

**ORIGINAL**



Your Touchstone Energy® Cooperative 

**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**In the Matter of:**

**AN ELECTRONIC EXAMINATION BY THE )  
PUBLIC SERVICE COMMISSION OF THE )  
ENVIRONMENTAL SURCHARGE MECHANISM )  
OF BIG RIVERS ELECTRIC CORPORATION )  
FOR THE SIX- MONTH BILLING PERIOD )  
ENDING JANUARY 31, 2019, )  
AND THE PASSTHROUGH MECHANISM OF )  
ITS THREE MEMBER DISTRIBUTION )  
COOPERATIVES )**

**Case No.  
2019-00172**

**Responses to Commission Staff's  
First Request for Information  
dated June 7, 2019**

**FILED: July 12, 2019**

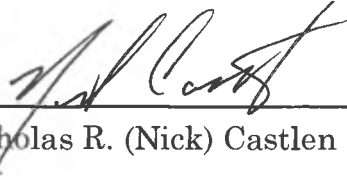
**ORIGINAL**

**BIG RIVERS ELECTRIC CORPORATION**

**AN ELECTRONIC EXAMINATION BY THE PUBLIC SERVICE  
COMMISSION OF THE ENVIRONMENTAL SURCHARGE MECHANISM  
OF BIG RIVERS ELECTRIC CORPORATION  
FOR THE SIX-MONTH BILLING PERIOD ENDING JANUARY 31, 2019,  
AND THE PASS THROUGH MECHANISM  
OF ITS THREE MEMBER DISTRIBUTION COOPERATIVES  
CASE NO. 2019-00172**

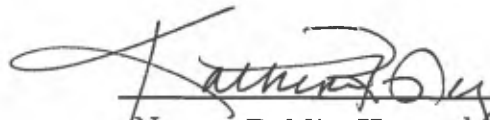
**VERIFICATION**

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 11<sup>th</sup> day of July, 2019.

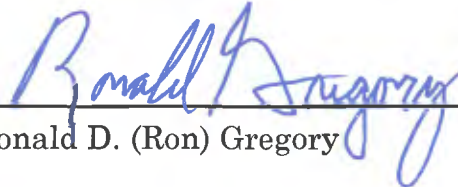
  
\_\_\_\_\_  
Notary Public, Kentucky State at Large  
My Commission Expires October 31, 2020

**BIG RIVERS ELECTRIC CORPORATION**

**AN ELECTRONIC EXAMINATION BY THE PUBLIC SERVICE  
COMMISSION OF THE ENVIRONMENTAL SURCHARGE MECHANISM  
OF BIG RIVERS ELECTRIC CORPORATION  
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CASE NO. 2019-00172**

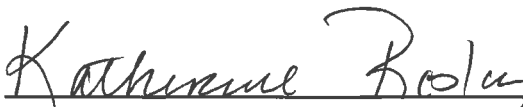
**VERIFICATION**

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

  
\_\_\_\_\_  
Ronald D. (Ron) Gregory

COMMONWEALTH OF KENTUCKY )  
COUNTY OF HENDERSON )

SUBSCRIBED AND SWORN TO before me by Ronald D. (Ron) Gregory on this  
the 11<sup>th</sup> day of July, 2019.

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

**BIG RIVERS ELECTRIC CORPORATION**

**AN ELECTRONIC EXAMINATION BY THE PUBLIC SERVICE  
COMMISSION OF THE ENVIRONMENTAL SURCHARGE MECHANISM  
OF BIG RIVERS ELECTRIC CORPORATION FOR THE SIX- MONTH  
BILLING PERIOD ENDING JANUARY 31, 2019, AND  
THE PASSTHROUGH MECHANISM OF ITS THREE MEMBER  
DISTRIBUTION COOPERATIVES  
CASE NO. 2019-00172**

**Response to Commission Staff's  
First Request for Information  
dated June 7, 2019**

**July 12, 2019**

1 **Item 1)** *Prepare a summary schedule showing the calculation of E(m)*  
2 *and the surcharge factor for the expense months covered by the billing*  
3 *period under review. Form 1.1 can be used as a model for this summary.*  
4 *Include the two expense months subsequent to the billing period in order to*  
5 *show the over- and under-recovery adjustments for the months included for*  
6 *the billing period. Include a calculation of any additional over- or under-*  
7 *recovery amount BREC believes needs to be recognized for the billing period*  
8 *under review. Provide the schedule and all supporting calculations and*  
9 *documentation in Excel spreadsheet format with formulas intact and*  
10 *unprotected.*

11

12 **Response)** Please see the attached schedule, in the format of Form 1.10, covering  
13 each of the expense months from June 2018 through January 2019 (*i.e.*, the expense  
14 months covered by the billing period under review plus the two expense months  
15 subsequent to the billing period).

16 The schedule and all supporting calculations and documentation are also  
17 provided in Excel spreadsheet format, with formulas intact and unprotected and all  
18 rows and columns fully accessible, in a separate Excel file as part of the electronic  
19 filing *and* on a CD accompanying these responses in the paper copy provided  
20 pursuant to 807 KAR 5:001 §8(12)(a)2.

