Fuel Procurement Policies:

This policy provides guidance to ensure an adequate supply of fuel and reagent of sufficient quality at the most competitive overall evaluated cost on a unit bus bar basis consistent with Big Rivers' obligations to provide adequate and reliable service to its customers, to meet operational and environmental standards, and to meet any other applicable legal requirements. Big Rivers will use its best efforts to secure its fuel and reagent supply at competitive prices through solicitation for such.

Implementation of this policy is of highest priority to Big Rivers. The Department shall be organized and staffed, and fuel procurement procedures and administration shall be conducted, in an efficient and practical manner consistent with this policy. Fuel, reagent, and related transportation shall be purchased at competitive prices considering all material factors. The factors include but are not limited to: quantity needed to maintain an adequate supply, quality necessary to ensure generating unit operating and maintenance characteristics and environmental standards, reliability of the supplier, creditworthiness, and forward planning to meet projected system requirements, and meeting emergency or other unusual circumstances that might affect operating conditions. From time to time, the Director will review this policy and recommend updates as appropriate.

C. Organization:

 <u>Department Structure</u>. The Department shall be organized and staffed to effectively administer Big Rivers' fuel procurement function.



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- Organizational Responsibility. The VP Production to whom the Director reports, has the
 responsibility for fuel procurement. The Director is responsible for the Department. Other
 departments may be called upon by the Department to the extent the Director or VP Production
 considers advisable in the execution of the functions of the Department.
- 3. Approval Authority (Award Recommendation). An Award Recommendation will be prepared for all fuel purchases that exceed the term, tenor, or notional amount of authority of the Director which is specified in the Energy Related Transaction Authority Policy (Board Policy 105). The Award Recommendation will be drafted by the Director. Contractual agreements and amendments for procurement shall be reviewed by Fuels legal counsel, and executed by the VP Production within the authority granted by the Energy Related Transaction Authority Policy (Board Policy 105). Greater expenditures shall require the signature of Big Rivers' President and Chief Executive Officer when such expenditure is within his trading authority as established by the Board of Directors ("Board"). These levels of authority may be amended, supplemented, or superseded as dictated by Big Rivers.
- Reports. The Director will instruct the Department to prepare, maintain and distribute reports to management and others as deemed necessary for business operations and regulatory requirements.
- 5. <u>Records.</u> The Department shall maintain the following records:
 - a. Open Contract Files. The Department shall maintain the following on open status for at least one-year or longer as the contract term or other conditions warrant:
 - 1. For each current contract supplier, the files will contain:
 - a) Contract documents, amendments, purchase orders and escalation documentation;
 - b) General correspondence;
 - c) Invoices and invoice verification data;
 - d) Delivery records and quality analyses data;
 - e) Inspection reports and other data.
 - 2. A record of transportation equipment owned or leased by Big Rivers (as applicable).
 - 3. A list containing current suppliers and known potential Suppliers of fuel.
 - <u>Closed Contract Files.</u> The Department shall maintain its files according to Big Rivers' record retention plan.
- 6. General Administrative Duties. The Department shall subscribe to and have membership in appropriate trade and industry publications and/or associations, to include reports of governmental or consulting agencies concerning fuel, reagent, and related transportation market information, to include fuel prices and/or projections. Department personnel shall use their best efforts to keep current with fuel market conditions, prices and availability, and other developments relating to fuel procurement.



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D. Fuel Supply Procedures:

- <u>Projections.</u> In conjunction with other departments of Big Rivers, the Department shall prepare annually a projection of fuel usage and cost at each Station for the number of years required for use in Big Rivers' planning process.
- 2. <u>Contract/Spot Mix.</u> Subject to the approval of the VP Production, the Director shall determine whether a contract purchase is advisable, considering the following factors: (a) the availability of adequate supplies from qualified suppliers, (b) the advisability or need to have an adequate supply committed for an existing or planned unit (subject to inventory limits specified by Big Rivers), (c) the desire to maintain practical flexibility as to market conditions and other factors affecting price and availability, (d) existing and anticipated environmental standards, (e) such other factors as may reasonably affect the implementation of this policy and (f) fuel impact on generation facilities' operation and maintenance.
- <u>Current Requirements.</u> The Department shall review and analyze the data available to the
 Department for purposes of conducting fuel and reagent purchases in a timely manner to meet the
 requirements of Big Rivers.
- 4. <u>Supplier Qualifications.</u> Big Rivers shall select potential suppliers on the basis of evaluation, market intelligence, performance information (as available), industry research, and creditworthiness, as determined by the Director and his staff. No potential qualified supplier shall be preferred or discriminated against because of race, religion, color, sex, age or marital status of the supplier or any of its representatives.

A supplier evaluation (to include site visit and mine engineering and/or performance report) may be performed to determine if a supplier has the ability to deliver in the time frame requested the quantity and quality of coal or reagent bid at the offered price.

5. Solicitations. The Department shall maintain a current list of Suppliers and shall review that list from time to time to ensure that it remains current. Normally, Big Rivers shall purchase its fuel and reagent through sealed bid solicitations; however, Big Rivers reserves the right to utilize its market intelligence to seize opportunity purchases of fuels and reagent, request oral, written, or electronic offers, potentially followed by negotiations, when in its judgment market conditions provide an opportunity to obtain fuel or reagent more advantageously than through mailed bid solicitations and usual procedures. When Big Rivers foregoes the solicitation process, documentation shall be appended to the resulting purchase order file describing the conditions. A notice of a request for quotation ("RFQ") shall be provided to normal industry newsletters and information postings. The normal solicitation process shall require that potential suppliers be notified in writing as to the general quantities, terms and quality specifications required. An RFQ number will be assigned to for the quotation package. An RFQ will include: instructions to bidders (date and time due); scope of supply (quantity and quality); potential term; standard terms and conditions of typical agreements.

Offers from potential suppliers shall be returned by the requested date and time or they will be rejected. A bid log shall be kept for logging in receipt of bid offers. Attendees viewing the



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opening of the bid shall initial the bid document as opened and the log as at the completion of the opening. Offers shall be opened and logged in the presence of the VP Production and Director or their representative in their absence, and another selected representative outside of the Department.

All appropriate bid data shall be documented and electronically categorized for the process of evaluation of the various offerings of fuel and reagent. The documents shall be maintained in a secured area and shall be kept pursuant to normal record keeping practices.

6. <u>Contract Awards.</u> The Department shall review and analyze each Contract offer. The Director, or his/her representative, may engage in preliminary negotiations to determine which offers warrant further consideration. The Director and/or representative shall investigate the potential supplier and proposed source of supply; and, as to any offer for fuel, the Department shall verify the adequacy of the proposed source of supply as to quantity, quality, and timely deliverability.

The evaluation shall include, but not necessarily be limited to, the response to the RFQ (items required by the RFQ for satisfactory operational, environmental, and economic criteria); diversity of supply; supplier credit assessment; transportation mode and cost; and diversity of suppliers to provide the lowest evaluated cost of electrical energy to the Unit bus bar over the long term.

From this initial evaluation, a select group of potential suppliers (a "short-list") of suppliers shall be developed for more in-depth evaluation. The Department may then engage in preliminary discussions to ensure that the offer warrants further evaluation and consideration. The objective of the negotiating discussions is to ensure that Big Rivers achieves balanced terms and conditions and the lowest evaluated electrical energy delivered to the Unit bus bar and reliable supply consistent with other qualifiers related to supplier reliability, environmental restraints, transportation options, etc.

The recommended Supplier(s) shall be selected based upon the evaluation criteria and the results of the negotiating discussions. The Department shall prepare a detailed Award Recommendation for approval. The Award Recommendation shall document the selection criteria and pertinent factors, and in circumstances where more than one company is selected, the recommendation shall describe the tonnage requirements and other responsibilities of each of the other recommended Suppliers.

All contracts for which the term, tenor or notional amount exceed the limits specified for the Director must be approved and signed by individual(s) authorized per the Energy Related Transaction Authority Policy (Board Policy 105).

- Spot Purchases. Spot purchases may be made by Big Rivers whenever considered advisable by
 the Director in furtherance of Big Rivers' fuel and reagent needs, subject to the limit of authority
 as outlined by Energy Related Transaction Authority Policy (Board Policy 105).
- Documentation. Contracts shall be signed by a duly appointed officer of the Supplier and an
 Officer of Big Rivers. A purchase order may be issued for a spot purchase. A purchase order
 shall contain all terms of that purchase. Further, the Department shall maintain documentation of

Deleted: by the negotiating team



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the final list (log) of bidders, a copy of the entire bid package; bidder's responses; and the bid evaluation summary used for decision support.

9. <u>Fuel Oil</u>. Fuel Supply Procedures principally address procurement of solid fuel. Fuel oil is procured on an "as-needed" basis due to the infrequency of use of this fuel and the nature of the oil markets. When the need for oil arises, the Department shall act to solicit vendors for offers. Orders are assigned on the basis of lowest delivered cost per gallon and ability to fill the order. Solicitation results shall be documented and purchase orders issued in the Department for those purchases initiated and completed by the Department.

E. Fuel Supply and Reagent Agreement Administration:

- <u>Compliance.</u> The Department shall review and analyze daily business and operational reports to
 properly administer all fuel and transportation agreements.
- 2. <u>Coal weights.</u> Coal weights shall be obtained by either Big Rivers or by Supplier, upon agreement by Big Rivers. Coal weight is obtained by scale or draft method, depending upon Big Rivers' site or methodology employed by Supplier to ascertain weights. In either event, coal weights are obtained by industry-accepted standards, and in cases where scales are utilized, are duly tested and maintained in proper order for such purpose. In cases where draft weights are utilized, Big Rivers employs processes to verify actions to obtain draft weights and that such measures are by industry-accepted standards. Coal quantity is obtained by Station personnel and reported through the fuels information system or is provided by the Supplier pursuant to the contract agreement.
- 3. <u>Coal sampling.</u> Coal sampling and analysis shall be performed by either Big Rivers or the Supplier, upon agreement by Big Rivers. Coal sampling and analysis shall be performed according to procedures adopted by Big Rivers' laboratory in accordance with A.S.T.M. standards for coal sampling, coal sample preparation, coal sample identification, handling of sample, and coal analysis. Coal quality is assessed and reported through the fuels information system by Big Rivers' laboratory personnel or is provided by the Supplier pursuant to the contract agreement.
- 4. <u>Amendments.</u> A contract shall not be materially amended except after analysis by the Department and recommendation of the Director or the VP Production. No material contract or purchase order addendum shall be made except upon legal review of such amendment, recommendation of the Director and the approval of the VP Production pursuant to the limits of the Energy Related Transaction Authority Policy (Board Policy 105). Amendments to contracts that were originally approved by the Board shall also be approved by the Board.
- 5. <u>Contract Administration.</u> The Director and the Department shall remain informed as to the terms and conditions of each current contract, and maintain the necessary data to administer the contracts. Every supplier request for a change in terms, conditions, or prices must be written and supported by adequate data in conformity with the contract. Each such request shall be analyzed by the Department against the contract provisions, and reported with recommendations to the



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Director. After review by the Director, the supplier request and Department's recommendations shall be approved as required by Big Rivers. If any request is not approved in whole or in part, the Director shall advise the supplier, specifying Big Rivers' objections with an adequate explanation. If the supplier's request is not approved, negotiation between the supplier and Big Rivers as dictated by contract terms shall be the primary method of resolving the issue.

- Force Majeure. A supplier's claim for relief from compliance with fuel supply agreement terms
 due to force majeure conditions must be in writing with an adequate description of conditions
 warranting nonperformance. Each force majeure claim shall be reviewed by the Director and Big
 Rivers' legal counsel.
- Inspections. The Director shall request inspections of mining and other facilities of a contract fuel and/or reagent supplier or other facilities as required or deemed necessary to manage the performance and contractual relationship (Contract Administration).

F. Fuel and Reagent Supply Agreement Enforcement:

- General Enforcement Policy. Supplier obligations under Fuel or Reagent Supply Agreements shall be enforced by Big Rivers in a reasonable, fair, and practical manner to achieve supplier compliance with Big Rivers' overall procurement policy and the continuing supply of fuel to meet current and anticipated system requirements.
- 2. <u>Director Responsibility</u>. Whenever it is determined that a shipment does not meet Fuel Supply or Reagent Agreement terms, the Director, or his/her designee, shall inform the supplier and direct that subsequent shipments be in compliance. When necessary the VP Production and the Director may determine, or receive advice, as to further action needed to assure fuel or reagent supply agreement compliance.
- 3. <u>Legal Assistance.</u> The Department shall have access to, and shall receive advice from, legal counsel as provided by Big Rivers on any matter relating to fuel, reagent, and related transportation procurement, contracts and amendments thereto, administration, and enforcement. Should a dispute as to a supplier's performance fail to be satisfactorily resolved by the Director, the matter shall be referred to legal counsel. Legal counsel may consider further negotiation, arbitration (if provided by the contract), or litigation. No arbitration or litigation shall commence except on the advice of said counsel with approval by Senior Management.

G. <u>Inventory Levels</u>:

Big Rivers has an obligation to ensure continuous low cost, reliable service to its Member-Owners. Decisions affecting fuel inventory shall consider these obligations.

Big Rivers shall maintain an adequate inventory while allowing for enough flexibility to permit inventory levels to be responsive to known and anticipated changes in conditions in an attempt to avoid risks and stoppages due to unforeseen conditions. Inventory shall be recommended based upon, but not limited to, supplier performance, environmental conditions, labor matters, logistical issues and concerns, and generation requirements and dispatch. The general level of inventory



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shall be monitored for such matters and recommendations to adjust inventory to meet anticipated conditions shall be made from time to time. Such inventory recommendations shall be made by the Director for approval by Senior Management and shall be in accordance with or modify concurrently Solid Fuel Inventory Policy (Board Policy 121).

Solid fuel inventories and reagent shall be monitored and reported regularly via Big Rivers' fuel information system(s).

H. <u>Emergency Procurement</u>:

Any one or more of the procedures described herein may be waived by the VP Production, when, in the informed judgment of the Director, and on his recommendation, fuel must be purchased without complying with one or more of such provisions due to extraordinary conditions including strikes, lockouts or other labor problems affecting fuel production, embargoes, mining or other problems affecting production or transportation, existing and/or forecasted extreme weather conditions, or any other conditions or circumstances that can be reasonably foreseen as impairing the continued supply of fuel and reagent to Big Rivers from its existing suppliers. When such a purchase is made, documentation of circumstances will be appended to the purchase order and/or contract file.

I. <u>Transportation Services Contracts</u>:

Transportation services bids shall be requested and Contracts negotiated whenever appropriate. Consideration shall be given to plant requirements, supplier loading capabilities, relative location of supplier to Stations, transportation mix, unloading capabilities and capacities at Stations, logistic constraints, transportation provider economics, Station material handling economics, and any other factor which might affect the delivery of Fuel and reagent to the Stations.

Unless otherwise dictated by Emergency situations, the Solicitation process will be utilized for transportation services. The selection of transportation provider will generally be based upon, but not necessarily limited to cost, reliability, insurance, past / current performance, container availability and suitability for purpose, material handling capacities and constraints, transportation mix, and any other mitigating factors in terms of logistics.

All transportation service agreements shall be in written contractual form duly executed by an authorized supplier of service and Big Rivers.

J. Ethics and Conduct:

Big Rivers recognizes the importance of following appropriate business ethics to guide the conduct of the Department in the performance of its duties and responsibilities. Fuels staff shall adhere to the ethical standards and policies of Big Rivers including, but not limited to, the Board of Directors Ethics Policy (Board Policy 102) and the Conflicts of Interest Policy (Board Policy 108) for Big Rivers' Employees. Also, each contractual document shall denote that the contract was prepared and executed in ethical dealing.



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Fuels staff shall endeavor to serve the best interests of Big Rivers, its Member-Owners, and stakeholders in the performance of their duties and responsibilities.

Number	Date	Notes	Approved by
Original	12/21/2007	Approved to be effective at close of unwind	Board
Rev 1	03/16/2012	Update out of date language and staffing changes	Board
Rev 2	03/14/2013	Update due to title change	
Rev 3	03/21/2014	Add date last reviewed line, section header and change "mmBTU" to "gallon"	Board
Rev 4	09/19/2014	Change Chief Operating Officer to VP Production	Board
Rev 5	08/21/2015	Add reference to Board Policy 105 – Energy Related Transaction Authority and Board Policy 121 – Solid Fuel Inventory; general clean up	Board
Rev 6	09/16/2016	Unified all references to Big Rivers Electric Corporation to Big Rivers, clarified policy references, minor wording change	Board
<u>Rev 7</u>	08/10/2018	Removed negotiating team from the process for preparing Award Recommendations	Board

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	Item 12) For the last six months of the period under review and for the		
2	years 2019 and 2020, list all firm power commitments for Big Rivers for (a)			
3	purchas	ses and (b) sales. This list shall identity the electric utility, the		
4	amount	of commitment in MW, and the purpose of the commitment (i.e.,		
5	peaking	g, emergency).		
6				
7	Respon	se)		
8	(a)	Purchases:		
9		Big Rivers has a contract with Southeastern Power Administration		
10		("SEPA") to purchase up to 178 MWs of energy. A force majeure,		
11		previously declared by SEPA for this contract due to dam safety issues		
12		at Wolf Creek and Center Hill dams on the Cumberland System,		
13		remained in effect for the last six months of the period under review, $i.e.$,		
14		May 1, 2018, through October 31, 2018. For the period under review,		
15	Big Rivers has operated under an annual contract in which we have to			
16		schedule the purchases under the terms of weekly capacity declarations.		
17		These are limited to 154 MWs due to ongoing repairs on the Center Hill		
18		dam. The repairs currently are expected to be complete in 2019.		
19		Additional purchases are shown on the table which follows.		
20		Please note, the purchases listed were made to support firm Off-System		
21		Sales and to adjust the amount of sales in selected months. The listed		
22		purchases were not passed through Big Rivers' FAC.		

