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February 15, 2017

Skill. Integrity. Efficiency.

VIA FEDERAL EXPRESS

Dr. Talina R. Mathews
Executive Director
Public Service Commission
211 Sower Boulevard, P.O. Box 615
Frankfort, Kentucky 40602-0615

Re: *In the Matter of: Application of Big Rivers
Electric Corporation for a Declaratory Order*
Case No. 2016-00278

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COMMISSION

Dear Dr. Mathews:

Enclosed for filing on behalf of Big Rivers Electric Corporation are an original and ten copies of Big Rivers Electric Corporation's responses to the post-hearing information requests.

Please note that Attachment 2 to Big Rivers' response to Item 1 of the post-hearing information requests contains information Big Rivers previously filed under a petition for confidential treatment. More specifically, the confidential information contained in Attachment 2 is the same as information contained in Big Rivers' Hearing Exhibit 3, which Big Rivers filed with the Commission on February 3, 2017, under a petition for confidential treatment, along with totals of the confidential information. That petition is pending. Pursuant to 807 KAR 5:001 Section 9, enclosed are one (1) copy of Attachment 2 with the confidential information highlighted, and ten (10) copies of Attachment 2 with the confidential information redacted

I certify that on this date, a copy of this letter and a copy of all the enclosures were served on all persons listed on the attached service list by first-class mail and electronic mail. Please feel free to contact me if you have any questions.

Sincerely yours,

James M. Miller
Counsel for Big Rivers Electric Corporation

JMM/abg

Enclosures

cc: Service List

Service List
PSC Case No. 2016-00278

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Frankfort, Kentucky 40601

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Attorney for City of Henderson

BIG RIVERS ELECTRIC CORPORATION

**APPLICATION OF BIG RIVERS ELECTRIC CORPORATION
FOR A DECLARATORY ORDER
CASE NO. 2016-00278**

**Response to Commission Staff's Information Request
from the
Hearing of February 7, 2017**

February 16, 2017

1 **Post-Hearing Item 1)** *Provide by month for the period June 2016 to date, the effect Big*
2 *Rivers not taking the uneconomic Excess Henderson Energy had on both Big Rivers' Fuel*
3 *Adjustment Clause and Big Rivers' financial statements as compared to if Big Rivers had*
4 *taken the uneconomic Excess Henderson Energy.*

5
6 **Response)** Please see the attachments that accompany this response. Attachment 1 reflects the
7 effect Big Rivers not taking the uneconomic Excess Henderson Energy (EHE) had on Big
8 Rivers' Fuel Adjustment Clause as compared to Big Rivers taking the uneconomic EHE. The
9 effect on Big Rivers' financial statements would be an increase in Big Rivers' share of Station
10 Two variable costs, an increase in Big Rivers' Off-System sales revenues, but an overall decrease
11 in Big Rivers' net margins, all of which impact the calculation of Big Rivers' tariff riders. The
12 overall financial impact to Big Rivers and its Members of taking unwanted EHE is shown in
13 Attachment 2.

14

15

16 **Witnesses)** Lindsay N. Barron (Attachment 1)

17 Mark J. Eacret (Attachment 2)

Big Rivers Electric Corporation
Case No. 2016-00278
FAC Impact if Big Rivers took Henderson's Uneconomic Excess Energy