**BIG RIVERS ELECTRIC CORPORATION**

**AN ELECTRONIC EXAMINATION BY THE PUBLIC SERVICE  
COMMISSION OF THE ENVIRONMENTAL SURCHARGE MECHANISM  
OF BIG RIVERS ELECTRIC CORPORATION FOR THE SIX- MONTH  
BILLING PERIOD ENDING JANUARY 31, 2019, AND  
THE PASSTHROUGH MECHANISM OF ITS THREE MEMBER  
DISTRIBUTION COOPERATIVES  
CASE NO. 2019-00172**

**Response to Commission Staff's  
First Request for Information  
dated June 7, 2019**

**July 12, 2019**

1           No additional over- or under-recovery is being requested by Big Rivers for  
2 the billing period under review.

3

4

5 **Witness)**   Nicholas R. Castlen

6

**Big Rivers Electric Corporation**

**Case No. 2019-00172**

**Calculation of Total E(m) and Jurisdictional Surcharge Billing Factor**

**For the Expense Months: June 2018 to January 2019**

	Jun-2018	Jul-2018	Aug-2018	Sep-2018
<b>Calculation of Total E(m)</b>				
E(m) = OE - BAS + RORB, where				
OE = Pollution Control Operating Expenses				
BAS = Total Proceeds from By-Product and Allowance Sales				
RORB = [ (RB/12) x (RORORB) ]				
OE	= \$ 2,403,777	\$ 2,613,989	\$ 2,256,184	\$ 2,992,606
BAS	= \$ -	\$ -	\$ -	\$ -
RORB	= \$ 141,156	\$ 139,913	\$ 139,848	\$ 140,007
E(m)	= \$ 2,544,933	\$ 2,753,902	\$ 2,396,032	\$ 3,132,613
<b>Calculation of Jurisdictional Environmental Surcharge Billing Factor</b>				
Jurisdictional Allocation Ratio for the Month	= 65.338420%	74.798009%	65.243081%	66.785895%
Jurisdictional E(m) = E(m) x Jurisdictional Allocation Ratio	= \$ 1,662,819	\$ 2,059,864	\$ 1,563,245	\$ 2,092,144
Adjustment for (Over)/Under Recovery	= \$ 42,297	\$ (126,147)	\$ (211,141)	\$ (155,637)
Prior Period Adjustment (if necessary)	= \$ -	\$ -	\$ -	\$ -
Net Jurisdictional E(m) = Jurisdictional E(m) plus (Over)/Under plus Prior Period Adjustment(s)	= \$ 1,705,116	\$ 1,933,717	\$ 1,352,104	\$ 1,936,507
R(m) = Average Monthly Member System Revenue for the 12 Months Ending with the Current Expense Month	= \$ 19,907,246	\$ 19,892,355	\$ 19,960,314	\$ 20,053,360
Jurisdictional Environmental Surcharge Billing Factor:				
CESF: E(m) / R(m); as a % of Revenue	= <b>8.565303%</b>	<b>9.720905%</b>	<b>6.773962%</b>	<b>9.656771%</b>

**Case No. 2019-00172**

**Attachment for Response to Staff's First Request Item 1**

**Witness: Nicholas R. Castlen**

**Page 1 of 2**

**Big Rivers Electric Corporation**

**Case No. 2019-00172**

**Calculation of Total E(m) and Jurisdictional Surcharge Billing Factor**

**For the Expense Months: June 2018 to January 2019**

	Oct-2018	Nov-2018	Dec-2018	Jan-2019
<b>Calculation of Total E(m)</b>				
E(m) = OE - BAS + RORB, where				
OE = Pollution Control Operating Expenses				
BAS = Total Proceeds from By-Product and Allowance Sales				
RORB = [ (RB/12) x (RORORB) ]				
OE	= \$ 2,374,347	\$ 2,238,403	\$ 2,363,027	\$ 2,489,408
BAS	= \$ -	\$ -	\$ -	\$ -
RORB	= \$ 138,789	\$ 140,006	\$ 138,543	\$ 138,362
E(m)	= \$ 2,513,136	\$ 2,378,409	\$ 2,501,570	\$ 2,627,770
<b>Calculation of Jurisdictional Environmental Surcharge Billing Factor</b>				
Jurisdictional Allocation Ratio for the Month	= 78.166219%	86.366931%	87.373318%	71.549443%
Jurisdictional E(m) = E(m) x Jurisdictional Allocation Ratio	= \$ 1,964,423	\$ 2,054,159	\$ 2,185,705	\$ 1,880,155
Adjustment for (Over)/Under Recovery	= \$ (11,133)	\$ 155,732	\$ 25,177	\$ 44,491
Prior Period Adjustment (if necessary)	= \$ -	\$ -	\$ -	\$ -
Net Jurisdictional E(m) = Jurisdictional E(m) plus (Over)/Under plus Prior Period Adjustment(s)	= \$ 1,953,290	\$ 2,209,891	\$ 2,210,882	\$ 1,924,646
R(m) = Average Monthly Member System Revenue for the 12 Months Ending with the Current Expense Month	= \$ 20,164,423	\$ 20,326,356	\$ 20,186,889	\$ 20,027,502
Jurisdictional Environmental Surcharge Billing Factor: CESF: E(m) / R(m); as a % of Revenue	= <b>9.686813%</b>	<b>10.872047%</b>	<b>10.952069%</b>	<b>9.610015%</b>