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

(a) Purchases:

2

1

Big Rivers Electric Corporation Power Purchases May 1, 2018 through October 31, 2018			
Date	Electric Utility	MW Commitment	Purpose
May – Oct	MISO	100 MWs – On-Peak	Purchases for
2018		206,400 Total	Off-System Sales
May – Oct	MISO	50 MWs – Off-Peak	Purchases for
2018		103,200 Total	Off-System Sales
May – Oct	MISO	50 MWs – On-Peak	Purchases for
2018		103,200 Total	Off-System Sales
May – Oct	AEP EP	50 MWs – On-Peak	Purchases for
2018		103,200 Total	Off-System Sales
May – Oct	EDF	100 MWs – On-Peak	Purchases for
2018		206,400 Total	Off-System Sales
May – Oct	EDF	50 MWs – On-Peak	Purchases for
2018		103,200 Total	Off-System Sales
May – Oct	MISO	50 MWs – Off-Peak	Purchases for
2018		193,600 Total	Off-System Sales
May – Oct	MISO	50 MWs – Off-Peak	Purchases for
2018		193,600 Total	Off-System Sales
May – Oct 2018	MISO	$25~\mathrm{MWs-ATC}$ $110,400~\mathrm{Total}$	Purchases for Off-System Sales
May – Oct 2018	MISO	$25~\mathrm{MWs-ATC}$ $110,400~\mathrm{Total}$	Purchases for Off-System Sales
May – Oct 2018	MISO	$50~\mathrm{MWs-ATC}$ $220,800~\mathrm{Total}$	Purchases for Off-System Sales

3

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ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

(a) Purchases (continued):

2

1

Big Rivers Electric Corporation Power Purchases (continued) May 1, 2018 through October 31, 2018			
Date	Electric Utility	MW Commitment	Purpose
May – Oct 2018	MISO	50 MWs – ATC 220,800 Total	Purchases for Off-System Sales

3

Big Rivers Electric Corporation Power Purchases 2019 and 2020			
Date	Electric Utility	MW Commitment	Purpose

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

(a) Purchases (continued):

2

1

Big Rivers Electric Corporation Power Purchases (continued) 2019 and 2020			
Date	Electric Utility	MW Commitment	Purpose

3

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

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February 25, 2019

(a) Purchases (continued):

2

1

Big Rivers Electric Corporation Power Purchases (<i>continued</i>) 2019 and 2020			
Date	Electric Utility	MW Commitment	Purpose

3

4

56

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

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1 (b) Sales:

2

Big Rivers Electric Corporation Firm Off-System Sales May 1, 2018 through October 31, 2018			
Date	Electric Utility	MW Commitment	Purpose
May – Oct 2018	EDF	$100~\mathrm{MWs-On ext{-}Peak} \ 206,400~\mathrm{Total}$	Off-System Sales
May – Oct 2018	NextEra	50 MW – Off-Peak 103,200 Total	Off-System Sales
May – Oct 2018	NextEra	50 MWs – On-Peak 103,200 Total	Off-System Sales
May – Oct 2018	MISO	50 MWs – On-Peak 103,200 Total	Off-System Sales Adjustment
May – Oct 2018	MISO	$100~\mathrm{MWs-On ext{-}Peak} \ 206,400~\mathrm{Total}$	Off-System Sales Adjustment
May – Oct 2018	MISO	50 MWs – On-Peak 103,200 Total	Off-System Sales Adjustment
May – Oct 2018	Morgan Stanley	50 MWs – Off-Peak 117,600 Total	Off-System Sales
May – Oct 2018	NextEra	50 MWs – Off-Peak 117,600 Total	Off-System Sales
May – Oct 2018	Morgan Stanley	$25~\mathrm{MWs-ATC}$ $110,400~\mathrm{Total}$	Off-System Sales
May – Oct 2018	DTE Energy	$25~\mathrm{MWs-ATC}$ $110,400~\mathrm{Total}$	Off-System Sales
May – Oct 2018	NextEra	$50~\mathrm{MWs-ATC}$ $220,\!800~\mathrm{Total}$	Off-System Sales

3

4

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ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

(b) Sales (continued):

2

1

Big Rivers Electric Corporation Firm Off-System Sales (continued) May 1, 2018 through October 31, 2018				
Date	Electric Utility	MW Commitment	Purpose	
May – Oct 2018	NextEra	50 MWs – ATC 220,800 Total	Off-System Sales	
May – Oct 2018	Northeast Power	23 MWs – PRQ Transaction 33,439 Total	Off-System Sales	

3

Big Rivers Electric Corporation Firm Off-System Sales 2019 and 2020			
Date	Electric Utility	MW Commitment	Purpose

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

(b) Sales (continued):

2

1

	Big Rivers Electric Corporation Firm Off-System Sales (continued) 2019 and 2020			
Date	Electric Utility	MW Commitment	Purpose	

3

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

(b) Sales (continued):

2

1

Big Rivers Electric Corporation Firm Off-System Sales (continued) 2019 and 2020			
Date	Electric Utility	MW Commitment	Purpose

3

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

(b) Sales (continued):

2

1

Big Rivers Electric Corporation Firm Off-System Sales (continued) 2019 and 2020			
Date	Electric Utility	MW Commitment	Purpose

3

5 Witness) Mark J. Eacret

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	Item 13) Provide a monthly billing summary of sales to all electric
2	utilities for the last six months of the period under review.
3	
4	Response) Please see the attached monthly billing summaries for sales to all
5	electric utilities for the last six months of the period under review, i.e., May 1,
6	2018, through October 31, 2018. Please note that certain identifying information
7	has been redacted from these billing summaries pursuant to 807 KAR 5:001
8	Section 4(10), which relates to privacy protection for filings.
9	
10	
11	Witness) Nicholas R. Castlen
12	

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

1	Member Billing May 2018	KW Billed (a)	kWh (b)	Demand Revenue (c)	I	Base Energy Revenue (d)	•	Total Demand & Energy (e) = (c) + (d)	Net Green Power (f)
2 3 4 5	KENERGY	119,920 213,077 79,845	52,375,707 95,285,321 35,421,234	1,655,495.60 2,941,527.99 1,102,260.23	\$	2,356,906.82 4,287,839.45 1,593,955.53	\$	4,012,402.42 7,229,367.44 2,696,215.76	\$ 8.00
6 7	TOTAL RURALS	412,842	183,082,262	\$ 5,699,283.82	\$	8,238,701.80	\$	13,937,985.62	\$ 8.00
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28		5,277 53 36,135 1,823 10,275 2,760 800 3,427 15,000 60 548 100 36,936 4,561 3,379 100 250 7,197 13,776 1,994	2,411,309 $31,260$ $19,951,494$ $635,894$ $3,322,799$ $31,306$ $49,367$ $973,796$ $11,092,848$ $11,119$ $219,407$ $22,319$ $24,857,840$ $1,936,287$ $1,748,544$ $46,546$ $29,088$ $4,477,697$ $7,605,340$ $1,019,942$	56,543.06 567.90 $387,186.53$ $19,533.45$ $110,096.63$ $29,573.40$ $8,572.00$ $36,720.31$ $160,725.00$ 642.90 $5,871.82$ $1,071.50$ $395,769.24$ $48,871.12$ $36,205.99$ $1,071.50$ $2,678.75$ $77,115.86$ $147,609.84$ $21,365.71$	\$	91,750.31 $1,189.44$ $759,154.35$ $24,195.77$ $126,432.50$ $1,191.19$ $1,878.41$ $37,052.94$ $422,082.87$ 423.08 $8,348.44$ 849.24 $945,840.81$ $73,675.72$ $66,532.10$ $1,771.08$ $1,106.80$ $170,376.37$ $289,383.19$ $38,808.79$	\$	$148,293.37 \\ 1,757.34 \\ 1,146,340.88 \\ 43,729.22 \\ 236,529.13 \\ 30,764.59 \\ 10,450.41 \\ 73,773.25 \\ 582,807.87 \\ 1,065.98 \\ 14,220.26 \\ 1,920.74 \\ 1,341,610.05 \\ 122,546.84 \\ 102,738.09 \\ 2,842.58 \\ 3,785.55 \\ 247,492.23 \\ 436,993.03 \\ 60,174.50$	\$ -
29 30	Sub-Total Kenergy Industrials	144,451	80,474,202	\$ 1,547,792.51	\$	3,062,043.40	\$	4,609,835.91	\$ -
$\begin{array}{c} 31 \\ 32 \\ 33 \end{array}$		1,760	93,208	 18,858.40		3,546.56		22,404.96	
34 35	TOTAL INDUSTRIALS	146,211	80,567,410	\$ 1,566,650.91	\$	3,065,589.96	\$	4,632,240.87	\$ _
	GRAND TOTAL	559,053	263,649,672	\$ 7,265,934.73	\$	11,304,291.76	\$	18,570,226.49	\$ 8.00

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

1	Member Billing May 2018	Po	wer Factor Penalty (g)	A	Billing Adjustment (h)	1	Fuel Adjustment Clause (FAC) (i)	nvironmental Surcharge (ES) (j)	No	on-FAC PPA (k)	(l	Revenue) = ∑ (e) to (k)
2 3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$	- - -	\$	- - -	\$	52,166.20 94,904.18 35,279.55	\$ 336,732.70 606,885.13 226,317.65	\$	70,707.20 128,635.18 47,818.67	\$	4,472,016.52 8,059,791.93 3,005,631.63
6 7	TOTAL RURALS	\$	_	\$	_	\$	182,349.93	\$ 1,169,935.48	\$	247,161.05	\$	15,537,440.08
8 9 10 11		\$	1,135.79	\$	(73,174.88)	\$	2,401.66 31.13 19,871.69	\$ 12,536.07 149.07 91,198.58	\$	3,255.27 42.20 26,934.52	\$	166,486.37 3,115.53 1,211,170.79
12 13 14 15			7,864.81		$12,665.70 \\92.61 \\38.05$		633.35 3,309.51 31.18 49.17	3,682.32 19,895.17 2,511.12 860.40		858.46 $4,485.78$ 42.26 66.65		48,903.35 $284,750.10$ $33,441.76$ $11,464.68$
16 17 18					- - -		969.90 11,048.48 11.07	6,193.33 49,576.75 88.93		1,314.62 14,975.34 15.01		82,251.10 658,408.44 1,180.99
19 20 21					- - -		$218.53 \\ 22.23 \\ 24,758.41$	1,199.86 160.67 113,995.07		296.20 30.13 33,558.08		$15,934.85 \\ 2,133.77 \\ 1,513,921.61$
22 23 24			546.47		- - -		1,928.54 1,741.55 46.36	10,348.80 8,699.92 240.36		2,613.99 2,360.53 62.84		137,984.64 115,540.09 3,192.14
25 26 27 28			3,289.51		- - -		28.97 4,459.79 7,574.92 1,015.86	313.81 21,008.51 37,036.92 5,094.81		39.27 6,044.89 10,267.21 1,376.92		4,167.60 $279,005.42$ $491,872.08$ $70,951.60$
29		 \$	12,836.58		(60,378.52)	 \$	80,152.30	\$ 384,790.47	\$	108,640.17	\$	5,135,876.91
$\frac{31}{32}$			-		-		92.84	1,842.23		125.83		24,465.86
33 34 35	TOTAL INDUSTRIALS	\$	12,836.58	\$	(60,378.52)	\$	80,245.14	\$ 386,632.70	\$	108,766.00	\$	5,160,342.77
	GRAND TOTAL	\$	12,836.58	\$	(60,378.52)	\$	262,595.07	\$ 1,556,568.18	\$	355,927.05	\$	20,697,782.85

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 2 of 30

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

1	Member Billing May 2018	Expense Mitigation Adjustment (EMA) (m)	MRSM Adjustment Fuel Roll-In (n)	,	MRSM - ER Transmission Rural Adjustment (o)	Τ	MRSM - ER ransmission Industrial Adjustment (p)	I	Total djustments for ER & RER on Power Bill (q) = (o) + (p)	4	Revenue Net of MRSM Adjustments (r) = (l) + (q)
2 3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$ 471,381.36 857,567.89 318,791.11	\$ (534,860.72) (973,053.69) (361,721.63)	\$	(90,636.76) (163,746.10) (61,014.00)			\$	(90,636.76) (163,746.10) (61,014.00)	\$	4,381,379.76 7,896,045.83 2,944,617.63
6 7	TOTAL RURALS	\$ 1,647,740.36	\$ (1,869,636.04)	\$	(315,396.86)	\$	-	\$	(315,396.86)	\$	15,222,043.22
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28		\$ 21,701.78 281.34 $179,563.45$ $5,723.05$ $29,905.19$ 281.75 444.30 $8,764.16$ $99,835.63$ 100.07 $1,974.66$ 200.87 $223,720.56$ $17,426.58$ $15,736.90$ 418.91 261.79 $40,299.27$ $68,448.06$ $9,179.48$	\$ (24,624.29) (319.23) $(203,744.66)$ $(6,493.75)$ $(33,932.42)$ (319.70) (504.14) $(9,944.40)$ $(113,280.16)$ (113.55) $(2,240.58)$ (227.92) $(253,848.26)$ $(19,773.36)$ $(17,856.13)$ (475.33) (297.05) $(45,726.24)$ $(77,665.73)$ $(10,415.65)$			\$	(2,620.60) (31.99) (18,188.94) (693.59) (4,868.84) (857.52) (341.64) (1,061.64) (11,258.09) (16.26) (41.33) (41.33) (26,905.92) (2,202.05) (1,987.88) (25.75) (66.03) (4,624.27) (7,590.97) (1,300.04)		(2,620.60) (31.99) (19,845.13) (746.31) (3,995.68) (378.59) (142.23) (1,224.22) (10,868.08) (16.65) (247.13) (30.80) (24,779.54) (2,145.77) (1,843.01) (50.34) (55.46) (4,533.19) (7,898.28) (1,077.99)	\$	163,865.77 $3,083.54$ $1,191,325.66$ $48,157.04$ $280,754.42$ $33,063.17$ $11,322.45$ $81,026.88$ $647,540.36$ $1,164.34$ $15,687.72$ $2,102.97$ $1,489,142.07$ $135,838.87$ $113,697.08$ $3,141.80$ $4,112.14$ $274,472.23$ $483,973.80$ $69,873.61$
29 30 31	Sub-Total Kenergy Industrials	\$ 724,267.80	\$ (821,802.55)			\$	(84,724.68)	\$	(82,530.99)	\$	5,053,345.92
32 33		 838.87	 (951.84)				(300.50)		(300.50)		24,165.36
34 35	TOTAL INDUSTRIALS	\$ 725,106.67	\$ (822,754.39)	\$	-	\$	(85,025.18)	\$	(82,831.49)	\$	5,077,511.28
	GRAND TOTAL	\$ 2,372,847.03	\$ (2,692,390.43)	\$	(315,396.86)	\$	(85,025.18)	\$	(398,228.35)	\$	20,299,554.50

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 3 of 30

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

$egin{array}{c} 1 \ 2 \end{array}$	Member Billing June 2018	KW Billed (a)	kWh (b)	Demand Revenue (c)	1	Base Energy Revenue (d)	•	Total Demand & Energy (e) = (c) + (d)		Net Green Power (f)
3	JP RURALS	133,281	61,964,010	 1,839,944.21	\$	2,788,380.45	\$	4,628,324.66	\$	8.00
4	KENERGY	$242,\!829$	111,267,430	3,352,254.35	т	5,007,034.35	т	8,359,288.70	,	
5	MEADE CO. RURALS	90,512	40,202,695	1,249,518.16		1,809,121.28		3,058,639.44		-
6 7	TOTAL RURALS	466,622	213,434,135	\$ 6,441,716.72	\$	9,604,536.08	\$	16,046,252.80	\$	8.00
8 9		5,179	2,209,707	 55,492.99	\$	84,079.35	\$	139,572.34		
10		55	30,632	589.33		1,165.55		1,754.88		
11		37,131	19,547,317	397,858.67		743,775.41		1,141,634.08		
12		1,791	602,014	19,190.57		22,906.63		42,097.20		
13		10,231	$4,\!428,\!225$	109,625.17		168,493.96		278,119.13		
14		2,760	29,589	29,573.40		1,125.86		30,699.26		
15		800	41,882	8,572.00		1,593.61		10,165.61		
16		3,276	325,239	35,102.34		$12,\!375.34$		47,477.68		
17		15,000	10,787,369	160,725.00		410,459.39		571,184.39		
18		60	23,483	642.90		893.53		1,536.43		
19		687	193,189	7,361.21		7,350.84		14,712.05		
20		100	17,872	1,071.50		680.03		1,751.53		
21		36,893	25,011,257	395,308.50		951,678.33		1,346,986.83		
22		4,649	1,985,608	49,814.04		75,552.38		125,366.42		
23		3,402	1,753,595	36,452.43		66,724.29		103,176.72		
24		100	9,818	1,071.50		373.57		1,445.07		
25		250	28,516	2,678.75		1,085.03		3,763.78		
26		7,409	4,569,491	79,387.44		173,869.13		$253,\!256.57$		
27		14,036	7,512,094	150,395.74		285,835.18		436,230.92		
28		1,985	1,144,090	21,269.28		43,532.62		64,801.90		
29 30 31	Sub-Total Kenergy Industrials	145,794	80,250,987	\$ 1,562,182.76	\$	3,053,550.03	\$	4,615,732.79		
32 33		1,782	80,411	 19,094.13		3,059.64		22,153.77		
	TOTAL INDUSTRIALS	147,576	80,331,398	\$ 1,581,276.89	\$	3,056,609.67	\$	4,637,886.56	\$	-
	GRAND TOTAL	614,198	293,765,533	\$ 8,022,993.61	\$	12,661,145.75	\$	20,684,139.36	\$	8.00