	<u>Jun-16</u>	<u>Jul-16</u>
Additional FAC Costs if Big Rivers took HMP&L's Uneconomic Excess Energy (before Allocation to Off-System Sales):		
HMP&L's Uneconomic Excess Energy Volumes (MWh)	18,140.000	23,989.000
Mult. By: Station Two's Average Monthly Fuel Cost (\$/MWh)	\$ 28.129	\$ 27.409
Additional Fuel Cost for HMP&L's Uneconomic Excess Energy (if taken by Big Rivers)	\$ 510,266	\$ 657,516
HMP&L's Uneconomic Excess Energy Volumes (MWh)	18,140.000	23,989.000
Mult. By: Contract Price per MWh for HMP&L's Excess Energy Taken (\$/MWh) ⁽¹⁾	\$ 1.50	\$ 1.50
Additional Contract Cost for HMP&L's Uneconomic Excess Energy (if taken by Big Rivers)⁽¹⁾	\$ 27,210	\$ 35,984
(A) Total Additional FAC Cost if Big Rivers took HMP&L's Uneconomic Excess Energy (before Allocations to Off-System Sales) (A)	\$ 537,476	\$ 693,499
Allocation of Additional FAC Costs to Off-System Sales:		
Big Rivers' Off-System Sales of Generation - As Filed (MWh)	258,284.906	361,158.038
Mult. By: Change in System Average Fuel Cost (\$/MWh) ⁽²⁾	\$ 0.133	\$ 0.061
Additional Fuel Cost Allocated to Original OSS	\$ 34,352	\$ 22,031
Additional Off-System Sales from Generation due to if HMP&L's Uneconomic Excess Energy was taken by Big Rivers (MWh)	18,140.000	23,989.000
Mult. By: Total System Average Fuel Cost - Proforma (\$/MWh)	\$ 24.622	\$ 25.889
Additional Fuel Cost Allocated to Off-System Sales of HMP&L's Uneconomic Excess Energy	\$ 446,643	\$ 621,051
(B) Total Cost of HMP&L's Uneconomic Excess Energy Allocated to Off-System Sales (if taken by Big Rivers) (B)	\$ 480,995	\$ 643,082
Additional Cost Allocated to Big Rivers' Members through the FAC (if HMP&L's Uneconomic Excess Energy was Taken) [(A) - (B)]	\$ 56,481	\$ 50,417

Big Rivers Electric Corporation
Case No. 2016-00278
FAC Impact if Big Rivers took Henderson's Uneconomic Excess Energy

	<u>Aug-16</u>	<u>Sep-16</u>
Additional FAC Costs if Big Rivers took HMP&L's Uneconomic Excess Energy (before Allocation to Off-System Sales):		
HMP&L's Uneconomic Excess Energy Volumes (MWh)	21,285.000	26,510.000
Mult. By: Station Two's Average Monthly Fuel Cost (\$/MWh)	\$ 28.207	\$ 26.406
Additional Fuel Cost for HMP&L's Uneconomic Excess Energy (if taken by Big Rivers)	\$ 600,378	\$ 700,029
HMP&L's Uneconomic Excess Energy Volumes (MWh)	21,285.000	26,510.000
Mult. By: Contract Price per MWh for HMP&L's Excess Energy Taken (\$/MWh) ⁽¹⁾	\$ 1.50	\$ 1.50
Additional Contract Cost for HMP&L's Uneconomic Excess Energy (if taken by Big Rivers)⁽¹⁾	\$ 31,928	\$ 39,765
(A) Total Additional FAC Cost if Big Rivers took HMP&L's Uneconomic Excess Energy (before Allocations to Off-System Sales)	\$ 632,305	\$ 739,794
Allocation of Additional FAC Costs to Off-System Sales:		
Big Rivers' Off-System Sales of Generation - As Filed (MWh)	351,938.347	315,274.068
Mult. By: Change in System Average Fuel Cost (\$/MWh) ⁽²⁾	\$ 0.112	\$ 0.120
Additional Fuel Cost Allocated to Original OSS	\$ 39,417	\$ 37,833
Additional Off-System Sales from Generation due to if HMP&L's Uneconomic Excess Energy was taken by Big Rivers (MWh)	21,285.000	26,510.000
Mult. By: Total System Average Fuel Cost - Proforma (\$/MWh)	\$ 25.098	\$ 24.035
Additional Fuel Cost Allocated to Off-System Sales of HMP&L's Uneconomic Excess Energy	\$ 534,211	\$ 637,168
(B) Total Cost of HMP&L's Uneconomic Excess Energy Allocated to Off-System Sales (if taken by Big Rivers)	\$ 573,628	\$ 675,001
Additional Cost Allocated to Big Rivers' Members through the FAC (if HMP&L's Uneconomic Excess Energy was Taken)	\$ 58,677	\$ 64,794

Big Rivers Electric Corporation
Case No. 2016-00278
FAC Impact if Big Rivers took Henderson's Uneconomic Excess Energy