**Case No. 2019-00172**

**Attachment for Response to Staff's First Request Item 1**

**Witness: Nicholas R. Castlen**

**BIG RIVERS ELECTRIC CORPORATION**

**AN ELECTRONIC EXAMINATION BY THE PUBLIC SERVICE  
COMMISSION OF THE ENVIRONMENTAL SURCHARGE MECHANISM  
OF BIG RIVERS ELECTRIC CORPORATION FOR THE SIX- MONTH  
BILLING PERIOD ENDING JANUARY 31, 2019, AND  
THE PASSTHROUGH MECHANISM OF ITS THREE MEMBER  
DISTRIBUTION COOPERATIVES  
CASE NO. 2019-00172**

**Response to Commission Staff's  
First Request for Information  
dated June 7, 2019**

**July 12, 2019**

1 **Item 2)** *For each of the Member Cooperatives, prepare a summary*  
2 *schedule showing the Member Cooperative's pass-through revenue*  
3 *requirement for the months corresponding with the billing period under*  
4 *review. Include the two months subsequent to the billing period included*  
5 *in the review period. Include a calculation of any additional over- or*  
6 *under-recovery amount the Member Cooperative believes needs to be*  
7 *recognized for the six-month review. Provide the schedule and all*  
8 *supporting calculations and documentation in Excel spreadsheet format*  
9 *with all cells and formulas intact and unprotected.*

10

11 **Response)** The following five schedules listed below, and attached to this  
12 response, reflect the Member Cooperatives' environmental surcharge pass-through  
13 revenue requirements for the months corresponding to Big Rivers' expense months  
14 of June 2018 through January 2019, applied to Big Rivers' Members' invoices for  
15 the service months of July 2018 through February 2019, which Big Rivers billed to  
16 its Members during the months of August 2018 through March 2019 (*i.e.*, the  
17 months corresponding with the six-month review plus the two subsequent months).

18

- 19 • Attachment 1 – Jackson Purchase Energy Corporation Non-Dedicated  
20 Delivery Point Customers;



**BIG RIVERS ELECTRIC CORPORATION**

**AN ELECTRONIC EXAMINATION BY THE PUBLIC SERVICE  
COMMISSION OF THE ENVIRONMENTAL SURCHARGE MECHANISM  
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BILLING PERIOD ENDING JANUARY 31, 2019, AND  
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DISTRIBUTION COOPERATIVES  
CASE NO. 2019-00172**

**Response to Commission Staff's  
First Request for Information  
dated June 7, 2019**

**July 12, 2019**

- 1       • Attachment 2 – Kenergy Corp. Non-Dedicated Delivery Point Customers;  
2       • Attachment 3 – Meade County Rural Electric Cooperative Corporation Non-  
3       Dedicated Delivery Point Customers;  
4       • Attachment 4 – Jackson Purchase Energy Corporation Dedicated Delivery  
5       Point Customers; and  
6       • Attachment 5 – Kenergy Corp. Dedicated Delivery Point Customers.

7

8       Note: Meade County Rural Electric Cooperative Corporation has no dedicated  
9       delivery point customers.

10       As illustrated in the attached schedules, there is a one-month billing lag for  
11       the Members' non-dedicated delivery point customers and no billing lag for the  
12       Members' dedicated delivery point customers.

13       The information in the attached schedules was obtained from the Members'  
14       monthly Environmental Surcharge Schedules provided by Big Rivers' Members.  
15       Other than the on-going cumulative over-/under-recovery mechanism, no additional  
16       over-/under-recovery amounts are being requested by the Members for the billing  
17       period under review.

**BIG RIVERS ELECTRIC CORPORATION**

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CASE NO. 2019-00172**

**Response to Commission Staff's  
First Request for Information  
dated June 7, 2019**

**July 12, 2019**

1 All schedules, supporting calculations, and documentation are provided in  
2 Excel spreadsheet format, with all cells and formulas intact and unprotected, in a  
3 separate Excel file as part of the electronic filing *and* on a CD accompanying these  
4 responses in the paper copy provided pursuant to 807 KAR 5:001 §8(12)(a)2.

5

6

7 **Witness)** Nicholas R. Castlen

8

**Big Rivers Electric Corporation  
Six-Month Environmental Surcharge Review (Case No. 2019-00172)**

<b>JACKSON PURCHASE ENERGY CORPORATION (JPEC) NON-DEDICATED DELIVERY POINT CUSTOMERS</b>									
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Big Rivers' Expense Month	Big Rivers' ES Factor Based on Expense Month	Big Rivers' Service Month	Month Billed by Big Rivers	Big Rivers' Invoice ES Amount for the Service Month	Month Billed by JPEC	ES Amount Billed to JPEC's Customers (Line 11 per Filing)	JPEC's (Over)/Under Recovery [from (j)]	JPEC's Total Recoverable [(e) + (h)]	JPEC's (Over)/Under Recovery [(i) for 3rd preceding month less (g) for current month]
Jun-18	8.565303%	Jul-18	Aug-18	\$ 439,516.08	Sep-18	\$ 517,934.03	\$ (113,983.42)	\$ 325,532.66	\$ (113,983.42)
Jul-18	9.720905%	Aug-18	Sep-18	\$ 461,234.75	Oct-18	\$ 464,720.77	\$ (115,398.49)	\$ 345,836.26	\$ (115,398.49)
Aug-18	6.773962%	Sep-18	Oct-18	\$ 298,073.62	Nov-18	\$ 472,321.28	\$ (7,459.89)	\$ 290,613.73	\$ (7,459.89)
Sep-18	9.656771%	Oct-18	Nov-18	\$ 369,178.30	Dec-18	\$ 283,651.00	\$ 41,881.66	\$ 411,059.96	\$ 41,881.66
Oct-18	9.686813%	Nov-18	Dec-18	\$ 391,919.34	Jan-19	\$ 302,808.98	\$ 43,027.28	\$ 434,946.62	\$ 43,027.28
Nov-18	10.872047%	Dec-18	Jan-19	\$ 449,389.71	Feb-19	\$ 233,972.52	\$ 56,641.21	\$ 506,030.92	\$ 56,641.21
Dec-18	10.952069%	Jan-19	Feb-19	\$ 503,242.71	Mar-19	\$ 490,283.27	\$ (79,223.31)	\$ 424,019.40	\$ (79,223.31)
Jan-19	9.610015%	Feb-19	Mar-19	\$ 364,772.34	Apr-19	\$ 481,713.31	\$ (46,766.69)	\$ 318,005.65	\$ (46,766.69)