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 4 of 30

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

$egin{array}{c} 1 \ 2 \end{array}$	Member Billing June 2018	wer Factor Penalty (g)	A	Billing Adjustment (h)	A	Fuel Adjustment Clause (FAC) (i)	nvironmental Surcharge (ES) (j)	No	on-FAC PPA (k)	(1	Revenue) = ∑ (e) to (k)
3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$ - - -	\$	- - -	\$	29,185.05 52,406.96 18,935.47	\$ 446,625.86 806,546.94 295,025.74	\$	83,651.41 150,211.03 54,273.64	\$	5,187,794.98 9,368,453.63 3,426,874.29
6 7	TOTAL RURALS	\$ _	\$	-	\$	100,527.48	\$ 1,548,198.54	\$	288,136.08	\$	17,983,122.90
8 9 10 11 12		\$ 921.49 - -	\$	(82,779.80)	\$	1,040.77 14.43 9,206.79 283.55	\$ 13,527.02 170.57 103,099.14 4,068.90	\$	2,983.10 41.35 26,388.88 812.72	\$	157,123.23 2,902.72 1,197,549.09 47,262.37
$\frac{13}{14}$		-		$10,950.81 \\ 70.95$		2,085.69 13.94	26,958.94 2,897.00		5,978.10 39.95		324,092.67 33,721.10
15 16 17		-		7.90		19.73 153.19 5,080.85	964.80 4,528.27 55,657.07		56.54 439.07 14,562.95		11,214.58 $52,598.21$ $646,485.26$
18 19		117.87				11.06 90.99	148.76 1,419.04		31.70 260.81		$1,845.82 \\ 16,482.89$
20 21 22 23		1,135.79				8.42 11,780.30 935.22	168.06 131,179.04 12,150.36		24.13 33,765.20 2,680.57		1,952.14 $1,523,711.37$ $142,268.36$
24 25		- -				825.94 4.62 13.43	10,020.25 137.81 359.45		2,367.35 13.25 38.50		116,390.26 1,600.75 4,175.16
26 27 28		2,957.34				2,152.23 3,538.20 538.87	24,641.08 42,382.37 6,300.71		6,168.81 10,141.33 1,544.52		286,218.69 492,292.82 76,143.34
29 30 31	Sub-Total Kenergy Industrials	\$ 5,132.49	\$	(71,750.14)	\$	37,798.22	\$ 440,778.64	\$	108,338.83	\$	5,136,030.83
$\frac{32}{33}$	TOTAL INDUCTION OF	 				37.87	 2,100.72		108.55	ф	24,400.91
34 35		\$ 5,132.49		(71,750.14)		37,836.09 	 442,879.36		108,447.38	\$ 	5,160,431.74
ა ხ	GRAND TOTAL	\$ $5,\!132.49$	\$	(71,750.14)	Ф	$138,\!363.57$	\$ 1,991,077.90	Þ	396,583.46	\$	23,143,554.64

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 5 of 30

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

1	Member Billing June 2018	Expense Mitigation Adjustment (EMA) (m)	MRSM Adjustment Fuel Roll-In (n)	ŗ	MRSM - ER Transmission Rural Adjustment (o)	T	MRSM - ER ransmission Industrial Adjustment (p)	F	Total djustments for ER & RER on Power Bill (q) = (o) + (p)	1	Revenue Net of MRSM Adjustments (r) = (l) + (q)
2 3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$ 557,676.09 1,001,406.87 361,824.26	\$ (632,776.47) (1,136,262.99) (410,549.91)	\$	(92,337.55) (166,571.24) (60,789.48)			\$	(92,337.55) (166,571.24) (60,789.48)	\$	5,095,457.43 9,201,882.39 3,366,084.81
6 7	TOTAL RURALS	\$ 1,920,907.22	\$ (2,179,589.37)	\$	(319,698.27)	\$	-	\$	(319,698.27)	\$	17,663,424.63
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28		\$ 19,887.36 275.69 $175,925.85$ $5,418.13$ $39,854.03$ 266.30 376.94 $2,927.15$ $97,086.32$ 211.35 $1,738.70$ 160.85 $225,101.31$ $17,870.47$ $15,782.36$ 88.36 256.64 $41,125.42$ $67,608.85$ $10,296.81$	\$ (22,565.53) (312.81) $(199,617.20)$ $(6,147.77)$ $(45,221.03)$ (302.16) (427.70) $(3,321.34)$ $(110,160.61)$ (239.81) $(1,972.85)$ (182.51) $(255,414.96)$ $(20,277.03)$ $(17,907.71)$ (100.26) (291.21) $(46,663.64)$ $(76,713.50)$ $(11,683.45)$			\$	(2,504.85) (32.26) $(19,752.55)$ (738.14) $(4,998.03)$ (427.99) (150.36) (737.19) $(10,720.65)$ (27.34) (253.32) (28.77) $(25,166.56)$ $(2,250.12)$ $(1,884.02)$ (22.41) (59.17) $(4,695.91)$ $(7,991.99)$ $(1,194.80)$	\$	(2,504.85) (32.26) $(19,752.55)$ (738.14) $(4,998.03)$ (427.99) (150.36) (737.19) $(10,720.65)$ (27.34) (253.32) (28.77) $(25,166.56)$ $(2,250.12)$ $(1,884.02)$ (22.41) (59.17) $(4,695.91)$ $(7,991.99)$ $(1,194.80)$	\$	$154,618.38 \\ 2,870.46 \\ 1,177,796.54 \\ 46,524.23 \\ 319,094.64 \\ 33,293.11 \\ 11,064.22 \\ 51,861.02 \\ 635,764.61 \\ 1,818.48 \\ 16,229.57 \\ 1,923.37 \\ 1,498,544.81 \\ 140,018.24 \\ 114,506.24 \\ 1,578.34 \\ 4,115.99 \\ 281,522.78 \\ 484,300.83 \\ 74,948.54$
29 30	Sub-Total Kenergy Industrials	\$ 722,258.89	\$ (819,523.08)			\$	(83,636.43)	\$	(83,636.43)	\$	5,052,394.40
$\begin{array}{c} 31 \\ 32 \\ 33 \end{array}$		 723.70	 (821.16)				(324.76)		(324.76)		24,076.15
34 35	TOTAL INDUSTRIALS	\$ 722,982.59	\$ (820,344.24)	\$		\$	(83,961.19)	\$	(83,961.19)	\$	5,076,470.55
	GRAND TOTAL	\$ 2,643,889.81	\$ (2,999,933.61)	\$	(319,698.27)	\$	(83,961.19)	\$	(403,659.46)	\$	22,739,895.18

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

1	Member Billing July 2018	KW Billed (a)	kWh (b)	Demand Revenue (c)	-	Base Energy Revenue (d)	•	Total Demand & Energy (e) = (c) + (d)	Net Green Power (f)
2 3		145,752	66,753,304	 2,012,106.36	\$	3,003,898.68	\$	5,016,005.04	\$ 8.00
4 5	KENERGY MEADE CO. RURALS	$258,884 \\ 98,641$	119,143,728 43,518,085	3,573,893.62 1,361,739.01		5,361,467.76 1,958,313.83		8,935,361.38 3,320,052.84	-
6 7	TOTAL RURALS	503,277	229,415,117	\$ 6,947,738.99	\$	10,323,680.27	\$	17,271,419.26	\$ 8.00
8 9		5,262	2,420,805	 56,382.33	\$	92,111.63	\$	148,493.96	
10		48	30,693	514.32		1,167.87		1,682.19	
11		36,660	18,720,051	392,811.90		712,297.94		1,105,109.84	
12		1,979	619,301	21,204.99		23,564.40		44,769.39	
13		10,023	3,654,137	107,396.45		139,039.91		246,436.36	
14		2,760	24,647	29,573.40		937.82		30,511.22	
15		800	30,496	8,572.00		1,160.37		9,732.37	
16		3,147	316,704	33,720.11		12,050.59		45,770.70	
17		15,000	11,155,984	160,725.00		424,485.19		585,210.19	
18		60	26,983	642.90		1,026.70		1,669.60	
19		813	354,408	8,711.30		13,485.22		22,196.52	
20		100	21,473	1,071.50		817.05		1,888.55	
21		37,022	26,046,714	396,690.73		991,077.47		1,387,768.20	
22		4,473	1,842,519	47,928.20		70,107.85		118,036.05	
23		3,387	1,707,359	36,291.71		64,965.01		101,256.72	
24		100	0	1,071.50		-		1,071.50	
25		250	29,028	2,678.75		1,104.52		3,783.27	
26		7,500	4,655,702	80,362.50		177,149.46		257,511.96	
27		13,874	7,840,226	148,659.91		298,320.60		446,980.51	
28		2,047	1,085,366	21,933.61		41,298.18		63,231.79	
29 30	Sub-Total Kenergy Industrials	145,305	80,582,596	\$ 1,556,943.11	\$	3,066,167.78	\$	4,623,110.89	
31 32		1,760	37,590	18,858.40		1,430.30		20,288.70	
33 34	TOTAL INDUSTRIALS	147,065	80,620,186	\$ 1,575,801.51	\$	3,067,598.08	\$	4,643,399.59	\$ -
35 36	GRAND TOTAL	650,342	310,035,303	\$ 8,523,540.50	\$	13,391,278.35	\$	21,914,818.85	\$ 8.00

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 7 of 30

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

$egin{array}{c} 1 \ 2 \end{array}$	Member Billing July 2018		ver Factor Penalty (g)	A	Billing Adjustment (h)	-	Fuel Adjustment Clause (FAC) (i)	nvironmental Surcharge (ES) (j)	No	on-FAC PPA (k)	(l	Revenue) = ∑ (e) to (k)
3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$	- - -	\$	- - -	\$	25,232.75 45,036.33 16,449.84	\$ 439,516.08 782,975.05 290,813.63	\$	90,116.96 160,844.03 58,749.41	\$	5,570,878.83 9,924,216.79 3,686,065.72
6 7	TOTAL RURALS	\$	_	\$	_	\$	86,718.92	\$ 1,513,304.76	\$	309,710.40	\$	19,181,161.34
8 9 10 11 12 13 14 15 16 17 18 19 20 21		\$	642.90 150.01	\$	- (78,237.72) 16,355.52 79.31 298.21	\$	915.06 11.60 7,076.18 234.10 1,381.26 9.32 11.53 119.71 4,216.96 10.20 133.97 8.12 9,845.66 696.47	\$ 13,077.26 148.63 90,725.43 3,926.30 21,648.86 2,617.03 838.12 3,967.27 51,776.21 147.00 1,953.65 164.94 122,721.68 10,382.85	\$	3,268.09 41.44 25,272.07 836.06 4,933.08 33.27 41.17 427.55 15,060.58 36.43 478.45 28.99 35,163.06 2,487.40	\$	165,754.37 $2,526.76$ $1,149,945.80$ $49,765.85$ $290,755.08$ $33,250.15$ $10,921.40$ $50,285.23$ $656,263.94$ $2,013.24$ $24,762.59$ $2,090.60$ $1,555,498.60$ $133,252.88$
21 22 23 24 25 26 27 28 29			2,743.04				10.97 1,759.86 2,963.61 410.27	 8,925.65 91.78 328.34 22,745.76 39,445.66 5,576.64		2,467.40 2,304.93 39.19 6,285.20 10,584.31 1,465.24		113,132.68 1,163.28 4,161.77 288,302.78 499,974.09 73,426.98
30 31 32	Sub-Total Kenergy Industrials	\$	5,186.06	\$	(61,504.68) -	\$	30,460.23 14.21	\$ 401,209.06 1,743.35	\$	108,786.51 50.75	\$	5,107,248.07 22,097.01
33 34	TOTAL INDUSTRIALS	\$	5,186.06	\$	(61,504.68)	\$	30,474.44	\$ 402,952.41	\$	108,837.26	\$	5,129,345.08
35 36	GRAND TOTAL	\$	5,186.06	\$	(61,504.68)	\$	117,193.36	\$ 1,916,257.17	\$	418,547.66	\$	24,310,506.42

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

$egin{array}{c} 1 \ 2 \end{array}$	Member Billing July 2018	Expense Mitigation Adjustment (EMA) (m)	MRSM Adjustment Fuel Roll-In (n)	MRSM - ER Fransmission Rural Adjustment (0)	Τ	MRSM - ER ransmission Industrial Adjustment (p)	E	Total justments for R & RER on Power Bill q) = (o) + (p)	4	Revenue Net of MRSM Adjustments (r) = (l) + (q)
3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$ 600,779.74 1,072,293.55 391,662.77	\$ (681,684.74) (1,216,695.75) (444,406.68)	\$ (89,957.74) (160,314.32) (59,351.63)			\$	(89,957.74) (160,314.32) (59,351.63)	\$	5,480,921.09 9,763,902.47 3,626,714.09
6 7	TOTAL RURALS	\$ 2,064,736.06	\$ (2,342,787.17)	\$ (309,623.69)	\$	-	\$	(309,623.69)	\$	18,871,537.65
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28		\$ 21,787.25 276.24 $168,480.46$ $5,573.71$ $32,887.23$ 221.82 274.46 $2,850.34$ $100,403.86$ 242.85 $3,189.67$ 193.26 $234,420.43$ $16,582.67$ $15,366.23$ $-$ 261.25 $41,901.32$ $70,562.03$ $9,768.29$	\$ (24,721.26) (313.44) (191,169.16) (6,324.30) (37,316.05) (251.70) (311.43) (3,234.18) (113,924.91) (275.55) (3,619.21) (219.28) (265,989.04) (18,815.80) (17,435.55) (296.43) (47,544.03) (80,064.39) (11,083.76)		\$	(2,591.74) (30.23) (18,449.32) (751.96) (4,204.48) (406.71) (135.75) (684.56) (10,643.93) (29.07) (385.42) (30.48) (25,132.28) (2,038.39) (1,782.36) (14.05) (57.34) (4,616.28) (7,948.64) (1,118.14)	\$	(2,591.74) (30.23) (18,449.32) (751.96) (4,204.48) (406.71) (135.75) (684.56) (10,643.93) (29.07) (385.42) (30.48) (25,132.28) (2,038.39) (1,782.36) (14.05) (57.34) (4,616.28) (7,948.64) (1,118.14)	\$	163,162.63 $2,496.53$ $1,131,496.48$ $49,013.89$ $286,550.60$ $32,843.44$ $10,785.65$ $49,600.67$ $645,620.01$ $1,984.17$ $24,377.17$ $2,060.12$ $1,530,366.32$ $131,214.49$ $111,350.32$ $1,149.23$ $4,104.43$ $283,686.50$ $492,025.45$ $72,308.84$
29 30	Sub-Total Kenergy Industrials	\$ 725,243.37	\$ (822,909.47)	 	\$	(81,051.13)	\$	(81,051.13)	\$	5,026,196.94
31 32 33		338.31	(383.87)			(276.09)		(276.09)		21,820.92
34 35	TOTAL INDUSTRIALS	\$ 725,581.68	\$ (823,293.34)	\$ -	\$	(81,327.22)	\$	(81,327.22)	\$	5,048,017.86
	GRAND TOTAL	\$ 2,790,317.74	\$ (3,166,080.51)	\$ (309,623.69)	\$	(81,327.22)	\$	(390,950.91)	\$	23,919,555.51

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

1	Member Billing August 2018	KW Billed (a)	kWh (b)	Demand Revenue (c)	I	Base Energy Revenue (d)		Total Demand & Energy (e) = (c) + (d)		Net Green Power (f)
$egin{array}{c} 2 \\ 3 \end{array}$	JP RURALS	132,960	61,308,219	 1,835,512.80	\$	2,758,869.86	\$	4,594,382.66	\$	8.00
4	KENERGY	239,576	113,049,693	3,307,346.68	Ψ	5,087,236.19	Ψ	8,394,582.87	Ψ	0.00
5	MEADE CO. RURALS	87,472	41,403,466	1,207,550.96		1,863,155.97		3,070,706.93		-
6 7	TOTAL RURALS	460,008	215,761,378	\$ 6,350,410.44	\$	9,709,262.02	\$	16,059,672.46	\$	8.00
8 9		5,489	2,601,675	 58,814.64	\$	98,993.73	\$	157,808.37		
10		48	30,210	514.32		1,149.49		1,663.81		
11		38,758	20,052,870	415,291.97		763,011.70		1,178,303.67		
12		1,950	627,103	20,894.25		23,861.27		44,755.52		
13		10,143	4,375,692	108,682.25		166,495.08		275,177.33		
14		2,760	24,149	29,573.40		918.87		30,492.27		
15		800	44,043	8,572.00		1,675.84		10,247.84		
16		3,355	401,292	35,948.83		15,269.16		51,217.99		
17		15,000	11,136,052	160,725.00		423,726.78		584,451.78		
18		69	28,923	739.34		1,100.52		1,839.86		
19		643	292,391	6,889.75		11,125.48		18,015.23		
20		100	23,212	1,071.50		883.22		1,954.72		
21		37,066	25,983,352	397,162.19		988,666.54		1,385,828.73		
22		4,445	2,012,953	47,628.18		76,592.86		124,221.04		
23		3,387	2,001,326	36,291.71		76,150.45		112,442.16		
24		100	0	1,071.50		-		1,071.50		
25		250	26,805	2,678.75		1,019.93		3,698.68		
26		7,507	4,722,709	80,437.51		179,699.08		260,136.59		
27		14,003	8,343,694	150,042.15		317,477.56		$467,\!519.71$		
28		2,102	1,156,818	22,522.93		44,016.92		66,539.85		
29 30 31	Sub-Total Kenergy Industrials	147,975	83,885,269	\$ 1,585,552.17	\$	3,191,834.48	\$	4,777,386.65		
32 33		1,728	31,392	18,515.52		1,194.47		19,709.99		
34 35	TOTAL INDUSTRIALS	149,703	83,916,661	\$ 1,604,067.69	\$	3,193,028.95	\$	4,797,096.64	\$	-
	GRAND TOTAL	609,711	299,678,039	\$ 7,954,478.13	\$	12,902,290.97	\$	20,856,769.10	\$	8.00