	<u>Oct-16</u>	<u>Nov-16</u>
Additional FAC Costs if Big Rivers took HMP&L's Uneconomic Excess Energy (before Allocation to Off-System Sales):		
HMP&L's Uneconomic Excess Energy Volumes (MWh)	28,862.000	36,343.000
Mult. By: Station Two's Average Monthly Fuel Cost (\$/MWh)	\$ 27.196	\$ 26.594
Additional Fuel Cost for HMP&L's Uneconomic Excess Energy (if taken by Big Rivers)	\$ 784,925	\$ 966,518
HMP&L's Uneconomic Excess Energy Volumes (MWh)	28,862.000	36,343.000
Mult. By: Contract Price per MWh for HMP&L's Excess Energy Taken (\$/MWh) ⁽¹⁾	\$ 1.50	\$ 1.50
Additional Contract Cost for HMP&L's Uneconomic Excess Energy (if taken by Big Rivers)⁽¹⁾	\$ 43,293	\$ 54,515
(A) Total Additional FAC Cost if Big Rivers took HMP&L's Uneconomic Excess Energy (before Allocations to Off-System Sales)	\$ 828,218	\$ 1,021,032
Allocation of Additional FAC Costs to Off-System Sales:		
Big Rivers' Off-System Sales of Generation - As Filed (MWh)	324,692.256	352,903.028
Mult. By: Change in System Average Fuel Cost (\$/MWh) ⁽²⁾	\$ 0.117	\$ 0.199
Additional Fuel Cost Allocated to Original OSS	\$ 37,989	\$ 70,228
Additional Off-System Sales from Generation due to if HMP&L's Uneconomic Excess Energy was taken by Big Rivers (MWh)	28,862.000	36,343.000
Mult. By: Total System Average Fuel Cost - Proforma (\$/MWh)	\$ 25.208	\$ 23.773
Additional Fuel Cost Allocated to Off-System Sales of HMP&L's Uneconomic Excess Energy	\$ 727,553	\$ 863,982
(B) Total Cost of HMP&L's Uneconomic Excess Energy Allocated to Off-System Sales (if taken by Big Rivers)	\$ 765,542	\$ 934,210
Additional Cost Allocated to Big Rivers' Members through the FAC (if HMP&L's Uneconomic Excess Energy was Taken)	\$ 62,676	\$ 86,823

Big Rivers Electric Corporation
Case No. 2016-00278
FAC Impact if Big Rivers took Henderson's Uneconomic Excess Energy

	<u>Dec-16</u>	<u>Total</u>
Additional FAC Costs if Big Rivers took HMP&L's Uneconomic Excess Energy (before Allocation to Off-System Sales):		
HMP&L's Uneconomic Excess Energy Volumes (MWh)	28,599.000	183,728.000
Mult. By: Station Two's Average Monthly Fuel Cost (\$/MWh)	\$ 27.534	
Additional Fuel Cost for HMP&L's Uneconomic Excess Energy (if taken by Big Rivers)	\$ 787,434	\$ 5,007,065
HMP&L's Uneconomic Excess Energy Volumes (MWh)	28,599.000	183,728.000
Mult. By: Contract Price per MWh for HMP&L's Excess Energy Taken (\$/MWh) ⁽¹⁾	\$ 1.50	\$ 1.50
Additional Contract Cost for HMP&L's Uneconomic Excess Energy (if taken by Big Rivers)⁽¹⁾	\$ 42,899	\$ 275,592
(A) Total Additional FAC Cost if Big Rivers took HMP&L's Uneconomic Excess Energy (before Allocations to Off-System Sales)	\$ 830,332	\$ 5,282,657
Allocation of Additional FAC Costs to Off-System Sales:		
Big Rivers' Off-System Sales of Generation - As Filed (MWh)	445,677.218	
Mult. By: Change in System Average Fuel Cost (\$/MWh) ⁽²⁾	\$ 0.113	
Additional Fuel Cost Allocated to Original OSS	\$ 50,362	\$ 292,211
Additional Off-System Sales from Generation due to if HMP&L's Uneconomic Excess Energy was taken by Big Rivers (MWh)	28,599.000	
Mult. By: Total System Average Fuel Cost - Proforma (\$/MWh)	\$ 24.937	
Additional Fuel Cost Allocated to Off-System Sales of HMP&L's Uneconomic Excess Energy	\$ 713,173	\$ 4,543,782
(B) Total Cost of HMP&L's Uneconomic Excess Energy Allocated to Off-System Sales (if taken by Big Rivers)	\$ 763,535	\$ 4,835,993
Additional Cost Allocated to Big Rivers' Members through the FAC (if HMP&L's Uneconomic Excess Energy was Taken)	[(A) - (B)]	\$ 446,664

Big Rivers Electric Corporation
Case No. 2016-00278
FAC Impact if Big Rivers took Henderson's Uneconomic Excess Energy

Footnotes and Supporting Calculations:

(1)

Rate of \$1.50 per MWh to be paid by Big Rivers to City of Henderson for the amount of Excess Henderson Energy, if any, taken by Big Rivers during the previous month, per Sec. 3.8(c) of the Power Sales Contract, as amended by the 1998 Amendments.