Case No. 2019-00172

Attachment (1 of 5) for Response to Staff's First Request Item 2

Witness: Nicholas R. Castlen

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**Big Rivers Electric Corporation**  
**Six-Month Environmental Surcharge Review (Case No. 2019-00172)**

<b>KENERGY CORP.</b>									
<b>NON-DEDICATED DELIVERY POINT CUSTOMERS</b>									
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Big Rivers' Expense Month	Big Rivers' ES Factor Based on Expense Month	Big Rivers' Service Month	Month Billed by Big Rivers	Big Rivers' Invoice ES Amount for the Service Month	Month Billed by Kenergy	ES Amount Billed to Kenergy's Customers (Line 11 per Filing)	Kenergy's (Over)/Under Recovery [from (j)]	Kenergy's Total Recoverable [(e) + (h)]	Kenergy's (Over)/Under Recovery [(i) for 2nd preceding month less (g) for current month]
Jun-18	8.565303%	Jul-18	Aug-18	\$ 782,975.05	Sep-18	\$ 885,372.83	\$ (154,272.24)	\$ 628,702.81	\$ (154,272.24)
Jul-18	9.720905%	Aug-18	Sep-18	\$ 842,986.56	Oct-18	\$ 675,162.26	\$ (14,637.04)	\$ 828,349.52	\$ (14,637.04)
Aug-18	6.773962%	Sep-18	Oct-18	\$ 548,916.38	Nov-18	\$ 580,469.73	\$ 48,233.08	\$ 597,149.46	\$ 48,233.08
Sep-18	9.656771%	Oct-18	Nov-18	\$ 683,100.54	Dec-18	\$ 706,162.94	\$ 122,186.58	\$ 805,287.12	\$ 122,186.58
Oct-18	9.686813%	Nov-18	Dec-18	\$ 735,905.13	Jan-19	\$ 518,164.94	\$ 78,984.52	\$ 814,889.65	\$ 78,984.52
Nov-18	10.872047%	Dec-18	Jan-19	\$ 820,582.40	Feb-19	\$ 903,187.14	\$ (97,900.02)	\$ 722,682.38	\$ (97,900.02)
Dec-18	10.952069%	Jan-19	Feb-19	\$ 968,268.47	Mar-19	\$ 869,036.58	\$ (54,146.93)	\$ 914,121.54	\$ (54,146.93)
Jan-19	9.610015%	Feb-19	Mar-19	\$ 679,514.76	Apr-19	\$ 791,326.51	\$ (68,644.13)	\$ 610,870.63	\$ (68,644.13)

Case No. 2019-00172

Attachment (2 of 5) for Response to Staff's First Request Item 2

Witness: Nicholas R. Castlen

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**Big Rivers Electric Corporation**  
**Six-Month Environmental Surcharge Review (Case No. 2019-00172)**

**MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION (MCRECC)**  
**NON-DEDICATED DELIVERY POINT CUSTOMERS**

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Big Rivers' Expense Month	Big Rivers' ES Factor Based on Expense Month	Big Rivers' Service Month	Month Billed by Big Rivers	Big Rivers' Invoice ES Amount for the Service Month	Month Billed by MCRECC	ES Amount Billed to MCRECC's Customers (Line 11 per Filing)	MCRECC's (Over)/Under Recovery [from (j)]	MCRECC's Total Recoverable [(e) + (h)]	MCRECC's (Over)/Under Recovery [(i) for 1st preceding month less (g) for current month]
Jun-18	8.565303%	Jul-18	Aug-18	\$ 290,813.63	Sep-18	\$ 284,208.88	\$ (27,178.20)	\$ 263,635.43	\$ (27,178.20)
Jul-18	9.720905%	Aug-18	Sep-18	\$ 308,373.32	Oct-18	\$ 248,511.93	\$ 15,123.50	\$ 323,496.82	\$ 15,123.50
Aug-18	6.773962%	Sep-18	Oct-18	\$ 197,820.24	Nov-18	\$ 292,894.53	\$ 30,602.29	\$ 228,422.53	\$ 30,602.29
Sep-18	9.656771%	Oct-18	Nov-18	\$ 261,011.33	Dec-18	\$ 212,002.41	\$ 16,420.12	\$ 277,431.45	\$ 16,420.12
Oct-18	9.686813%	Nov-18	Dec-18	\$ 332,959.28	Jan-19	\$ 330,074.16	\$ (52,642.71)	\$ 280,316.57	\$ (52,642.71)
Nov-18	10.872047%	Dec-18	Jan-19	\$ 383,033.48	Feb-19	\$ 300,886.29	\$ (20,569.72)	\$ 362,463.76	\$ (20,569.72)
Dec-18	10.952069%	Jan-19	Feb-19	\$ 465,385.34	Mar-19	\$ 391,512.40	\$ (29,048.64)	\$ 436,336.70	\$ (29,048.64)
Jan-19	9.610015%	Feb-19	Mar-19	\$ 303,544.93	Apr-19	\$ 382,070.50	\$ 54,266.20	\$ 357,811.13	\$ 54,266.20