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 10 of 30

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

1	Member Billing August 2018	ver Factor Penalty (g)	Billing Adjustment (h)	Fuel Adjustment Clause (FAC) (i)	nvironmental Surcharge (ES) (j)	No	on-FAC PPA (k)	(l	Revenue) = ∑ (e) to (k)
2 3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$ - - -	\$ - - -	\$ 67,622.97 124,693.81 45,668.02	\$ 461,234.75 842,986.56 308,373.32	\$	82,766.10 152,617.09 55,894.68	\$	5,206,014.48 9,514,880.33 3,480,642.95
6 7	TOTAL RURALS	\$ <u>-</u>	\$ -	\$ 237,984.80	\$ 1,612,594.63	\$	291,277.87	\$	18,201,537.76
8 9 10 11		\$ 707.19	\$ (98,469.78)	\$ 2,869.65 33.32 22,118.32	\$ 15,960.78 168.94 109,751.31	\$	3,512.26 40.78 27,071.37	\$	180,151.06 2,614.04 1,238,774.89
12 13 14			2,746.34 67.20	691.69 4,826.39 26.64	4,500.18 27,793.13 2,969.88		846.59 5,907.18 32.60		50,793.98 316,450.37 33,588.59
15 16 17		01400	(20.80)	48.58 442.63 12,283.07	1,006.69 5,074.54 59,469.44		59.46 541.74 15,033.67		11,341.77 57,276.90 671,237.96
18 19 20		214.30		31.90 322.51 25.60	185.75 1,820.97 195.55		39.05 394.73 31.34		2,310.86 20,553.44 2,207.21
21222324		1,639.40		28,659.64 2,220.29 2,207.46	140,910.92 12,555.41 11,407.62 104.16		35,077.53 2,717.49 2,701.79		1,590,476.82 $143,353.63$ $128,759.03$ $1,175.66$
25 26 27 28		2,507.31		29.57 $5,209.15$ $9,203.09$ $1,275.97$	365.94 26,413.78 47,436.73 6,744.12		36.19 6,375.66 11,263.99 1,561.70		4,130.38 $298,135.18$ $535,423.52$ $78,628.95$
29 30	Sub-Total Kenergy Industrials	\$ 5,068.20	\$ (95,677.04)	\$ 92,525.47	\$ 474,835.84	\$	113,245.12	\$	5,367,384.24
31 32		-	-	34.63	1,923.48		42.38		21,710.48
33 34 35	TOTAL INDUSTRIALS	\$ 5,068.20	\$ (95,677.04)	\$ 92,560.10	\$ 476,759.32	\$	113,287.50	\$	5,389,094.72
	GRAND TOTAL	\$ 5,068.20	\$ (95,677.04)	\$ 330,544.90	\$ 2,089,353.95	\$	404,565.37	\$	23,590,632.48

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 11 of 30

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

$egin{array}{c} 1 \ 2 \end{array}$	Member Billing August 2018		Expense Mitigation Adjustment (EMA) (m)	MRSM Adjustment Fuel Roll-In (n)	ŗ	MRSM - ER Fransmission Rural Adjustment (o)	T	MRSM - ER ransmission Industrial Adjustment (p)	E	Total justments for R & RER on Power Bill q) = (o) + (p)	1	Revenue Net of MRSM Adjustments (r) = (l) + (q)
3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$	551,773.97 1,017,447.24 372,631.19	\$ (626,079.53) (1,154,463.46) (422,812.19)	\$	(100,813.96) (184,641.28) (67,562.55)			\$	(100,813.96) (184,641.28) (67,562.55)	\$	5,105,200.52 9,330,239.05 3,413,080.40
6 7	TOTAL RURALS	\$	1,941,852.40	\$ (2,203,355.18)	\$	(353,017.79)	\$	-	\$	(353,017.79)	\$	17,848,519.97
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28		\$	23,415.08 271.89 $180,475.83$ $5,643.93$ $39,381.23$ 217.34 396.39 $3,611.63$ $100,224.47$ 260.31 $2,631.52$ 208.91 $233,850.17$ $18,116.58$ $18,011.93$ $-$ 241.25 $42,504.38$ $75,093.25$ $10,411.36$	\$ (26,568.31) (308.50) (204,779.91) (6,403.98) (44,684.57) (246.61) (449.77) (4,097.99) (113,721.36) (295.36) (2,985.90) (237.04) (265,341.99) (20,556.28) (20,437.54) - (273.73) (48,228.30) (85,205.80) (11,813.43)			\$	(3,037.36) (33.00) (20,153.84) (841.32) (5,100.60) (385.62) (342.30) (1,143.33) (11,039.14) (17.14) (51.25) (51.25) (24,620.68) (2,392.43) (2,017.23) (40.98) (91.57) (4,313.33) (7,430.00) (1,119.66)	\$	(3,037.36) (33.00) (21,577.61) (822.34) (5,239.58) (418.05) (153.17) (829.47) (11,778.41) (34.91) (345.11) (34.44) (27,779.61) (2,378.56) (2,216.25) (14.39) (59.13) (5,160.00) (9,222.79) (1,301.81)	\$	177,113.70 $2,581.04$ $1,217,197.28$ $49,971.64$ $311,210.79$ $33,170.54$ $11,188.60$ $56,447.43$ $659,459.55$ $2,275.95$ $20,208.33$ $2,172.77$ $1,562,697.21$ $140,975.07$ $126,542.78$ $1,161.27$ $4,071.25$ $292,975.18$ $526,200.73$ $77,327.14$
29 30	Sub-Total Kenergy Industrials	\$	754,967.45	\$ (856,636.37)			\$	(84,222.03)	\$	(92,435.99)	\$	5,274,948.25
31 32 33			282.53	 (320.58)				(317.64)		(275.79)		21,434.69
34 35	TOTAL INDUSTRIALS	\$	755,249.98	\$ (856,956.95)	\$	-	\$	(84,539.67)	\$	(92,711.78)	\$	5,296,382.94
	GRAND TOTAL	\$	2,697,102.38	\$ (3,060,312.13)	\$	(353,017.79)	\$	(84,539.67)	\$	(445,729.57)	\$	23,144,902.91

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

1	Member Billing September 2018	KW Billed (a)	kWh (b)	Demand Revenue (c)	I	Base Energy Revenue (d)	(Total Demand & Energy (e) = (c) + (d)	Net Green Power (f)
$\frac{2}{3}$	JP RURALS	132,917	53,760,964	 1,834,919.19	\$	2,419,243.38	\$	4,254,162.57	\$ 8.00
4	KENERGY	243,384	99,405,092	3,359,916.12		4,473,229.14		7,833,145.26	
5	MEADE CO. RURALS	88,514	35,591,761	1,221,935.77		1,601,629.25		2,823,565.02	-
6 7	TOTAL RURALS	464,815	188,757,817	\$ 6,416,771.08	\$	8,494,101.77	\$	14,910,872.85	\$ 8.00
8 9		5,458	2,281,095	 58,482.47	\$	86,795.66	\$	145,278.13	
10		48	29,165	514.32		1,109.73		1,624.05	
11		36,793	19,397,841	394,237.00		738,087.85		1,132,324.85	
12		2,043	447,370	21,890.75		17,022.43		38,913.18	
13		9,734	3,499,358	104,299.81		133,150.57		237,450.38	
14		2,760	23,597	29,573.40		897.87		$30,\!471.27$	
15		800	39,284	$8,\!572.00$		1,494.76		10,066.76	
16		3,462	402,330	37,095.33		15,308.66		52,403.99	
17		15,000	10,068,863	160,725.00		383,120.24		543,845.24	
18		60	23,743	642.90		903.42		1,546.32	
19		693	274,871	7,425.50		10,458.84		17,884.34	
20		100	31,905	1,071.50		1,213.99		2,285.49	
21		37,454	25,748,324	401,319.61		979,723.73		1,381,043.34	
22		4,200	1,781,579	45,003.00		67,789.08		112,792.08	
23		3,440	1,702,250	36,859.60		64,770.61		101,630.21	
24		100	0	1,071.50		-		1,071.50	
25		250	25,308	2,678.75		962.97		3,641.72	
26		7,598	4,489,607	81,412.57		170,829.55		$252,\!242.12$	
27		13,971	7,536,728	149,699.27		286,772.50		$436,\!471.77$	
28		2,057	1,037,314	22,040.76		39,469.80		61,510.56	
29 30 31	Sub-Total Kenergy Industrials	146,021	78,840,532	\$ 1,564,615.04	\$	2,999,882.26	\$	4,564,497.30	
32 33		100	9,977	1,071.50		379.62		1,451.12	
34 35	TOTAL INDUSTRIALS	146,121	78,850,509	\$ 1,565,686.54	\$	3,000,261.88	\$	4,565,948.42	\$ -
	GRAND TOTAL	610,936	267,608,326	\$ 7,982,457.62	\$	11,494,363.65	\$	19,476,821.27	\$ 8.00

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 13 of 30

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

1	Member Billing September 2018	ver Factor Penalty (g)	A	Billing Adjustment (h)	Fuel Adjustment Clause (FAC) (i)	nvironmental Surcharge (ES) (j)	No	on-FAC PPA (k)	(l	Revenue) = ∑ (e) to (k)
2 3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$ - - -	\$	- - -	\$ 60,534.85 111,930.13 40,076.32	\$ 298,073.62 548,916.38 197,820.24	\$	85,587.45 158,252.91 56,662.08	\$	4,698,366.49 8,652,244.68 3,118,123.66
6 7	TOTAL RURALS	\$ _	\$	-	\$ 212,541.30	\$ 1,044,810.24	\$	300,502.44	\$	16,468,734.83
8 9 10 11		\$ 610.76	\$	(79,520.30)	\$ 2,568.51 32.84 21,841.97	\$ 10,261.07 115.38 74,888.04	\$	3,631.50 46.43 30,881.36	\$	161,739.21 2,429.46 1,180,415.92
12 13 14 15		2,368.02		20,721.07 63.91 18.84	503.74 3,940.28 26.57 44.23	2,718.33 16,729.09 2,068.46 689.15		712.21 $5,570.98$ 37.57 62.54		42,847.46 286,779.82 32,667.78
16 17 18		203.59		16.64	44.25 453.02 11,337.54 26.73	3,623.90 38,693.71 109.12		62.54 640.51 16,029.63 37.80		10,881.52 $57,121.42$ $609,906.12$ $1,923.56$
19 20 21					309.50 35.93 28,992.61	1,262.09 160.69 98,292.04		437.59 50.79 40,991.33		19,893.52 2,532.90 1,549,319.32
22 23 24					2,006.06 1,916.73 -	7,968.51 7,197.80 72.58		2,836.27 2,709.98 -		125,602.92 113,454.72 1,144.08
25 26 27 28		2,453.74			28.50 5,055.30 8,486.36 1,168.02	251.35 17,913.40 30,954.07 4,357.69		40.29 7,147.45 11,998.47 1,651.40		3,961.86 $282,358.27$ $487,910.67$ $71,141.41$
29 30	Sub-Total Kenergy Industrials	\$ 5,636.11	\$	(58,716.48)	\$ 88,774.44	\$ 318,326.47	\$	125,514.10	\$	5,044,031.94
31 32 33		-		-	 11.23	 100.13		15.88		1,578.36
34 35	TOTAL INDUSTRIALS	\$ 5,636.11	\$	(58,716.48)	\$ 88,785.67	\$ 318,426.60	\$	125,529.98	\$	5,045,610.30
	GRAND TOTAL	\$ 5,636.11	\$	(58,716.48)	\$ 301,326.97	\$ 1,363,236.84	\$	426,032.42	\$	21,514,345.13

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

1 2	Member Billing September 2018	,	Expense Mitigation Adjustment (EMA) (m)	MRSM Adjustment Fuel Roll-In (n)	MRSM - ER Transmission Rural Adjustment (0)	Τ	MRSM - ER ransmission Industrial Adjustment (p)	I	Total djustments for ER & RER on Power Bill (q) = (o) + (p)	_	Revenue Net of MRSM Adjustments (r) = (l) + (q)
3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$	483,848.68 894,645.83 320,325.85	\$ (549,006.95) (1,015,124.79) (363,463.05)	\$ (126,459.27) (233,160.93) (83,865.29)			\$	(126,459.27) (233,160.93) (83,865.29)	\$	4,571,907.22 8,419,083.75 3,034,258.37
7	TOTAL RURALS	\$	1,698,820.36	\$ (1,927,594.79)	\$ (443,485.49)	\$	_	\$	(443,485.49)	\$	16,025,249.34
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28		\$	20,529.86 262.49 $174,580.57$ $4,026.33$ $31,494.22$ 212.37 353.56 $3,620.97$ $90,619.77$ 213.69 $2,473.84$ 287.15 $231,734.92$ $16,034.21$ $15,320.25$ $-$ 227.77 $40,406.46$ $67,830.55$ $9,335.83$	\$ (23,294.54) (297.83) (198,090.75) (4,568.54) (35,735.44) (240.97) (401.17) (4,108.59) (102,823.23) (242.46) (2,806.98) (325.81) (262,941.88) (18,193.48) (17,383.38) (258.45) (45,847.87) (76,965.07) (10,593.05)		\$	(3,612.48) (42.52) (27,854.17) (872.01) (5,770.65) (491.94) (180.91) (1,057.40) (14,416.95) (38.13) (441.23) (54.50) (36,715.27) (2,810.86) (2,589.36) (16.81) (71.93) (6,581.33) (11,252.60) (1,571.30)	\$	(3,612.48) (42.52) (27,854.17) (872.01) (5,770.65) (491.94) (180.91) (1,057.40) (14,416.95) (38.13) (441.23) (54.50) (36,715.27) (2,810.86) (2,589.36) (16.81) (71.93) (6,581.33) (11,252.60) (1,571.30)	\$	158,126.73 $2,386.94$ $1,152,561.75$ $41,975.45$ $281,009.17$ $32,175.84$ $10,700.61$ $56,064.02$ $595,489.17$ $1,885.43$ $19,452.29$ $2,478.40$ $1,512,604.05$ $122,792.06$ $110,865.36$ $1,127.27$ $3,889.93$ $275,776.94$ $476,658.07$ $69,570.11$
29 30 31	Sub-Total Kenergy Industrials	\$	709,564.81	\$ (805,119.49)	 	\$	(116,442.35)	\$	(116,442.35)	\$	4,927,589.59
32 33			89.79	 (101.89)	 		(28.60)		(28.60)		1,549.76
34 35	TOTAL INDUSTRIALS	\$	709,654.60	\$ (805,221.38)	\$ -	\$	(116,470.95)	\$	(116,470.95)	\$	4,929,139.35
	GRAND TOTAL	\$	2,408,474.96	\$ (2,732,816.17)	\$ (443,485.49)	\$	(116,470.95)	\$	(559,956.44)	\$	20,954,388.69