(2) Calculation of change in Big Rivers' monthly System Average Fuel Cost:

System Avg. Fuel Cost (Proforma - Including Add'l Station Two Generation and Fuel Costs for HMP&L's Uneconomic Excess Energy) (\$/MWh)

Big Rivers' System Avg. Fuel Cost (As Filed) (\$/MWh)

Change in Big Rivers' System Avg. Fuel Cost if HMP&L's Uneconomic Excess Energy was Taken (\$/MWh)

	<u>Jun-16</u>	<u>Jul-16</u>	<u>Aug-16</u>	<u>Sep-16</u>	<u>Oct-16</u>	<u>Nov-16</u>	<u>Dec-16</u>
	\$ 24.622	\$ 25.889	\$ 25.098	\$ 24.035	\$ 25.208	\$ 23.773	\$ 24.937
	\$ 24.489	\$ 25.828	\$ 24.986	\$ 23.915	\$ 25.091	\$ 23.574	\$ 24.825
	\$ 0.133	\$ 0.061	\$ 0.112	\$ 0.120	\$ 0.117	\$ 0.199	\$ 0.112

Big Rivers Corporation
Excess Henderson Energy "EHE" Calculation Financial Impact to Big Rivers and its Members if All Henderson Excess Energy is Taken
June - December 2016

Line

No. EHE Calculation (Reservation - Load):

Line No.	EHE Calculation (Reservation - Load):	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Total
1	Station II Net Generation MWhrs								
2	EHE MWhrs Sold to BREC	20,393	29,619	26,784	30,385	32,401	37,837	35,342	212,761
3									
4	DA/RT NET Revenue - EHE	\$ 505,908	\$ 829,527	\$ 737,732	\$ 806,520	\$ 860,412	\$ 930,411	\$ 1,035,821	\$ 5,706,331
5	Fee Paid to HMPL	\$ (30,590)	\$ (44,429)	\$ (40,176)	\$ (45,578)	\$ (48,602)	\$ (56,756)	\$ (53,013)	\$ (319,142)
6	Est. Avg Variable Cost - EHE	[REDACTED]							
7	Net Gain/(Loss) to BREC and Members	[REDACTED]							

BIG RIVERS ELECTRIC CORPORATION

**APPLICATION OF BIG RIVERS ELECTRIC CORPORATION
FOR A DECLARATORY ORDER
CASE NO. 2016-00278**

**Response to Commission Staff's Information Request
from the
Hearing of February 7, 2017**

February 16, 2017

1 **Post-Hearing Item 2) Refer to Big Rivers Hearing Exhibit 2. Explain why the sum of the**
2 **Grand Totals for the columns labeled "Gain/(Loss) Station Two Generation for HMPL**
3 **Load;" "Gain/(Loss) Station Two Generation for Henderson Excess Energy (Resv-Load);"**
4 **and "Gain/(Loss) Station Two Generation- BREC Share" does not equal the Grand Total for**
5 **the column labeled "Gain/(Loss) on Total Station Two Generation."**

6
7 **Response)** In the lower section of Exhibit 2 labeled "Market Lower than Variable Cost ->
8 Should Purchase at Market instead of Generating", the spreadsheet did not properly present
9 Henderson's load supplied at market in hours when neither Station Two unit was running. This
10 overstated the Grand Total Loss in the column labeled "Gain/(Loss) Station Two Generation for
11 HMPL Load" by \$512,261.71. The spreadsheet has been corrected to present the proper loss
12 calculation in that column and another column has been added to note the number of MWh
13 supplied at market when Station Two generation was not available. Note that those MWh are
14 presented for information only, are not part of Total Station Two Generation, and thus are
15 excluded from that total. Please see the revised spreadsheet attached to this response.