Case No. 2019-00172

Attachment (3 of 5) for Response to Staff's First Request Item 2

Witness: Nicholas R. Castlen

Page 1 of 1

**Big Rivers Electric Corporation  
Six-Month Environmental Surcharge Review (Case No. 2019-00172)**

<b>JACKSON PURCHASE ENERGY CORPORATION (JPEC) DEDICATED DELIVERY POINT CUSTOMERS</b>							
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Big Rivers' Expense Month	Big Rivers' ES Factor Based on Expense Month	Big Rivers' Service Month	Month Billed by Big Rivers	Big Rivers' Invoice ES Amount for the Service Month	Month Billed by JPEC	ES Amount Billed to JPEC's Customers	JPEC's Monthly (Over)/Under Recovery [column (e) less column (g)]
Jun-18	8.565303%	Jul-18	Aug-18	\$ 1,743.35	Aug-18	\$ 1,743.35	\$ -
Jul-18	9.720905%	Aug-18	Sep-18	\$ 1,923.48	Sep-18	\$ 1,923.48	\$ -
Aug-18	6.773962%	Sep-18	Oct-18	\$ 100.13	Oct-18	\$ 100.13	\$ -
Sep-18	9.656771%	Oct-18	Nov-18	\$ 134.45	Nov-18	\$ 134.45	\$ -
Oct-18	9.686813%	Nov-18	Dec-18	\$ 145.50	Dec-18	\$ 145.50	\$ -
Nov-18	10.872047%	Dec-18	Jan-19	\$ 168.64	Jan-19	\$ 168.64	\$ -
Dec-18	10.952069%	Jan-19	Feb-19	\$ 182.24	Feb-19	\$ 182.24	\$ -
Jan-19	9.610015%	Feb-19	Mar-19	\$ 141.83	Mar-19	\$ 141.83	\$ -

**Big Rivers Electric Corporation  
Six-Month Environmental Surcharge Review (Case No. 2019-00172)**

<b>KENERGY CORP.</b>							
<b>DEDICATED DELIVERY POINT CUSTOMERS</b>							
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Big Rivers' Expense Month	Big Rivers' ES Factor Based on Expense Month	Big Rivers' Service Month	Month Billed by Big Rivers	Big Rivers' Invoice ES Amount for the Service Month	Month Billed by Kenergy	ES Amount Billed to Kenergy's Customers	Kenergy's Monthly (Over)/Under Recovery [column (e) less column (g)]
Jun-18	8.565303%	Jul-18	Aug-18	\$ 401,209.06	Aug-18	\$ 401,209.06	\$ -
Jul-18	9.720905%	Aug-18	Sep-18	\$ 474,835.84	Sep-18	\$ 474,835.84	\$ -
Aug-18	6.773962%	Sep-18	Oct-18	\$ 318,326.47	Oct-18	\$ 318,326.47	\$ -
Sep-18	9.656771%	Oct-18	Nov-18	\$ 467,350.19	Nov-18	\$ 467,350.19	\$ -
Oct-18	9.686813%	Nov-18	Dec-18	\$ 467,183.92	Dec-18	\$ 467,183.92	\$ -
Nov-18	10.872047%	Dec-18	Jan-19	\$ 512,226.13	Jan-19	\$ 512,226.13	\$ -
Dec-18	10.952069%	Jan-19	Feb-19	\$ 534,863.19	Feb-19	\$ 534,863.19	\$ -
Jan-19	9.610015%	Feb-19	Mar-19	\$ 439,392.00	Mar-19	\$ 439,392.00	\$ -

Case No. 2019-00172

Attachment (5 of 5) for Response to Staff's First Request Item 2

Witness: Nicholas R. Castlen

Page 1 of 1

BIG RIVERS ELECTRIC CORPORATION

AN ELECTRONIC EXAMINATION BY THE PUBLIC SERVICE  
COMMISSION OF THE ENVIRONMENTAL SURCHARGE MECHANISM  
OF BIG RIVERS ELECTRIC CORPORATION FOR THE SIX- MONTH  
BILLING PERIOD ENDING JANUARY 31, 2019, AND  
THE PASSTHROUGH MECHANISM OF ITS THREE MEMBER  
DISTRIBUTION COOPERATIVES  
CASE NO. 2019-00172

Response to Commission Staff's  
First Request for Information  
dated June 7, 2019

July 12, 2019

1 Item 3) *This question is addressed to BREC. Refer to Form 2.5,*  
2 *Operating and Maintenance Expenses, for each of the expense months*  
3 *covered by the applicable billing period. For each of the expense account*  
4 *numbers listed on this schedule, explain the reason(s) for any change in the*  
5 *expense levels from month to month if that change is greater than plus or*  
6 *minus 10 percent.*

7

8 **Response)** Please see the attached schedule for the monthly Operating and  
9 Maintenance ("O&M") expenses from Form 2.50 and the requested variance  
10 explanations for the six-month review period.