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

1	Member Billing October 2018	KW Billed (a)	kWh (b)	Demand Revenue (c)	I	Base Energy Revenue (d)	Total Demand & Energy (e) = (c) + (d)	Net Green Power (f)
2 3	JP RURALS	112,496	47,071,834	 1,553,007.28	\$	2,118,232.53	\$ 3,671,239.81	\$ 8.00
4 5	KENERGY MEADE CO. RURALS	$205,\!487$ $75,\!070$	87,861,867 34,558,369	2,836,748.04 1,036,341.35		3,953,784.02 1,555,126.61	$6,790,532.06 \\ 2,591,467.96$	-
6 7	TOTAL RURALS	393,053	169,492,070	\$ 5,426,096.67	\$	7,627,143.16	\$ 13,053,239.83	\$ 8.00
8 9		4,997	2,017,833	 53,542.86	\$	76,778.55	\$ 130,321.41	
10		63	33,272	675.05		1,266.00	1,941.05	
11		37,515	20,791,131	401,973.23		791,102.53	1,193,075.76	
12		1,905	614,307	20,412.08		23,374.38	43,786.46	
13		10,030	3,999,535	107,471.45		152,182.31	259,653.76	
14		2,760	25,903	29,573.40		985.61	30,559.01	
15 16		800	44,824	8,572.00		1,705.55	10,277.55	
16 17		3,789	538,409	40,599.14		20,486.46	61,085.60	
17		15,000	11,159,375	160,725.00		424,614.22	585,339.22	
18		84	25,584 257,817	900.06		973.47	1,873.53	
19 20		491 100	257,817	5,261.07		9,809.94	15,071.01	
20 21		36,720	25,202 24,942,017	1,071.50 393,454.80		958.94 949,043.75	2,030.44	
21 22		4,501	24,942,017 $2,067,167$	48,228.22		78,655.70	1,342,498.55 $126,883.92$	
23		3,410	1,924,981	36,538.15		73,245.53	109,783.68	
23 24		100	1,324,301	1,071.50		10,240.00	1,071.50	
25		250	27,328	2,678.75		1,039.83	3,718.58	
26		7,462	4,589,494	79,955.33		174,630.25	254,585.58	
27		13,452	7,390,484	144,138.18		281,207.92	425,346.10	
28		$2{,}177$	1,076,099	23,326.56		40,945.57	64,272.13	
29 30	Sub-Total Kenergy Industrials	145,606	81,550,762	\$ 1,560,168.33	\$	3,103,006.51	\$ 4,663,174.84	
31 32 33		100	7,773	1,071.50		295.76	1,367.26	
34 35	TOTAL INDUSTRIALS	145,706	81,558,535	\$ 1,561,239.83	\$	3,103,302.27	\$ 4,664,542.10	\$ -
	GRAND TOTAL	538,759	251,050,605	\$ 6,987,336.50	\$	10,730,445.43	\$ 17,717,781.93	\$ 8.00

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

1	Member Billing October 2018		wer Factor Penalty (g)	A	Billing Adjustment (h)	Fuel Adjustment Clause (FAC) (i)	nvironmental Surcharge (ES) (j)	No	on-FAC PPA (k)	(l	Revenue) = ∑ (e) to (k)
2 3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$	- - -	\$	- - -	\$ 76,821.23 143,390.57 56,399.26	\$ 369,178.30 683,100.54 261,011.33	\$	74,938.36 139,876.09 55,016.92	\$	4,192,185.70 7,756,899.26 2,963,895.47
6 7	TOTAL RURALS	\$	-	\$	-	\$ 276,611.06	\$ 1,313,290.17	\$	269,831.37	\$	14,912,980.43
8 9 10 11		\$	6,696.88 567.90	\$	(86,482.91)	\$ 3,293.10 54.30 33,931.13	\$ 13,213.06 197.80 113,334.13	\$	3,212.39 52.97 33,099.48	\$	156,736.84 2,814.02 1,286,957.59
12 13 14 15			5,003.91		17,042.98 61.44 (11.55)	$ \begin{array}{r} 1,002.55 \\ 6,527.24 \\ 42.27 \\ 73.15 \end{array} $	4,419.61 26,319.36 2,959.08 1,006.43		977.98 6,367.26 41.24 71.36		50,186.60 $320,914.51$ $33,663.04$ $11,416.94$
16 17 18			235.73		, ,	878.68 18,212.10 41.75	6,066.52 59,999.16 188.89		857.15 17,765.73 40.73		68,887.95 681,316.21 2,380.63
19 20 21 22						$420.76 \\ 41.13 \\ 40,705.37 \\ 3,373.62$	1,535.64 203.92 137,407.32		410.44 40.12 39,707.69		17,437.85 2,315.61 1,560,318.93
23 24						3,141.57	12,896.47 11,200.87 103.47		3,290.93 3,064.57		146,444.94 127,190.69 1,174.97
25 26 27 28						44.60 7,490.05 12,061.27 1,756.19	367.60 26,013.61 43,375.61 6,541.64		43.51 7,306.47 11,765.65 1,713.15		4,174.29 $295,395.71$ $492,548.63$ $74,283.11$
29 30 31	Sub-Total Kenergy Industrials	\$	12,504.42	\$	(69,390.04)	\$ 133,090.83	\$ 467,350.19	\$	129,828.82	\$	5,336,559.06
32 33			-		-	 12.69	 134.45		12.37		1,526.77
34 35	TOTAL INDUSTRIALS	\$	12,504.42	\$	(69,390.04)	\$ 133,103.52	\$ 467,484.64	\$	129,841.19	\$	5,338,085.83
	GRAND TOTAL	\$	$12,\!504.42$	\$	(69,390.04)	\$ 409,714.58	\$ 1,780,774.81	\$	399,672.56	\$	20,251,066.26

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

1	Member Billing October 2018	,	Expense Mitigation Adjustment (EMA) (m)	MRSM Adjustment Fuel Roll-In (n)	Τ	MRSM - ER Transmission Rural Adjustment (0)	7	MRSM - ER Transmission Industrial Adjustment (p)]	Total djustments for ER & RER on Power Bill (q) = (o) + (p)	_	Revenue Net of MRSM Adjustments (r) = (l) + (q)
2 3 4 5	JP RURALS KENERGY MEADE CO. RURALS	\$	423,646.51 790,756.80 311,025.32	\$ (480,697.57) (897,245.39) (352,910.06)	\$	(119,095.37) (220,879.50) (85,061.84)			\$	(119,095.37) (220,879.50) (85,061.84)	\$	4,073,090.33 7,536,019.76 2,878,833.63
6 7	TOTAL RURALS	\$	1,525,428.63	\$ (1,730,853.02)	\$	(425,036.71)	\$	-	\$	(425,036.71)	\$	14,487,943.72
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28		\$	18,160.50 299.45 $187,120.18$ $5,528.76$ $35,995.82$ 233.13 403.42 $4,845.68$ $100,434.38$ 230.26 $2,320.35$ 226.82 $224,478.15$ $18,604.50$ $17,324.83$ $ 245.95$ $41,305.45$ $66,514.36$ $9,684.89$	\$ (20,606.11) (339.77) (212,319.03) (6,273.30) (40,843.25) (264.52) (457.74) (5,498.23) (113,959.54) (261.26) (2,632.83) (257.36) (254,707.88) (21,109.91) (19,657.91) - (279.07) (46,867.91) (75,471.62) (10,989.12)			\$	(3,024.59) (46.66) (27,524.21) (984.16) (6,015.74) (484.00) (180.96) (1,212.55) (14,640.57) (41.75) (362.09) (43.98) (33,250.16) (2,996.46) (2,661.31) (16.51) (71.07) (6,234.72) (10,276.91) (1,532.43)		(3,024.59) (46.66) (27,524.21) (984.16) (6,015.74) (484.00) (180.96) (1,212.55) (14,640.57) (41.75) (362.09) (43.98) (33,250.16) (2,996.46) (2,996.46) (2,661.31) (16.51) (71.07) (6,234.72) (10,276.91) (1,532.43)	\$	153,712.25 $2,767.36$ $1,259,433.38$ $49,202.44$ $314,898.77$ $33,179.04$ $11,235.98$ $67,675.40$ $666,675.64$ $2,338.88$ $17,075.76$ $2,271.63$ $1,527,068.77$ $143,448.48$ $124,529.38$ $1,158.46$ $4,103.22$ $289,160.99$ $482,271.72$ $72,750.68$
29 30 31	Sub-Total Kenergy Industrials	\$	733,956.88	\$ (832,796.36)			\$	(111,600.83)		(111,600.83)	\$	5,224,958.23
32 33			69.96	 (79.38)				(24.98)		(24.98)		1,501.79
34 35	TOTAL INDUSTRIALS	\$	734,026.84	\$ (832,875.74)	\$	-	\$	(111,625.81)	\$	(111,625.81)	\$	5,226,460.02
	GRAND TOTAL	\$	2,259,455.47	\$ (2,563,728.76)	\$	(425,036.71)	\$	(111,625.81)	\$	(536,662.52)	\$	19,714,403.74

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Big Rivers Electric Corporation Monthly Billing Summary Other Sales May 2018

1	May 2018 - Other Sales	MWH	REVENUE	MILLS/KWH
2				
3	SPECIAL SALES - ENERGY			
4	KENERGY-DOMTAR COGEN	8,913	\$ 321,104.50	36.03
5	ADM INVESTOR SERVICES		\$ (121,502.00)	
6	BP ENERGY		\$ (378, 336.00)	
7	HENDERSON MUNICIPAL POWER & LIGHT	32,373	\$ 1,012,581.54	31.28
8	MISO	307,123	\$ 10,206,457.02	33.23
9	NORTHEAST POWER		\$ 199,815.79	
10			 	
11	TOTAL SPECIAL SALES - ENERGY	348,409	\$ 11,240,120.85	32.26
12				
13	SPECIAL SALES - BILATERAL			
14	DTE ENERGY TRADING		\$ 585,900.00	
15	EDF TRADING NORTH AMERICA		\$ 1,203,840.00	
16	MORGAN STANLEY CAPITAL GROUP		\$ 1,101,380.00	
17	NEXTERA ENERGY POWER MARKETING		\$ 4,205,380.00	
18	MISO - CONTRA REVENUE		\$ (4,826,293.12)	
19	AEP ENERGY PARTNERS - CONTRA REVENUE		\$ (636,240.00)	
20	EDF TRADING NORTH AMERICA - CONTRA REVENUE		\$ (1,908,720.00)	
21			 · · · · ,	
22	TOTAL SPECIAL SALES - BILATERAL		\$ (274,753.12)	
23			, , ,	

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Big Rivers Electric Corporation Monthly Billing Summary Other Sales May 2018

1	May 2018 - Other Sales MWH		REVENUE		MILLS/KWH
2 3	SPECIAL SALES - CAPACITY	_			
4	HOOSIER ENERGY PURAL ELECTRIC COOP - CAPACITY SALES		\$	370,000.00	
5	WABASH VALLEY POWER ASSOC., INC - CAPACITY SALES		\$	1,750.00	
6	SOUTHERN ILLINOIS POWER COOP - CAPACITY SALES		\$	1,300.00	
7	CITY OF HANNIBAL, MO - CAPACITY SALES		\$	85,500.00	
8	CITY OF KAHOKA, MO - CAPACITY SALES		\$	14,250.00	
9	CITY OF CALIFORNIA, MO - CAPACITY SALES		\$	29,500.00	
10	CITY OF CENTRALIA, MO - CAPACITY SALES		\$	24,250.00	
11	CITY OF MARCELINE, MO - CAPACITY SALES		\$	7,750.00	
12	DTE ENERGY TRADING - CAPACITY SALES		\$	250,000.00	
13	MISO - CAPACITY SALES		\$	(316.20)	
14	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		\$	275,000.00	
15	SHELL ENERGY NORTH AMERICA (US) LP - CAPACITY SALES		\$	125,000.00	
16					
17	TOTAL SPECIAL SALES - CAPACITY		\$	1,183,983.80	
18					
19	TOTAL	348,409	\$	12,149,351.53	34.87

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Big Rivers Electric Corporation Monthly Billing Summary Other Sales June 2018

1	June 2018 - Other Sales	MWH	REVENUE	MILLS/KWH
$egin{array}{c} 2 \ 3 \end{array}$	SPECIAL SALES - ENERGY			
4	KENERGY-DOMTAR COGEN	7,578	\$ 343,855.39	45.38
5	ADM INVESTOR SERVICES	.,	\$ (72,846.00)	10.00
6	HENDERSON MUNICIPAL POWER & LIGHT	43,214	\$ 1,311,909.05	30.36
7	MISO	285,473	\$ 8,599,041.62	30.12
8	NORTHEAST POWER	•	\$ 154,577.68	
9			 	
10	TOTAL SPECIAL SALES - ENERGY	336,265	\$ 10,336,537.74	30.74
11				
12	SPECIAL SALES - BILATERAL			
13				
14	DTE ENERGY TRADING		\$ 567,000.00	
15	EDF TRADING NORTH AMERICA		\$ 1,149,120.00	
16	MORGAN STANLEY CAPITAL GROUP		\$ 1,071,960.00	
17	NEXTERA ENERGY POWER MARKETING		\$ 4,058,040.00	
18	MISO - CONTRA REVENUE		\$ (4,323,713.10)	
19	AEP ENERGY PARTNERS - CONTRA REVENUE		\$ (607, 320.00)	
20	EDF TRADING NORTH AMERICA - CONTRA REVENUE		\$ (1,821,960.00)	
21			 	
22	TOTAL SPECIAL SALES - BILATERAL		\$ 93,126.90	
23				

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Big Rivers Electric Corporation Monthly Billing Summary Other Sales June 2018

1	June 2018 - Other Sales	MWH	REVENUE	MILLS/KWH
2 3	SPECIAL SALES - CAPACITY			
4				
5	CITY OF HANNIBAL, MO - CAPACITY SALES		\$ 62,500.00	
6	CITY OF KAHOKA, MO - CAPACITY SALES		\$ 500.00	
7	CITY OF CALIFORNIA, MO - CAPACITY SALES		\$ 29,500.00	
8	CITY OF CENTRALIA, MO - CAPACITY SALES		\$ $24,\!250.00$	
9	CITY OF MARCELINE, MO - CAPACITY SALES		\$ 7,750.00	
10	DTE ENERGY TRADING - CAPACITY SALES		\$ 486,760.00	
11	MISO - CAPACITY SALES		\$ 48,739.20	
12	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		\$ 123,000.00	
13			 	
14	TOTAL SPECIAL SALES - CAPACITY		\$ 782,999.20	
15			 	
16	TOTAL	336,265	\$ 11,212,663.84	33.34

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Big Rivers Electric Corporation Monthly Billing Summary Other Sales July 2018

1	July 2018 - Other Sales	MWH		REVENUE	MILLS/KWH
2					
3	SPECIAL SALES - ENERGY				
4	KENERGY-DOMTAR COGEN	12,477	\$	402,408.00	32.25
5	ADM INVESTOR SERVICES		\$	80,594.00	
6	HENDERSON MUNICIPAL POWER & LIGHT	34,610	\$	1,082,442.10	31.28
7	MISO	215,857	\$	5,161,301.61	23.91
8	NORTHEAST POWER		\$	45,662.33	
9					
10	TOTAL SPECIAL SALES - ENERGY	262,944	\$	6,772,408.04	25.76
11					
12	SPECIAL SALES - BILATERAL				
13	DTE ENERGY TRADING		\$	585,900.00	
14	EDF TRADING NORTH AMERICA		\$	1,149,120.00	
15	MORGAN STANLEY CAPITAL GROUP		\$	1,013,120.00	
16	NEXTERA ENERGY POWER MARKETING		\$	4,165,140.00	
17	MISO - CONTRA REVENUE		\$	(4,480,017.51)	
18	AEP ENERGY PARTNERS - CONTRA REVENUE		\$	(607, 320.00)	
19	EDF TRADING NORTH AMERICA - CONTRA REVENUE		\$	(1,821,960.00)	
20	MORGAN STANLEY CAPITAL GROUP - CONTRA REVENUE		\$	(23,019.00)	
21			Ψ 	(20,010.00)	
22 23	TOTAL SPECIAL SALES - BILATERAL		\$	(19,036.51)	

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Big Rivers Electric Corporation Monthly Billing Summary Other Sales July 2018

1	July 2018 - Other Sales	MWH	REVENUE		MILLS/KWH
2					
3	SPECIAL SALES - CAPACITY				
4	CITY OF HANNIBAL, MO - CAPACITY SALES		\$	$62,\!500.00$	
5	CITY OF KAHOKA, MO - CAPACITY SALES		\$	500.00	
6	CITY OF CALIFORNIA, MO - CAPACITY SALES		\$	29,500.00	
7	CITY OF CENTRALIA, MO - CAPACITY SALES		\$	$24,\!250.00$	
8	CITY OF MARCELINE, MO - CAPACITY SALES		\$	7,750.00	
9	DTE ENERGY TRADING - CAPACITY SALES		\$	486,760.00	
10	MISO - CAPACITY SALES		\$	50,363.84	
11	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		\$	123,000.00	
12					
13	TOTAL SPECIAL SALES - CAPACITY		\$	784,623.84	
14					
15	TOTAL	262,944	\$	7,537,995.37	28.67

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Big Rivers Electric Corporation Monthly Billing Summary Other Sales August 2018

1	August 2018 - Other Sales	IWH	REVENUE		MILLS/KWH
2	CDECIAL CALEG ENERGY				
3	SPECIAL SALES - ENERGY	10001	Φ.	0.1 = 2 = 0.1	24.22
4	KENERGY-DOMTAR COGEN	18,024	\$	617,552.81	34.26
5	ADM INVESTOR SERVICES		\$	(44,618.00)	
6	HENDERSON MUNICIPAL POWER & LIGHT	26,799	\$	782,507.24	29.20
7	MISO	300,837	\$	9,300,888.49	30.92
8	NORTHEAST POWER		\$	55,957.37	
9	CITY OF OWENSBORO, KY		\$	11,329.88	
10	PJM INTERCONNECTION		\$	1,935.52	
11					
12	TOTAL SPECIAL SALES - ENERGY	345,660	\$	10,725,553.31	31.03
13					
14	SPECIAL SALES - BILATERAL				
15	DTE ENERGY TRADING		\$	585,900.00	
16	EDF TRADING NORTH AMERICA		\$	1,258,560.00	
17	MORGAN STANLEY CAPITAL GROUP		\$	1,080,340.00	
18	NEXTERA ENERGY POWER MARKETING		\$	4,245,620.00	
19	MISO - CONTRA REVENUE		\$	(4,569,782.45)	
20	AEP ENERGY PARTNERS - CONTRA REVENUE		\$	(665, 160.00)	
21	EDF TRADING NORTH AMERICA - CONTRA REVENUE		\$	(1,995,480.00)	
22					
23	TOTAL SPECIAL SALES - BILATERAL		\$	(60,002.45)	
24					