16
17
18 **Witness)** Mark J. Eacret

A	B	C	D	E	F	G	H	I	J	K
1	Big Rivers Corporation									
2	Station II Actual Generation vs Generating Economically									
3	2016 - Revised									
4										
5		Total Station Two Generation	Gain/(Loss) on Total Station Two Generation	HMPL Load Net of SEPA Purchased at Market mWhs³	Station Two Generation for HMPL Load net of SEPA mWhs	Gain/(Loss) Station Two Generation for HMPL Load¹	Station Two Generation for Henderson Excess (Resv - Load) mWhs	Gain/(Loss) Station Two Generation for Henderson Excess Energy (Resv-Load)	Station Two Generation - BREC Share	Gain/(Loss) Station Two Generation - BREC Share
6	Market Higher than Variable Cost² -> Generate Economically:									
7		245,148	\$620,925.51	-	71,140	\$188,667.21	36,500	(\$16,633.28)	137,508	\$448,891.58
8	January	-	\$0.00	-	-	\$0.00	-	\$0.00	-	\$0.00
9	February	-	\$0.00	-	-	\$0.00	-	\$0.00	-	\$0.00
10	March	-	\$0.00	-	-	\$0.00	-	\$0.00	-	\$0.00
11	April	-	\$0.00	-	-	\$0.00	-	\$0.00	-	\$0.00
12	May	-	\$0.00	-	-	\$0.00	-	\$0.00	-	\$0.00
13	June	-	\$0.00	-	-	\$0.00	-	\$0.00	-	\$0.00
14	July	62,548	\$68,233.97	-	18,474	\$19,171.53	9,126	(\$18,953.73)	34,948	\$68,016.17
15	August	19,268	\$111,735.16	-	5,881	\$31,859.05	2,399	\$4,156.35	10,988	\$75,719.77
16	September	82,851	\$306,159.31	-	23,811	\$100,535.67	12,069	(\$952.41)	46,971	\$206,576.05
17	October	16,277	(\$27,323.05)	-	4,908	(\$8,420.90)	3,372	(\$10,863.32)	7,997	(\$8,038.83)
18	November	-	\$0.00	-	-	\$0.00	-	\$0.00	-	\$0.00
19	December	64,204	\$162,120.11	-	18,066	\$45,521.86	9,534	\$9,979.83	36,604	\$106,618.42
20										
21	Market Lower than Variable Cost -> Should Purchase at Market instead of Generating:									
22		1,566,121	(\$12,901,324.70)	13,924	524,514	(\$4,543,267.77)	344,974	(\$3,417,354.33)	696,633	(\$4,940,702.60)
23	January	133,250	(\$1,493,223.92)	-	52,202	(\$597,758.00)	31,133	(\$372,371.70)	49,915	(\$523,094.21)
24	February	158,774	(\$1,896,578.10)	-	47,816	(\$562,264.73)	32,224	(\$397,590.44)	78,734	(\$936,722.94)
25	March	171,105	(\$2,095,013.23)	-	48,452	(\$588,476.58)	36,993	(\$465,004.60)	85,660	(\$1,041,532.05)
26	April	165,305	(\$1,452,833.16)	-	46,534	(\$408,551.16)	36,252	(\$341,208.89)	82,519	(\$703,073.11)
27	May	83,537	(\$1,560,878.77)	5,345	42,943	(\$790,962.96)	32,111	(\$618,649.69)	8,483	(\$151,266.12)
28	June	89,766	(\$1,164,510.54)	7,569	48,498	(\$626,246.41)	20,393	(\$313,507.38)	20,875	(\$224,756.75)
29	July	117,739	(\$314,107.82)	24	37,028	(\$102,769.67)	20,493	(\$121,012.57)	60,218	(\$90,325.58)
30	August	138,633	(\$490,531.31)	484	52,070	(\$183,281.47)	24,385	(\$159,078.06)	62,178	(\$148,171.79)
31	September	95,306	(\$247,125.45)	-	28,604	(\$67,697.36)	18,316	(\$75,046.46)	48,386	(\$104,381.63)
32	October	110,204	(\$480,521.20)	502	43,137	(\$182,836.91)	29,029	(\$138,462.73)	38,038	(\$159,221.56)
33	November	173,619	(\$1,286,678.16)	-	45,078	(\$334,172.67)	37,837	(\$300,233.23)	90,704	(\$652,272.27)
34	December	128,883	(\$419,323.04)	-	32,152	(\$98,249.86)	25,808	(\$115,188.59)	70,923	(\$205,884.59)
35	Grand Total	1,811,269	(\$12,280,399.19)	13,924	595,654	(\$4,354,600.56)	381,474	(\$3,433,987.61)	834,141	(\$4,491,811.02)
36										
37	Please Note:									
38	¹ Load mWhrs are priced at Big Rivers variable cost since HMPL actual variable cost is unknown									
39	² Decision to Generate or Buy from Market looks at the next day average DA LMP at BREC.HMP1 and compares against average Station II variable cost									
40	³ mWhrs consumed by HMPL and purchased at market at times when Station Two generation was unavailable									