11

12

13 **Witnesses)** Nicholas R. Castlen (*Schedule of O&M Expenses*) and  
14 Ronald D. Gregory (*Reason(s) for Changes in Expense Levels*)

15



**Big Rivers Electric Corporation**  
**Case No. 2019-00172**  
**Form 2.50 - Operating and Maintenance Expense Analysis**

NOx Plan:

Expense Month	May-18	Jun-18	Jun-18 vs. May-18 % Change	Jul-18	Jul-18 vs. Jun-18 % Change	Aug-18	Aug-18 vs. Jul-18 % Change	Sep-18	Sep-18 vs. Aug-18 % Change	Oct-18	Oct-18 vs. Sep-18 % Change	Nov-18	Nov-18 vs. Oct-18 % Change
<b>NOx Plan</b>													
Anhydrous Ammonia	\$ 55,646	\$ 63,887	15%	\$ 58,240	-9%	\$ 42,471	-27%	\$ 43,543	3%	\$ 10,756	-75%	\$ 22,214	107%
Emulsified Sulphur for NOx	-	-	Note 1	-	Note 1	-	Note 1	-	Note 1	-	Note 1	-	Note 1
Total NOx Plan O&M Expenses	\$ 55,646	\$ 63,887	15%	\$ 58,240	-9%	\$ 42,471	-27%	\$ 43,543	3%	\$ 10,756	-75%	\$ 22,214	107%

SO2 Plan:

Expense Month	May-18	Jun-18	Jun-18 vs. May-18 % Change	Jul-18	Jul-18 vs. Jun-18 % Change	Aug-18	Aug-18 vs. Jul-18 % Change	Sep-18	Sep-18 vs. Aug-18 % Change	Oct-18	Oct-18 vs. Sep-18 % Change	Nov-18	Nov-18 vs. Oct-18 % Change
<b>SO2 Plan Expenses:</b>													
(Note 2)	\$ 533,909	\$ 544,603	2%	\$ 499,423	-8%	\$ 39,691	-92%	\$ 990,357	2395%	\$ 533,829	-46%	\$ 553,308	4%
Fixation Lime	109,755	116,620	6%	186,557	60%	196,282	5%	199,122	1%	138,395	-30%	134,142	-3%
Reagent-Limestone	173,369	182,844	5%	186,469	2%	228,652	23%	198,831	-13%	-	-100%	-	Note 1
Reagent-Lime	802,765	755,232	-6%	756,452	0%	904,488	20%	842,842	-7%	1,114,812	32%	898,160	-19%
Emulsified Sulphur for SO2	5,815	16,089	177%	8,854	-45%	13,008	47%	17,318	33%	-	-100%	4,175	Note 1
Reagent-DiBasic Acid	102,335	99,672	-3%	84,527	-15%	128,374	52%	74,845	-42%	-	-100%	43,704	Note 1
Reagent-Sodium BiSulfite for SO2	41,011	34,928	-15%	54,084	55%	45,194	-16%	65,007	44%	-	-100%	45,007	Note 1
Total SO2 Plan O&M Expenses	\$ 1,768,959	\$ 1,749,988	-1%	\$ 1,776,366	2%	\$ 1,555,689	-12%	\$ 2,388,322	54%	\$ 1,787,036	-25%	\$ 1,678,496	-6%

SO3 Plan:

Expense Month	May-18	Jun-18	Jun-18 vs. May-18 % Change	Jul-18	Jul-18 vs. Jun-18 % Change	Aug-18	Aug-18 vs. Jul-18 % Change	Sep-18	Sep-18 vs. Aug-18 % Change	Oct-18	Oct-18 vs. Sep-18 % Change	Nov-18	Nov-18 vs. Oct-18 % Change
<b>SO3 Plan Expenses:</b>													
Hydrated Lime - SO3	\$ -	\$ -	Note 1	\$ -	Note 1	\$ -	Note 1	\$ -	Note 1	\$ -	Note 1	\$ -	Note 1
Total SO3 Plan O&M Expenses	\$ -	\$ -	Note 1	\$ -	Note 1	\$ -	Note 1	\$ -	Note 1	\$ -	Note 1	\$ -	Note 1

**Case No. 2019-00172**

**Attachment for Response to Staff Item 3**

**Witnesses: Nicholas R. Castlen (Schedules of O and M Expenses) and  
Ronald D. Gregory (Reason(s) for Changes in Expense Levels)**

**Big Rivers Electric Corporation**  
**Case No. 2019-00172**  
**Form 2.50 - Operating and Maintenance Expense Analysis**