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Big Rivers Electric Corporation Monthly Billing Summary Other Sales August 2018

1	August 2018 - Other Sales	MWH		REVENUE	MILLS/KWH
2			-		
3	SPECIAL SALES - CAPACITY				
4	CITY OF HANNIBAL, MO - CAPACITY SALES		\$	62,500.00	
5	CITY OF KAHOKA, MO - CAPACITY SALES		\$	500.00	
6	CITY OF CALIFORNIA, MO - CAPACITY SALES		\$	29,500.00	
7	CITY OF CENTRALIA, MO - CAPACITY SALES		\$	24,250.00	
8	CITY OF MARCELINE, MO - CAPACITY SALES		\$	7,750.00	
9	DTE ENERGY TRADING - CAPACITY SALES		\$	486,760.00	
10	MISO - CAPACITY SALES		\$	50,363.84	
11	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		\$	123,000.00	
12					
13	TOTAL SPECIAL SALES - CAPACITY		\$	784,623.84	
14					
15	TOTAL	345,660	\$	11,450,174.70	33.13

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 26 of 30

Big Rivers Electric Corporation Monthly Billing Summary Other Sales September 2018

1	September 2018 - Other Sales	MWH	REVENUE	MILLS/KWH
2			 	
3	SPECIAL SALES - ENERGY			
4	KENERGY-DOMTAR COGEN	7,429	\$ 269,793.98	36.32
5	ADM INVESTOR SERVICES		\$ (117, 134.00)	
6	HENDERSON MUNICIPAL POWER & LIGHT	27,659	\$ 842,343.93	30.45
7	MISO	$257,\!688$	\$ 8,472,707.79	32.88
8	NORTHEAST POWER		\$ 47,945.11	
9	CITY OF OWENSBORO, KY		\$ (8,823.69)	
10			 	
11	TOTAL SPECIAL SALES - ENERGY	292,776	\$ 9,506,833.12	32.47
12				
13	SI SPECIAL SALES - BILATERAL			
14	DTE ENERGY TRADING		\$ 567,000.00	
15	EDF TRADING NORTH AMERICA		\$ 1,039,680.00	
16	MORGAN STANLEY CAPITAL GROUP		\$ 1,114,040.00	
17	NEXTERA ENERGY POWER MARKETING		\$ 3,977,560.00	
18	MISO - CONTRA REVENUE		\$ (4,781,752.88)	
19	AEP ENERGY PARTNERS - CONTRA REVENUE		\$ (549,480.00)	
20	EDF TRADING NORTH AMERICA - CONTRA REVENUE		\$ (1,648,440.00)	
21 22 23	TOTAL SPECIAL SALES - BILATERAL		\$ (281,392.88)	

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 27 of 30

Big Rivers Electric Corporation Monthly Billing Summary Other Sales September 2018

1	September 2018 - Other Sales	MWH	REVENUE	MILLS/KWH
2 3	SI SPECIAL SALES - CAPACITY			
4	CITY OF HANNIBAL, MO - CAPACITY SALES		\$ 62,500.00	
5	CITY OF KAHOKA, MO - CAPACITY SALES		\$ 500.00	
6	CITY OF CALIFORNIA, MO - CAPACITY SALES		\$ 29,500.00	
7	CITY OF CENTRALIA, MO - CAPACITY SALES		\$ 24,250.00	
8	CITY OF MARCELINE, MO - CAPACITY SALES		\$ 7,750.00	
9	DTE ENERGY TRADING - CAPACITY SALES		\$ 486,760.00	
10	MISO - CAPACITY SALES		\$ 48,739.20	
11	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		\$ 123,000.00	
12			 	
13	TOTAL SPECIAL SALES - CAPACITY		\$ 782,999.20	
14			 	
15	TOTAL	292,776	\$ 10,008,439.44	34.18

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 28 of 30

Big Rivers Electric Corporation Monthly Billing Summary Other Sales October 2018

1	October 2018 - Other Sales	MWH	REVENUE	MILLS/KWH
2			 	
3	SPECIAL SALES - ENERGY			
4	KENERGY-DOMTAR COGEN	6,961	\$ 257,329.88	36.97
5	ADM INVESTOR SERVICES		\$ (208,402.00)	
6	HENDERSON MUNICIPAL POWER & LIGHT	6,348	\$ 198,622.48	31.29
7	MISO	133,824	\$ 4,686,126.84	35.02
8	NORTHEAST POWER		\$ 12,429.07	
9	CITY OF OWENSBORO, KY		\$ 31.25	
10			 	
11	TOTAL SPECIAL SALES - ENERGY	147,133	\$ 4,946,137.52	33.62
12				
13	SPECIAL SALES - BILATERAL			
14	DTE ENERGY TRADING		\$ 585,900.00	
15	EDF TRADING NORTH AMERICA		\$ 1,258,560.00	
16	MORGAN STANLEY CAPITAL GROUP		\$ 1,080,340.00	
17	NEXTERA ENERGY POWER MARKETING		\$ 4,245,620.00	
18	MISO - CONTRA REVENUE		\$ (5,089,596.29)	
19	AEP ENERGY PARTNERS - CONTRA REVENUE		\$ (665, 160.00)	
20	EDF TRADING NORTH AMERICA - CONTRA REVENUE		\$ (1,995,480.00)	
21			 	
22	TOTAL SPECIAL SALES - BILATERAL		\$ (579,816.29)	
23			, ,	

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 29 of 30

Big Rivers Electric Corporation Monthly Billing Summary Other Sales October 2018

1	October 2018 - Other Sales	MWH]	REVENUE	MILLS/KWH
2					
3	SPECIAL SALES - CAPACITY				
4	CITY OF HANNIBAL, MO - CAPACITY SALES		\$	62,500.00	
5	CITY OF KAHOKA, MO - CAPACITY SALES		\$	500.00	
6	CITY OF CALIFORNIA, MO - CAPACITY SALES		\$	29,500.00	
7	CITY OF CENTRALIA, MO - CAPACITY SALES		\$	$24,\!250.00$	
8	CITY OF MARCELINE, MO - CAPACITY SALES		\$	7,750.00	
9	DTE ENERGY TRADING - CAPACITY SALES		\$	486,760.00	
10	MISO - CAPACITY SALES		\$	50,363.84	
11	NEXTERA ENERGY POWER MARKETING - CAPACITY SALES		\$	123,000.00	
12					
13	TOTAL SPECIAL SALES - CAPACITY SALES		\$	784,623.84	
14					
15	TOTAL	147,133	\$	5,150,945.07	35.01

Case No. 2019-00007 Attachment for Response to PSC 1-13 Witness: Nicholas R. Castlen Page 30 of 30

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	Item 14)	Describe the effect on the FAC calculation of line losses related
2	to:	
3	a.	Intersystem sales when using a third-party transmission system,
4		and
5	b .	Intersystem sales when not using a third-party transmission
6		system.
7		
8	Respons	ee)
9	a.	Big Rivers had no intersystem sales during the last six months of the
10		period under review which used a third-party transmission system.
11	b.	Line losses related to intersystem sales, which did not use a third-party
12		transmission system, are included in Big Rivers' total System Losses
13		reported on page 3 of its monthly Form A filing. Big Rivers calculates $$
14		an overall system average fuel cost per kWh each month by dividing (1)
15		the total cost of fuel for generation by (2) the net kWh generated minus
16		total System Losses. The overall system average fuel cost per kWh
17		(which accounts for total System Losses, including losses related to
18		intersystem sales) is multiplied by the total intersystem sales volume to
19		calculate the cost of fuel allocated to intersystem sales in Big Rivers'
20		monthly Form A filing.
21		
22	Witness	Nicholas R. Castlen

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 15) Provide a list, in chronological order, showing by unit, any
2	scheduled, actual, and forced outages between for the last six months of
3	the period under review. Provide a key for any information that is
4	abbreviated.
5	
6	Response) Please see the attached summary for the requested information
7	regarding scheduled ("S"), actual ("A"), and forced ("F") outages for the last six
8	months of the period under review, i.e., May 1, 2018, through October 31, 2018.
9	
10	
11	Witness) Ronald D. Gregory
12	

Big Rivers Electric Corporation **Reid Station Unit #1 - Coal - 65MW Net** May 1, 2018, through October 31, 2018 Schedule vs. Actual

	_			MAINTI	ENANCE		нопр	S OF DUR	ATION	REASON FOR DEVIATION FROM SCHEDULED		
			Scheduled		Act	ual	поок	S OF DUK	ATION	MAINTENANCE OR REASON FOR FORCED OUTAG		
	MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Forced	Actual	AS APPROPRIATE		
	May 2018		No Outages							Reid Unit #1 was idled April 1, 2016, and has not yet been restarted.		
	June 2018		No Outages									
	July 2018		No Outages									
	August 2018		No Outages									
	September 2018		No Outages									
	October 2018		No Outages									

Case No. 2019-00007 Attachment for Response to PSC 1-15 Witness: Ronald D. Gregory Page 1 of 11

Big Rivers Electric Corporation

Schedule vs. Actual

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

May 1, 2018, through October 31, 2018

			MAINTI	ENANCE		HOURS	S OF DURA	ATION	REASON FOR DEVIATION FROM SCHEDULED	
<u>.</u>		Sche	duled	Act	ual	110011	OF DUIL	THON	MAINTENANCE OR REASON FOR FORCED OUTAGE	
MONTH	TYPE	FROM	TO	FROM	ТО	Scheduled	Forced	Actual	AS APPROPRIATE	
May 2018		No Outages								
June 2018		No Outages								
July 2018	F			7/10/2018 11:15	7/10/2018 13:56		2:41	2:41	Compressor bleed valve issues delayed startup	
August 2018	F			8/26/2018 16:14	8/26/2018 16:47		0:33	0:33	Unit tripped offline, due to high turbine exhaust temperature	
September 2018	F			9/26/2018 16:01	9/26/2018 17:23		1:22	1:22	Oil leak from main transformer, due to high shell pressure	
October 2018		No Outages								

Case No. 2019-00007 Attachment for Response to PSC 1-15 Witness: Ronald D. Gregory Page 2 of 11

Big Rivers Electric Corporation Henderson Station Two - Unit #1 - Coal - 153MW Net Schedule vs. Actual

May 1, 2018, through October 31, 2018

		MAINTENANCE		<u> </u>	HOURS OF DURATION		MION	REASON FOR DEVIATION FROM SCHEDULED		
		Sche	Scheduled Actu		ual		S OF DUKE	ATION	MAINTENANCE OR REASON FOR FORCED OUTAGE	
MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Forced	Actual	AS APPROPRIATE	
May 2018	S, A	5/18/2018 14:00	5/19/2018 18:00	5/18/2018 14:00	5/19/2018 17:35	28:00		27:35	A tube leak was discovered during a hydrostatic test of the boiler while the unit was offline and in Reserve Standby. The unit status was changed to Maintenance Outage for repair of the tube leak and the unit was returned to Reserve Standby status when the repair work was completed.	
June 2018		No Outages								
July 2018	F			7/1/2018 23:24	7/2/2018 1:33		2:09	2:09	Unit tripped offline, due to high drum level while transitioning to one mill operation.	
	F			7/2/2018 7:11	7/2/2018 18:00		10:49	10:49	Unit taken offline, due to a water leak on the feed water flow sensing line. Operators could not control boiler drum level due to the false indication of feed water flow caused by the leak in the flow sensing line.	
August 2018	F			8/5/2018 23:51	8/6/2018 3:16		3:25	3:25	Unit tripped offline, due to a high drum level while trying to stabilize the unit after start-up.	
	F			8/17/2018 18:56	8/19/2018 10:00		39:04	39:04	The unit was taken offline, due to waterwall tube leaks.	
	F			8/27/2018 19:04	8/27/2018 22:56		3:52	3:52	The unit was taken offline, due to loss of the boiler furnace water seal.	
September 2018	F			9/13/2018 20:07	9/14/2018 0:36		4:29	4:29	Unit tripped offline, due to a high drum level while placing the second mill in service after unit tied online.	
October 2018	F			10/21/2018 20:06	10/21/2018 23:07		3:01	3:01	The unit had just been tied online and the operator closed igniter header valve by mistake, which tripped the unit.	

Case No. 2019-00007 Attachment for Response to PSC 1-15 Witness: Ronald D. Gregory Page 3 of 11

Big Rivers Electric Corporation **Henderson Station Two - Unit #2 - Coal - 159MW Net** May 1, 2018, through October 31, 2018 Schedule vs. Actual

		MAINTENANCE					C OF DID	MION	REASON FOR DEVIATION FROM SCHEDULED	
		Sche	duled	Act	tual	HOUR	S OF DURA	TION	MAINTENANCE OR REASON FOR FORCED OUTAGE	
MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Forced	Actual	AS APPROPRIATE	
May 2018	F			5/15/2018 0:04	5/15/2018 2:08		2:04	2:04	Unit tripped offline, due to high drum level during transition to one mill operation	
	F			5/28/2018 5:16	5/28/2018 15:03		9:47	9:47	Unit was taken offline, due to a water leak on the feed water flow sensing line.	
June 2018		No Outages								
July 2018	F			7/17/2018 0:27	7/28/2018 3:27		267:00	267:00	The unit tripped offline, due to a low drum level that occurred while "B" mill was being taken out of service. Excessive water induction into the cold reheat piping during unit start-up resulted in damage to areas of insulation and several pipe hangers.	
August 2018	F			8/14/2018 8:00	8/14/2018 10:33		2:33	2:33	Unit tripped offline, due to a high drum level trip while putting a mill in service.	
	F			8/14/2018 23:04	8/15/2018 3:11		4:07	4:07	Unit tripped offline, due to a high drum level trip while removing a mill from service.	
September 2018	F			9/25/2018 16:40	9/27/2018 14:50		46:10	46:10	Unit removed from Reserve Standby status to repair the boiler main steam isolation valve actuator.	
October 2018	F			10/4/2018 16:54	10/5/2018 20:12		27:18	27:18	The unit was taken offline to repair a gas leak near the selective catalytic reduction system.	

Case No. 2019-00007 Attachment for Response to PSC 1-15 Witness: Ronald D. Gregory Page 4 of 11

Big Rivers Electric Corporation

Schedule vs. Actual

Green Station Unit #1 - Coal/Pet coke - 231MW Net

May 1, 2018, through October 31, 2018

MAINTE		ENANCE	HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED			
	Scheduled		Act	tual	HOURS OF BUILDIN			MAINTENANCE OR REASON FOR FORCED OUTAGE	
MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Forced	Actual	AS APPROPRIATE
May 2018	F			5/17/2018 20:57	5/19/2018 0:58		28:01	28:01	Unit was removed from service, due to a reheat intermediate leading edge boiler tube leak.
	S, A	5/19/2018 00:00	5/21/2018 0:00	5/19/2018 0:58	5/20/2018 23:30	48:00		46:32	During the previous forced outage, inspections were made on "B" air heater and the upper guide bearing was discovered to be in need of repair. The boiler tube leak repair was completed and the unit status classification was changed from Unplanned (Forced) Outage - Immediate to Maintenance Outage.
	F			5/21/2018 5:28	5/21/2018 8:06		2:38	2:38	The loss of "B" auxiliary bus, while transferring it from start-up to normal feed, caused all "B" equipment to trip which caused the unit to trip.
	F			5/29/2018 11:30			60:30	60:30	Unit was removed from service, due to a reheat outlet boiler tube leak.
June 2018	F				6/1/2018 10:28		10:28	10:28	Unit was removed from service, due to a reheat outlet boiler tube leak.
July 2018	F			7/21/2018 13:38	7/28/2018 19:48		174:10	174:10	Unit was removed from service, due to a reheat outlet boiler tube leak.
	F			7/28/2018 19:48	7/29/2018 3:37		7:49	7:49	Outage start-up delayed, due to a leak in the "B" flue gas desulfurization recycle pump header.
August 2018	F			8/30/2018 10:14	→		37:46	37:46	Unit was removed from service, due to a reheat outlet boiler tube leak.
September 2018	F				9/2/2018 2:17		26:17	26:17	Unit was removed from service, due to a reheat outlet boiler tube leak.

Case No. 2019-00007 Attachment for Response to PSC 1-15 Witness: Ronald D. Gregory Page 5 of 11

Big Rivers Electric Corporation

Schedule vs. Actual

Green Station Unit #1 - Coal/Pet coke - 231MW Net

May 1, 2018, through October 31, 2018

			MAINTE	ENANCE		нопр	S OF DURA	ATION	REASON FOR DEVIATION FROM SCHEDULED	
		Sche	duled	Act	ual	110010	5 OF DUM	ATION	MAINTENANCE OR REASON FOR FORCED OUTAGE	
MONTH	TYPE	FROM	TO	FROM	TO	Scheduled Forced Actual		Actual	AS APPROPRIATE	
	F			9/26/2018 10:13	9/28/2018 11:02		48:49	48:49	Unit was removed from service, due to a reheat outlet boiler tube leak.	
October 2018	F			10/29/2018 1:52	10/29/2018 18:17		16:25	16:25	Unit tripped offline, due to "A" forced draft fan inlet and outlet dampers going closed and causing 1A pulverizer to trip. The unit shed 75 MW's in one minute, which caused a drum level upset that lead to a unit trip.	
	F			10/29/2018 18:17	10/30/2018 0:29		6:12	6:12	Unit was declared in starting failure, due to #2 main steam stop valve LVDT (Linear Variable Differential Transducer) failure. Could not tie the turbine, due to the speed not staying steady.	