2012 Plan:

Expense Month	May-18	Jun-18	Jun-18 vs. May-18 % Change	Jul-18	Jul-18 vs. Jun-18 % Change	Aug-18	Aug-18 vs. Jul-18 % Change	Sep-18	Sep-18 vs. Aug-18 % Change	Oct-18	Oct-18 vs. Sep-18 % Change	Nov-18	Nov-18 vs. Oct-18 % Change
2012 Plan Expenses:													
Project 9 - Wilson Hg	\$ 94,731	\$ 70,910	-25%	\$ 101,180	43%	\$ 82,951	-18%	\$ 74,188	-11%	\$ 17,269	-77%	\$ 2,420	-86%
Project 10 - Green Hg	493,338	452,802	-8%	611,771	35%	499,950	-18%	407,102	-19%	481,977	18%	460,614	-4%
Project 11 - HMP&L Hg	36,876	2,896	-92%	3,116	8%	12,507	301%	16,865	35%	14,933	-11%	12,291	-18%
Total 2012 Plan	\$ 624,945	\$ 526,608	-16%	\$ 716,067	36%	\$ 595,408	-17%	\$ 498,155	-16%	\$ 514,179	3%	\$ 475,325	-8%
<b>Total</b>	<b><u>\$ 2,449,550</u></b>	<b><u>\$ 2,340,483</u></b>		<b><u>\$ 2,550,673</u></b>		<b><u>\$ 2,193,568</u></b>		<b><u>\$ 2,930,020</u></b>		<b><u>\$ 2,311,971</u></b>		<b><u>\$ 2,176,035</u></b>	

Note 1: Percentage change not calculated because the cost incurred during the prior expense month was \$0.

Note 2: The monthly totals for Disposal Bottom Ash, Disposal Flyash and Disposal Flyash/Bottom Ash/Sludge have been consolidated due to similarity to better facilitate comparability.

Case No. 2019-00172

Attachment for Response to Staff Item 3

Witnesses: Nicholas R. Castlen (Schedules of O and M Expenses) and  
Ronald D. Gregory (Reason(s) for Changes in Expense Levels)

**Big Rivers Electric Corporation**  
**Case No. 2019-00172**  
**Form 2.50 - Operating and Maintenance Expense Analysis**

**Variance Explanations:**

Anhydrous Ammonia:

Jun-18 vs. May-18	15%	The increase was due to timing of product delivery and invoicing at Wilson.
Aug-18 vs. Jul-18	-27%	The decrease was due to timing of product delivery and invoicing at Wilson.
Oct-18 vs. Sep-18	-75%	The decrease was due to decreased generation at Wilson, due to the Planned Outage.
Nov-18 vs. Oct-18	107%	The increase was due to timing of product delivery and invoicing at HMPL.

Disposal-Flyash/Bottom Ash/Sludge:

Aug-18 vs. Jul-18	-92%	The decrease was due to timing of landfill operating costs in August for Station Two.
Sep-18 vs. Aug-18	2395%	The increase was due to timing of landfill operating costs for Green and Station Two and landfill cover costs at Wilson in September.
Oct-18 vs. Sep-18	-46%	The decrease was due to decreased generation at Wilson, due to the Planned Outage.

Fixation Lime:

Jul-18 vs. Jun-18	60%	The increase was due to timing of product delivery and invoicing at Wilson and due to variability in quantity of fixation lime used.
Oct-18 vs. Sep-18	-30%	The decrease was due to decreased generation at Wilson, due to the Planned Outage.

Reagent-Limestone:

Aug-18 vs. Jul-18	23%	The increase was due to increased generation at Wilson in August compared to July.
Sep-18 vs. Aug-18	-13%	The decrease was due to lower generation at Wilson in September compared to August and the timing of product delivery and invoicing at Wilson.
Oct-18 vs. Sep-18	-100%	The decrease was due to decreased generation at Wilson, due to the Planned Outage.

Reagent-Lime:

Aug-18 vs. Jul-18	20%	The increase was due to increased generation at Green and HMPL in August compared to July.
Oct-18 vs. Sep-18	32%	The increase was due to increased generation at Green and HMPL in October compared to September.
Nov-18 vs. Oct-18	-19%	The decrease was due to decreased generation at Green in November compared to October.

**Big Rivers Electric Corporation**  
**Case No. 2019-00172**  
**Form 2.50 - Operating and Maintenance Expense Analysis**

**Variance Explanations (continued):**

Emulsified Sulfur for SO<sub>2</sub>:

Jun-18 vs. May-18	177%	The increase was due to timing of product delivery and invoicing at Green.
Jul-18 vs. Jun-18	-45%	The decrease was due to timing of product deliveries and invoicing at Green and Wilson.
Aug-18 vs. Jul-18	47%	The increase was due to timing of product deliveries and invoicing at Green and Wilson.
Sep-18 vs. Aug-18	33%	The increase was due to timing of product deliveries and invoicing at Green and Wilson.
Oct-18 vs. Sep-18	-100%	The decrease was due to timing of product deliveries and invoicing at Green and decreased generation at Wilson, due to the Planned Outage.

Reagent-Dibasic Acid:

Jul-18 vs. Jun-18	-15%	The decrease was due to timing of product delivery and invoicing at Wilson.
Aug-18 vs. Jul-18	52%	The increase was due to increased generation at Wildon in August compared to July.
Sep-18 vs. Aug-18	-42%	The decrease was due to lower generation at Wilson in September compared to August.
Oct-18 vs. Sep-18	-100%	The decrease was due to decreased generation at Wilson, due to the Planned Outage.

Reagent-Sodium BiSulfite for SO<sub>2</sub>:

Jun-18 vs. May-18	-15%	The decrease was due to timing of product delivery and invoicing at Wilson.
Jul-18 vs. Jun-18	55%	The decrease was due to timing of product delivery and invoicing at Green.
Aug-18 vs. Jul-18	-16%	The decrease was due to timing of product delivery and invoicing at Green.
Sep-18 vs. Aug-18	44%	The increase was due to timing of product delivery and invoicing at Green.
Oct-18 vs. Sep-18	-100%	The decrease was due to decreased generation at Wilson, due to the Planned Outage.