Big Rivers Electric Corporation

Schedule vs. Actual

Green Station Unit #2 - Coal/Pet coke - 223MW Net

May 1, 2018, through October 31, 2018

			MAINTI	ENANCE		попр	S OF DURA	TION	REASON FOR DEVIATION FROM SCHEDULED		
			Sche	duled	Act	tual	поок	S OF DUKA	ATION	MAINTENANCE OR REASON FOR FORCED OUTAGE	
	MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Forced	Actual	AS APPROPRIATE	
	May 2018		No Outages								
	June 2018		No Outages								
	July 2018	F			7/8/2018 1:28	7/8/2018 9:04		7:36	7:36	Unit tripped offline while performing a mechanical overspeed oil pressure test.	
		F			7/8/2018 9:05	7/8/2018 10:25		1:20	1:20	Unit tripped offline for reverse current/no load, due to generation not above the 3% minimum within the allotted 1 minute timeframe after synchronization to the grid.	
	August 2018		No Outages								
	September 2018	F			9/22/2018 8:39	9/27/2018 6:44		118:05	118:05	Unit was removed from service, due to a waterwall boiler tube leak. Waterwall tube leak caused boiler to flame out leading to master fuel trip.	
		F			9/27/2018 6:44	9/27/2018 6:53		0:09	0:09	Startup was delayed for resolution of voltage and synchronization scope issues.	
	October 2018		No Outages								

Case No. 2019-00007 Attachment for Response to PSC 1-15 Witness: Ronald D. Gregory Page 7 of 11

Big Rivers Electric Corporation Coleman Station Unit #1 - Coal - 150MW Net May 1, 2018, through October 31, 2018 Schedule vs. Actual

ſ				MAINTE	ENANCE		HOURS OF DURATION			REASON FOR DEVIATION FROM SCHEDULED
			Scheduled		Actual		HOURS OF DURATION			MAINTENANCE OR REASON FOR FORCED OUTAGE
	MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Forced	Actual	AS APPROPRIATE
						•			•	

May 2018 No Outages

June 2018 No Outages

July 2018 No Outages

August 2018 No Outages

September 2018 No Outages

October 2018 No Outages

Coleman Unit #1 was idled on May 1, 2014, and has not yet been returned to service.

Case No. 2019-00007 Attachment for Response to PSC 1-15 Witness: Ronald D. Gregory Page 8 of 11

Big Rivers Electric Corporation Coleman Station Unit #2 - Coal - 138MW Net May 1, 2018, through October 31, 2018 Schedule vs. Actual

Scheduled Actual MAINTENANCE OR REASON FOR FO	EDULED	REASON FOR DEVIATION FROM SCHEDUL	. I	HOURS OF DURATION								
MONTH TOTAL TO THOM TO THOM TO CLAIM TO A LACADED OF THE TOTAL TO THE TOTAL TO	CED OUTAGI	MAINTENANCE OR REASON FOR FORCED				tual	Act	eduled	Sche			
MONTH TYPE FROM TO FROM TO Scheduled Forced Actual AS APPROPRIATE		AS APPROPRIATE	ual A	Actua	Forced	Scheduled	TO	FROM	TO	FROM	TYPE	MONTH

May 2018 No Outages

June 2018 No Outages

July 2018 No Outages

August 2018 No Outages

September 2018 No Outages

October 2018 No Outages

Coleman Unit #2 was idled on May 1, 2014, and has not yet been returned to service.

Case No. 2019-00007 Attachment for Response to PSC 1-15 Witness: Ronald D. Gregory Page 9 of 11

Big Rivers Electric Corporation Coleman Station Unit #3 - Coal - 155MW Net May 1, 2018, through October 31, 2018 Schedule vs. Actual

			MAINTI	ENANCE		HOUR	S OF DURA	ATION	REASON FOR DEVIATION FROM SCHEDULED	
		Scheduled		Actual		110010	S OF DUIM	AIION	MAINTENANCE OR REASON FOR FORCED OUTAGE	
	MONTH TYPE	FROM	TO	FROM	TO	Scheduled Forced Actual		Actual	AS APPROPRIATE	
	May 2018	No Outages							Coleman Unit #3 was idled on May 8, 2014, and has not yet been returned to service.	
	June 2018	No Outages								
	July 2018	No Outages								
	August 2018	No Outages								
	September 2018	No Outages								
	October 2018	No Outages								

Case No. 2019-00007 Attachment for Response to PSC 1-15 Witness: Ronald D. Gregory Page 10 of 11

Big Rivers Electric Corporation

Schedule vs. Actual

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

May 1, 2018, through October 31, 2018

			MAINTI	ENANCE		HOURS OF DURATION		TION	REASON FOR DEVIATION FROM SCHEDULED
		Schee	duled	Act	ual	HOOK	5 OF DUIL	IIION	MAINTENANCE OR REASON FOR FORCED OUTAGE
MONTH	TYPE	FROM	TO	FROM	TO	Scheduled	Forced	Actual	AS APPROPRIATE
May 2018		No Outages							
June 2018		No Outages							
July 2018	S, A	7/25/2018 00:00	7/27/2018 3:00	7/24/2018 23:57	7/27/2018 6:29	51:00		54:32	Unit was removed from service, due to a leak on a 4" downcomer line on west side of drum on 15th floor.
	F			7/28/2018 1:29	7/28/2018 17:28		15:59	15:59	Unit was removed from service, due to a leak in the sensing line on the 1st stage east superheat spray regulator.
August 2018		No Outages							
September 201	8 F			9/12/2018 23:55	9/16/2018 2:39		74:44	74:44	Unit was removed from service, due to waterwall tube leak on west side wall by IR-7 soot blower on the 7 $\frac{1}{2}$ floor.
	S, A	9/29/2018 00:00		9/29/2018 0:27		48:00		47:33	
October 2018	S, A				→	744:00		744:00	

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

- 1 Item 16) For the last six months of the period under review, provide the
- 2 monthly capacity factor at which each generating unit operated.

3

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

	Big l Monthly Ca	Rivers Ele apacity Fa		_			
Generating Unit	Metric ^a	May- 2018	Jun- 2018	Jul- 2018	Aug- 2018	Sep- 2018	Oct- 2018
Station Two	GCF	28.5%	16.1%	27.0%	37.6%	31.0%	71.8%
Unit # 1	NCF	27.0%	14.7%	25.5%	36.0%	29.5%	70.1%
Station Two	GCF	19.0%	2.5%	2.4%	19.2%	25.8%	22.2%
Unit # 2	NCF	17.9%	1.3%	1.0%	17.7%	24.3%	20.6%
Reid Station	GCF	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unit#1 b	NCF	-3.4%	-3.4%	-3.4%	-3.2%	-3.3%	-3.5%
Reid Station	GCF	0.6%	0.2%	0.4%	0.2%	2.2%	0.4%
Unit # 2 CT	NCF	0.5%	0.1%	0.2%	0.1%	2.1%	0.3%
Green Station	GCF	67.3%	77.5%	61.3%	83.0%	79.7%	95.6%
Unit # 1	NCF	65.3%	75.3%	59.2%	81.0%	77.9%	94.3%
Green Station	GCF	85.2%	80.4%	81.1%	83.9%	71.7%	94.2%
Unit # 2	NCF	83.9%	78.8%	79.5%	82.5%	70.2%	93.2%
Wilson Station	GCF	92.3%	92.1%	83.5%	93.7%	78.2%	0.0%
Unit # 1	NCF	92.2%	91.9%	82.9%	93.4%	77.6%	-0.8%
Coleman Station	GCF	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unit # 1 c	NCF	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%
Coleman Station	GCF	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unit # 2 c	NCF	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%
Coleman Station	GCF	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unit#3 c	NCF	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%

5

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1

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

a	NCF (Net Capacity Factor)	= -	Net Actual Generation x 100%		
			PH (Period Hours) x NMC (Net Maximum Capacity		
	COE (Company Company)		Gross Actual Generation x 100%		
	GCF (Gross Capacity Factor)		PH (Period Hours) x GMC (Gross Maximum Capacity		

- **b.-** Reid Unit 1 was put in Idled Status effective April 1, 2016.
- c.- Coleman Station Units 1 and 2 were placed in Idled Status on May 1, 2014; Coleman Station Unit 3 was placed in Idled Status on May 8, 2014.

2

4 Witness) Jason C. Burden

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 17)	
2	a.	For the last six months of the period under review, explain if Big
3		Rivers made any changes to its maintenance and operation
4		practices, or completed any specific generation efficiency
5		improvements that affect fuel usage at Big Rivers' generation
6		facilities.
7	b.	Describe the impact of these changes on Big Rivers' fuel usage.
8		
9	Respons	se)
10	a.	For the last six months of the period under review, i.e., May 1, 2018,
11		through October 31, 2018, Big Rivers has not made any changes to its
12		maintenance and operation practices, or completed any specific
13		generation efficiency improvements that affect fuel usage at Big Rivers'
14		generation facilities.
15	b.	Not applicable.
16		
17		
18	Witness	es) Ronald D. Gregory (a. only) and
19		Jason C. Burden (b. only)
20		

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	Item 18) State whether Big Rivers is aware of any violations of its
2	policies and procedures regarding fuel procurement that occurred prior
3	to or during the last six months of the period under review.
4	
5	Response) Big Rivers is unaware of any violations of its policies and procedures
6	regarding fuel procurement that occurred during the last six months of the period
7	under review, i.e., May 1, 2018, through October 31, 2018. Big Rivers is also
8	unaware of any unreported violation prior to the last six months of the period
9	under review.
10	
11	
12	Witnesses) Mark W. McAdams (Coal) and
13	Mark J. Eacret (Natural Gas)
14	

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 19)	State whether Big Rivers is aware of any violations of 807 KAR
2	5:056 that	occurred prior to or during the last six months of the period
3	under revi	lew.
4		
5	Response)	Big Rivers is unaware of any violations of 807 KAR 5:056 that
6	occurred pr	ior to or during the last six months of the period under review.
7		
8		
9	Witness)	Nicholas R. Castlen
10		

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 20) State whether all fuel contracts related to commodity and
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' fuel and transportation contracts have been filed
7	with the Commission.
8	
9	
10	Witnesses) Mark W. McAdams (Coal) and
11	Mark J. Eacret (Natural Gas)
12	

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	Item 21)	For each generating station, state the methods of coal delivery
2	currently a	vailable.

3

4 Response) The currently available methods for coal deliveries to Big Rivers

5 generating stations is shown below.

6

	Rail	Truck	Barge
Coleman	Not Available	Available	Available
Green	Not Available	Available	Available
Reid	Not Available	Available	Available
Station II	Not Available	Available	Available
Wilson	Not Available	Available	Available

7

8

Witness) Mark W. McAdams

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

I	Item 22) If a change in the base fuel cost is proposed, state the month to
2	be used as the base period (b). If the base period results in a fuel cost other
3	than one representative of current costs as prescribed by 807 KAR 5:056,
4	Section 1 (2), explain why this base period was selected. If no change is
5	proposed, include an explanation of the reason(s) Big Rivers believes the
6	current base period fuel cost should remain unchanged.
7	
8	Response) Big Rivers is proposing, and recommends the Commission approve, no
9	change in Big Rivers' base fuel cost and that it, therefore, remain unchanged at
10	\$0.020932 per kWh. This proposal and recommendation is based upon three
11	factors. First, Big Rivers believes the history of its monthly FAC factor during the
12	period under review, and Big Rivers' projections of its monthly FAC factor for 2019
13	and 2020, support this position. Second, Big Rivers' Members concurred with this
14	position when presented this historical and forecasted information. Third, Big
15	Rivers' current portfolio of fuel contracts, and anticipated changes to that portfolio
16	support this position.
17	Big Rivers reviewed its historical, monthly FAC performance for the period
18	under review, i.e., from November 1, 2016 through October 31, 2018. Big Rivers
19	also reviewed its forecasted monthly FAC factor for 2019 and 2020. These reviews
20	are comparable to Big Rivers' analysis in its prior two-year FAC Reviews –
21	

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

- 1 Case No. 2010-00495,² Case No. 2012-00555,³ Case No. 2014-00455,⁴ Case No. 2017-
- 2 00006.⁵ Attachment 1 to this response shows the performance of Big Rivers' FAC
- 3 factor for the twenty-four (24) months of the period under review. Attachment 2
- 4 adjusts this information by removing a monthly \$311,111 credit.⁶ As Attachment 1
- 5 shows, the <u>unadjusted</u> twenty-four (24) month average for Big Rivers' FAC factor is
- 6 \$0.001288. Upon removing the \$311,111 monthly credit, Attachment 2 shows the
- 7 <u>adjusted</u> twenty-four (24) month average for Big Rivers' FAC factor is \$0.001386.
- 8 Finally, Attachment 3, filed with a Petition for Confidential Treatment, shows that
- 9 the *projected* twenty-four month average for Big Rivers' FAC factor for the expense
- months in 2019 and 2020 is . As Attachment 3 shows, these projected
- 11 monthly FAC factors range from

² See In the Matter of: An Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from July 17, 2009 through October 31, 2010, Case No. 2010-00495.

³ See In the Matter of: An Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2010 through October 31, 2012. Case No. 2012-00555.

⁴ See In the Matter of: An Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2012 through October 31, 2014. Case No. 2014-00455.

⁵ 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.

⁶ Case No. 2014-00455. An Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2012 through October 31, 2014 (Ky. PSC Jul. 27, 2015). The credit expired with the December 2016 expense month filing.

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	to Big Rivers believes these values clearly support no
2	change in its current base fuel cost of \$0.020932 per kWh.
3	As a Member-Owned generation and transmission cooperative, Big Rivers
4	consulted with its Member-Owners ⁷ about a possible change in Big Rivers' current
5	base fuel cost. Any change in Big Rivers' current base fuel cost would impact its
6	Members' tariffs and their respective billing systems. Big Rivers informed its
7	Member-Owners that it did not anticipate changing the current base fuel cost given
8	the currently available information. All three Member-Owners concurred with Big
9	Rivers' position to not change its base fuel cost.
10	Finally, Big Rivers has entered into one-, three-, and five-year coal supply
10 11	Finally, Big Rivers has entered into one-, three-, and five-year coal supply agreements which Big Rivers believes provide a series of price hedges, in lessening
11 12	agreements which Big Rivers believes provide a series of price hedges, in lessening
11 12	agreements which Big Rivers believes provide a series of price hedges, in lessening percentages, over the term of these agreements. At this time, based upon bids
11 12 13 14	agreements which Big Rivers believes provide a series of price hedges, in lessening percentages, over the term of these agreements. At this time, based upon bids received, contracts secured, and market indices, it does not appear that coal pricing
11 12 13 14	agreements which Big Rivers believes provide a series of price hedges, in lessening percentages, over the term of these agreements. At this time, based upon bids received, contracts secured, and market indices, it does not appear that coal pricing
11 12 13 14 15	agreements which Big Rivers believes provide a series of price hedges, in lessening percentages, over the term of these agreements. At this time, based upon bids received, contracts secured, and market indices, it does not appear that coal pricing

19

⁷ Big Rivers' Member-Owners are Jackson Purchase Energy Corporation, Kenergy Corp., and Meade County Rural Electric Cooperative Corporation.

Big Rivers Electric Corporation Summary of Fuel Adjustment Clause Calculation Components November 1, 2016 through October 31, 2018

(a)	(b)	(c)	(d)	(e) = (c) - (d)	(f)	(g)	(h)
Expense Month	Billing Month	Base Fuel Cost per kWh ¹	Total Fuel Cost per kWh	FAC Factor	Over/(Under) Recovery ²	Fuel Cost \$ Schedule ("Fm")	Sales(kWhs) Schedule ("Sm") ³
Nov 2016	Jan 2017	\$0.020932	\$0.019894	(\$0.001038)	\$10,630	4,707,021	236,599,577
Dec 2016	Feb 2017	\$0.020932	\$0.021580	\$0.000648	(\$69,713)	6,555,174	303,760,321
Jan 2017	Mar 2017	\$0.020932	\$0.022281	\$0.001349	(\$6,984)	6,528,029	292,982,825
Feb 2017	Apr 2017	\$0.020932	\$0.022657	\$0.001725	(\$76,697)	5,349,974	236,128,002
Mar 2017	May 2017	\$0.020932	\$0.021845	\$0.000913	\$21,760	5,433,831	248,742,653
Apr 2017	Jun 2017	\$0.020932	\$0.021421	\$0.000489	(\$27,777)	4,676,663	218,318,588
May 2017	Jul 2017	\$0.020932	\$0.021270	\$0.000338	\$11,371	5,138,276	241,572,042
Jun 2017	Aug 2017	\$0.020932	\$0.022401	\$0.001469	\$9,453	6,037,935	$269,\!538,\!022$
Jul 2017	Sep 2017	\$0.020932	\$0.022849	\$0.001917	\$53,225	6,986,519	305,769,700
Aug 2017	Oct 2017	\$0.020932	\$0.022703	\$0.001771	(\$51,448)	6,332,161	278,911,398
Sep 2017	Nov 2017	\$0.020932	\$0.023004	\$0.002072	(\$51,311)	5,749,407	249,927,116
Oct 2017	$Dec\ 2017$	\$0.020932	\$0.022942	\$0.002010	(\$24,757)	5,459,598	237,978,607
Twelve-Mor	nth Average	\$0.020932	\$0.022071	\$0.001139	(\$16,854)	5,746,216	260,019,071
Nov 2017	Jan 2018	\$0.020932	\$0.021434	\$0.000502	\$20,864	5,323,245	248,358,931
Dec 2017	Feb 2018	\$0.020932	\$0.021636	\$0.000704	\$26,679	6,523,214	301,504,056
Jan 2018	Mar 2018	\$0.020932	\$0.022926	\$0.001994	\$24,155	7,699,024	335,814,833
Feb 2018	Apr 2018	\$0.020932	\$0.024767	\$0.003835	(\$167,902)	6,231,604	251,611,091
Mar 2018	May 2018	\$0.020932	\$0.022465	\$0.001533	\$37,544	5,872,411	261,401,141
Apr 2018	Jun 2018	\$0.020932	\$0.021928	\$0.000996	(\$43,439)	5,110,657	233,065,327
May 2018	Jul 2018	\$0.020932	\$0.021403	\$0.000471	\$30,462	5,642,888	263,649,672
Jun 2018	Aug 2018	\$0.020932	\$0.021310	\$0.000378	\$14,185	6,260,273	293,765,533
Jul 2018	Sep 2018	\$0.020932	\$0.022035	\$0.001103	\$6,150	6,831,596	310,035,303
Aug 2018	Oct 2018	\$0.020932	\$0.022058	\$0.001126	(\$11,424)	6,610,360	299,678,039
Sep 2018	Nov 2018	\$0.020932	\$0.022564	\$0.001632	(\$36,110)	6,038,194	267,608,326
Oct 2018	Dec 2018	\$0.020932	\$0.023911	\$0.002979	(\$27,022)	6,002,804	251,050,605
Twelve-Mor	nth Average	\$0.020932	\$0.022370	\$0.001438	(\$10,488)	6,178,856	276,461,905
24-Month	Average	\$0.020932	\$0.022220	\$0.001288	(\$13,671)	5,962,536	268,240,488

Note(s):

- 1.- See Big Rivers' Monthly Form A filing, page 1 of 2.
- 2.- See Big Rivers' Monthly Form A filing, page 2 of 4; see also Big Rivers' Monthly Form A filing, page 4 of 4.
- 3.- See Big Rivers' Monthly Form A, page 1 of 2; also see Big Rivers' Monthly Form A, page 3 of 4.

Case No. 2019-00007

Attachment 1 for Response to PSC 1-22

Witness: Roger D. Hickman

Big Rivers Electric Corporation Summary of Fuel Adjustment Clause Calculation Components November 1, 2016 through October 31, 2018

Excludes monthly credit of \$311,111 from Fuel Cost through the December 2016 Expense Month

(a)	(b)	(c)	(d)	(e) = (c) - (d)	(f)	(g)	(h)
Expense Month	Billing Month	Base Fuel Cost per kWh ¹	<u>Restated</u> Total Fuel Cost per kWh	<u>Restated</u> FAC Factor	Over/(Under) Recovery ²	<u>Restated</u> Fuel Cost \$ Schedule ("Fm")	Sales(kWhs) Schedule ("Sm") ³
Nov 2016	Jan 2017	\$0.020932	\$0.021209	\$0.000277	\$10,630	5,018,132	236,599,577
Dec 2016	Feb 2017	\$0.020932	\$0.022604	\$0.001672	(\$69,713)	6,866,285	303,760,321
Jan 2017	Mar 2017	\$0.020932	\$0.022281	\$0.001349	(\$6,984)	6,528,029	292,982,825
Feb 2017	Apr 2017	\$0.020932	\$0.022657	\$0.001725	(\$76,697)	5,349,974	236,128,002
Mar 2017	May 2017	\$0.020932	\$0.021845	\$0.000913	\$21,760	5,433,831	248,742,653
Apr 2017	Jun 2017	\$0.020932	\$0.021421	\$0.000489	(\$27,777)	4,676,663	218,318,588
May 2017	Jul 2017	\$0.020932	\$0.021270	\$0.000338	\$11,371	5,138,276	241,572,042
Jun 2017	Aug 2017	\$0.020932	\$0.022401	\$0.001469	\$9,453	6,037,935	269,538,022
Jul 2017	Sep 2017	\$0.020932	\$0.022849	\$0.001917	\$53,225	6,986,519	305,769,700
Aug 2017	Oct 2017	\$0.020932	\$0.022703	\$0.001771	(\$51,448)	6,332,161	278,911,398
$Sep\ 2017$	Nov 2017	\$0.020932	\$0.023004	\$0.002072	(\$51,311)	5,749,407	249,927,116
Oct 2017	Dec 2017	\$0.020932	\$0.022942	\$0.002010	(\$24,757)	5,459,598	237,978,607
Twelve-Mo	nth Average	\$0.020932	\$0.022266	\$0.001334	(\$16,854)	5,798,068	260,019,071
Nov 2017	Jan 2018	\$0.020932	\$0.021434	\$0.000502	\$20,864	5,323,245	248,358,931
$Dec\ 2017$	Feb 2018	\$0.020932	\$0.021636	\$0.000704	\$26,679	6,523,214	301,504,056
Jan 2018	Mar 2018	\$0.020932	\$0.022926	\$0.001994	\$24,155	7,699,024	335,814,833
Feb 2018	Apr 2018	\$0.020932	\$0.024767	\$0.003835	(\$167,902)	6,231,604	251,611,091
Mar 2018	May 2018	\$0.020932	\$0.022465	\$0.001533	\$37,544	5,872,411	261,401,141
Apr 2018	Jun 2018	\$0.020932	\$0.021928	\$0.000996	(\$43,439)	5,110,657	233,065,327
May 2018	Jul 2018	\$0.020932	\$0.021403	\$0.000471	\$30,462	5,642,888	263,649,672
Jun 2018	Aug 2018	\$0.020932	\$0.021310	\$0.000378	\$14,185	6,260,273	293,765,533
Jul 2018	Sep 2018	\$0.020932	\$0.022035	\$0.001103	\$6,150	6,831,596	310,035,303
Aug 2018	Oct 2018	\$0.020932	\$0.022058	\$0.001126	(\$11,424)	6,610,360	299,678,039
Sep 2018	Nov 2018	\$0.020932	\$0.022564	\$0.001632	(\$36,110)	6,038,194	267,608,326
Oct 2018	Dec 2018	\$0.020932	\$0.023911	\$0.002979	(\$27,022)	6,002,804	251,050,605
Twelve-Mo	nth Average	\$0.020932	\$0.022370	\$0.001438	(\$10,488)	6,178,856	276,461,905
24-Month	n Average	\$0.020932	\$0.022318	\$0.001386	(\$13,671)	5,988,462	268,240,488

Note(s):

- 1.- See Big Rivers' Monthly Form A filing, page 1 of 2.
- 2.- See Big Rivers' Monthly Form A filing, page 2 of 4; see also Big Rivers' Monthly Form A filing, page 4 of 4.
- 3.- See Big Rivers' Monthly Form A, page 1 of 2; also see Big Rivers' Monthly Form A, page 3 of 4.

Case No. 2019-00007

 $\underline{Attachment~2}$ for Response to PSC 1-22

Witness: Roger D. Hickman

Big Rivers Electric Corporation Summary of Fuel Adjustment Clause Calculation Components <u>Forecasted Expense Months</u> January 2019 through December 2020

(a)	(b)	(c)	(d)	(e) = (c) - (d)	(f)	(g)
Expense Month	Billing Month	Base Fuel Cost per kWh	Total Fuel Cost per kWh	FAC Factor	Fuel Cost \$ Schedule ("Fm")	Sales(kWhs) Schedule ("Sm")
Jan 2019	Mar 2019	\$0.020932				
Feb 2019	Apr 2019	\$0.020932				
Mar 2019	May 2019	\$0.020932				
Apr 2019	Jun 2019	\$0.020932				
May 2019	Jul 2019	\$0.020932				
Jun 2019	Aug 2019	\$0.020932				
Jul 2019	Sep 2019	\$0.020932				
Aug 2019	Oct 2019	\$0.020932				
Sep 2019	Nov 2019	\$0.020932				
Oct 2019	Dec 2019	\$0.020932				
Nov 2019	Jan 2020	\$0.020932				
Dec 2019	Feb 2020	\$0.020932				
Twelve-Mon	nth Average	\$0.020932				
T	3.5	40.00000				
Jan 2020	Mar 2020	\$0.020932				
Feb 2020	Apr 2020	\$0.020932				
Mar 2020	May 2020	\$0.020932				
Apr 2020	Jun 2020	\$0.020932				
May 2020	Jul 2020	\$0.020932				
Jun 2020	Aug 2020	\$0.020932				
Jul 2020	Sep 2020	\$0.020932				
Aug 2020	Oct 2020	\$0.020932				
Sep 2020	Nov 2020	\$0.020932				
Oct 2020	Dec 2020	\$0.020932				
Nov 2020	Jan 2021	\$0.020932				
Dec 2020	Feb 2021	\$0.020932				
i weive-Moi	nth Average	\$0.020932				
24-Month	n Average	\$0.020932				

Case No. 2019-00007

Attachment 3 for Response to PSC 1-22

Witness: Roger D. Hickman

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	Item 23) Provide a calculation of the fossil fuel costs F(b) that Big
2	Rivers proposes to use to calculate the base period fuel cost. This
3	calculation shall show each component of $F(b)$ as defined by 807 KAR
4	5:056. Explain why the fuel cost in the selected base period is
5	representative of the level of fuel cost currently being experienced by Big
6	Rivers.
7	
8	Response) Please see Big Rivers' response to Item 22. As Big Rivers is
9	proposing no change to its current base fuel cost of \$0.020932 per kWh, Big Rivers
10	considers this information request not applicable.
11	
12	
13	Witness) Roger D. Hickman
14	

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	Item 24) Provide a schedule showing each component of sales as
2	defined by 807 KAR 5:056 in the selected base period (b). Explain why Big
3	Rivers believes that the sales in the selected base period (b) are
4	representative of the level of kWh sales that Big Rivers will derive from the
5	level of fuel cost incurred during the selected base period (b).
6	
7	a. Separately provide the amounts of power purchases used in the
8	calculation of sales provided.
9	b. Separately provide the amounts of intersystem power sales used
10	in the calculation of sales provided.
11	
12	Response) Please see Big Rivers' response to Item 22. As Big Rivers is
13	proposing no change to its current base fuel cost of \$0.020932 per kWh, Big Rivers
14	considers this information request not applicable.
15	
16	
17	Witness) Roger D. Hickman
18	

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 25) Provide a schedule showing the calculation of Big Rivers'
2	proposed increase or decrease in its base fuel cost per kWh to be
3	incorporated into its base rate.
4	
5	Response) Please see Big Rivers' response to Item 22. As Big Rivers is
6	proposing no change to its current base fuel cost of \$0.020932 per kWh, Big Rivers
7	considers this information request not applicable.
8	
9	
10	Witness) Roger D. Hickman
11	

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 26) Provide a schedule of the present and proposed rates that E	3ig
2	Rivers seeks to change pursuant to 807 KAR 5:056, shown in comparati	ve
3	form.	
4		
5	Response) Please see Big Rivers' response to Item 22. As Big Rivers	is
6	proposing no change to its current base fuel cost of \$0.020932 per kWh, Big Rive	ers
7	considers this information request not applicable.	
8		
9		
10	Witness) Roger D. Hickman	
11		

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 27)	Provide a copy of the current tariff showing by cross-outs and
2	inserts all	proposed changes in rates.
3		
4	Response)	Please see Big Rivers' response to Item 22. As Big Rivers is
5	proposing r	no change to its current base fuel cost of \$0.020932 per kWh, Big Rivers
6	considers th	nis information request not applicable.
7		
8		
9	Witness)	Roger D. Hickman
10		

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

1	Item 28)	For the years ending October 31, 2017, and October 31, 2018,
2	provide:	
3		
4	a.	Maximum annual system demand; and
5	b.	Average annual demand.
6		
7	Respons	ee)
8	a.	November 1, 2016 through October 31, $2017 - 729$ MW;
9		November 1, 2017 through October 31, $2018 - 741$ MW.
10	b.	November 1, 2016 through October 31, $2017 - 426$ MW;
11		November 1, 2017 through October 31, $2018 - 450$ MW.
12		
13	The figur	res above include only Big Rivers' native load and do not include other
14	transmis	sion customers
15		
16		
17	Witness	Mark J. Eacret
18		

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	Item 29	
2	a.	Provide a schedule of the calculation of the 12-month average
3		line loss by month for November 2016 through October 2018.
4	b.	Describe the actions that Big Rivers has taken to reduce line loss
5		during this period.
6		
7	Respon	se)
8	a.	Please see the table attached to this response for calculations of the 12-
9		month average line losses for November 2016 through October 2018.
10	b.	Big Rivers continues to design and operate its transmission system in
11		the most efficient manner possible. No specific actions with the
12		potential to further reduce line losses were identified or implemented
13		during the period from November 2016 through October 2018.
14		
15		
16	Witness	ses) Nicholas R. Castlen (a. only) and
17		Christopher S. Bradley (b. only)
18		

Big Rivers Electric Corporation Case No. 2019-00007 12 Month Average Line Loss Calculation November 2016 - October 2018

	(a)	(b)	(c)	(d)
Line No.	12 Months Ended	12 Month Total kWh Sources	12 Month Total kWh Line Losses	12 Month Line Losses as a Percent of Total Sources
1	Nov-16	7,855,734,058	244,389,169	3.11%
2	Dec-16	7,921,161,926	262,330,289	3.31%
3	Jan-17	8,007,852,191	266,470,433	3.33%
4	Feb-17	7,967,619,280	272,084,917	3.41%
5	Mar-17	7,897,216,652	275,174,940	3.48%
6	Apr-17	7,821,504,498	275,026,717	3.52%
7	May-17	7,796,387,028	263,723,633	3.38%
8	Jun-17	7,839,343,330	274,002,318	3.50%
9	Jul-17	7,787,419,781	280,734,454	3.60%
10	Aug-17	7,710,796,987	296,011,902	3.84%
11	Sep-17	7,668,252,657	228,812,622	2.98%
12	Oct-17	7,696,731,823	220,664,842	2.87%
13	Nov-17	7,720,812,974	226,730,214	2.94%
14	Dec-17	7,647,810,844	226,523,536	2.96%
15	Jan-18	7,530,171,618	211,026,009	2.80%
16	Feb-18	7,374,708,683	198,291,232	2.69%
17	Mar-18	7,332,761,323	195,828,826	2.67%
18	Apr-18	7,368,754,863	190,091,946	2.58%
19	May-18	7,369,045,859	186,723,317	2.53%
20	Jun-18	7,383,182,501	187,239,508	2.54%
21	Jul-18	7,310,928,495	189,162,615	2.59%
22	Aug-18	7,344,826,521	176,291,679	2.40%
23	Sep-18	7,320,650,588	166,908,835	2.28%
24	Oct-18	7,097,740,770	162,015,537	2.28%

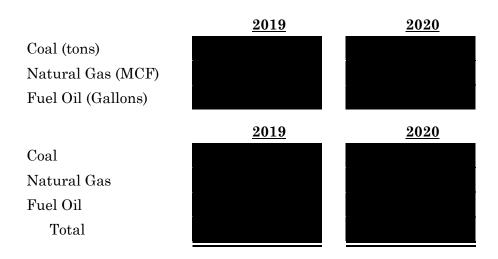
ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	Item 30) Provide the most recent projected fuel requirements for the
2	years 2019 and 2020 in tons for coal, MMBtu for natural gas, and dollars
3	
4	Response) Please see the schedule below.

5



6 7

Witnesses) Mark W. McAdams (Coal) and

8 Mark J. Eacret (Natural Gas)

9

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1 Item 31) Provide the most recent sales projections for the years 2019 2 and 2020 in kWh and dollars.

3

4 Response) Sales projections for the years 2019 and 2020 are provided in the

5 table below.

6

Year	Member Cooperative Energy (kWh)	Member Cooperative Sales (\$)	Off-System Sales (kWh)	Off-System Sales (\$)
2019	3,415,841	262,755,033		
2020	3,462,960	260,536,811		

7 8

Witness) Mark J. Eacret

9 10

> Case No. 2019-00007 Response to PSC 1-31 Witness: Mark J. Eacret

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1 Item 32) Provide the planned maintenance schedule for each of the 2 generating units for the years 2019 and 2020.

3

4 **Response**) Please see the redacted schedules below for the planned maintenance

5 schedule for Big Rivers' generating units for the years 2019 and 2020. The

unredacted schedule is being provided with a Petition for Confidential Treatment.

7

6

2019 Outage Schedule				
Start	End	Hours	Days	Unit/Outage
	Total			

8

2020 Outage Schedule				
Start	End	Hours	Days	Unit/Outage
	Total			

9

11 Witness) Ronald D. Gregory

ELECTRONIC EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2016 THROUGH OCTOBER 31, 2018 CASE NO. 2019-00007

Response to Commission Staff's Request for Information dated February 11, 2019

February 25, 2019

1	Item 33) Identify any issues that could affect fuel costs for the two-year
2	period that remain unresolved or unsettled. Include in the response any
3	issues related to billings from a regional transmission operator. Consider
4	this a continuing request to inform the Commission if Big Rivers becomes
5	aware of any issues during the course of this proceeding.
6	
7	Response) There are no unresolved or unsettled issues for the two-year period
8	that could affect fuel costs, including issues related to billing from the
9	Midcontinent Independent System Operator, Inc. ("MISO").
10	
11	
12	Witnesses) Mark W. McAdams (Coal) and
13	Mark J. Eacret (Natural Gas)
14	