**Big Rivers Electric Corporation**  
**Case No. 2019-00172**  
**Form 2.50 - Operating and Maintenance Expense Analysis**

**Variance Explanations (continued):**

Project 9 - Wilson Hg

Jun-18 vs. May-18	-25%	The decrease was due to timing of product delivery and invoicing at Wilson.
Jul-18 vs. Jun-18	43%	The increase was due to timing of product delivery and invoicing at Wilson.
Aug-18 vs. Jul-18	-18%	The decrease was due to timing of product delivery and invoicing at Wilson.
Sep-18 vs. Aug-18	-11%	The decrease was due to lower generation in September compared to August and the timing of product delivery and invoicing at Wilson.
Oct-18 vs. Sep-18	-77%	The decrease was due to decreased generation at Wilson, due to the Planned Outage.
Nov-18 vs. Oct-18	-86%	The decrease was due to decreased generation at Wilson, due to the Planned Outage.

Project 10 - Green Hg

Jul-18 vs. Jun-18	35%	The increase was due to timing of product delivery and invoicing and variability in usage of Hydrated Lime and Powder Activated Carbon with operational conditions.
Aug-18 vs. Jul-18	-18%	The decrease was due to timing of product delivery and invoicing and variability in usage of Hydrated Lime and Powder Activated Carbon with operational conditions.
Sep-18 vs. Aug-18	-19%	The decrease was due to timing of product delivery and invoicing and variability in usage of Hydrated Lime and Powder Activated Carbon with operational conditions.
Oct-18 vs. Sep-18	18%	The increase was due to timing of product delivery and invoicing and variability in usage of Hydrated Lime and Powder Activated Carbon with operational conditions.

Project 11 - HMP&L Hg

Jun-18 vs. May-18	-92%	The decrease was due to variability in costs for trap analysis or stack testing, which are incurred on as needed basis for compliance monitoring
Aug-18 vs. Jul-18	301%	The increase was due to variability in costs for trap analysis or stack testing, which are incurred on as needed basis for compliance monitoring.
Sep-18 vs. Aug-18	35%	The increase was due to variability in costs for trap analysis or stack testing, which are incurred on as needed basis for compliance monitoring.
Oct-18 vs. Sep-18	-11%	The decrease was due to variability in costs for trap analysis or stack testing, which are incurred on as needed basis for compliance monitoring
Nov-18 vs. Oct-18	-18%	The decrease was due to variability in costs for trap analysis or stack testing, which are incurred on as needed basis for compliance monitoring

**Case No. 2019-00172**

**Attachment for Response to Staff Item 3**

**Witnesses: Nicholas R. Castlen (Schedules of O and M Expenses) and  
Ronald D. Gregory (Reason(s) for Changes in Expense Levels)**

**BIG RIVERS ELECTRIC CORPORATION**

**AN ELECTRONIC EXAMINATION BY THE PUBLIC SERVICE  
COMMISSION OF THE ENVIRONMENTAL SURCHARGE MECHANISM  
OF BIG RIVERS ELECTRIC CORPORATION FOR THE SIX- MONTH  
BILLING PERIOD ENDING JANUARY 31, 2019, AND  
THE PASSTHROUGH MECHANISM OF ITS THREE MEMBER  
DISTRIBUTION COOPERATIVES  
CASE NO. 2019-00172**

**Response to Commission Staff's  
First Request for Information  
dated June 7, 2019**

**July 12, 2019**

1 **Item 4)** *Refer to BREC's monthly environmental surcharge reports for*  
2 *the expense months in this review period. Provide the calculations and*  
3 *supporting data for the rates of return included in each monthly*  
4 *environmental surcharge filing. Provide all supporting calculations and*  
5 *documentation in Excel spreadsheet format, with formulas intact and*  
6 *unprotected and all rows and columns accessible.*

7

8 **Response)** Please see the attachment to this response for the calculations and  
9 supporting data for the rates of return included in each monthly environmental  
10 surcharge filing for the six-month review period. These calculations are provided  
11 in Excel spreadsheet format, with formulas intact and unprotected and all rows and  
12 columns accessible, in a separate Excel file as part of the electronic filing *and* on a  
13 CD accompanying these responses in the paper copy provided pursuant to 807 KAR  
14 5:001 §8(12)(a)2.

15

16

17 **Witness)** Nicholas R. Castlen

18

**Big Rivers Electric Corporation**  
**Case No. 2019-00172**  
**Calculations of Rates of Return on Environmental Compliance Rate Base**  
**For the Expense Months: June 2018 through November 2018**

**Calculations of Monthly Rates of Return on Environmental Compliance Rate Base:**

Expense Month:	<u>Jun-18</u>	<u>Jul-18</u>	<u>Aug-18</u>	<u>Sep-18</u>	<u>Oct-18</u>	<u>Nov-18</u>
<b><u>Monthly Interest Expense on Long-Term Debt (by Obligation):</u></b>						
RUS - Series B Note	\$ 840,254.59	\$ 880,815.46	\$ 880,815.46	\$ 852,402.05	\$ 893,689.23	\$ 864,860.55
CoBank - Series 2012A Notes	674,351.33	688,770.46	688,770.46	666,273.75	680,040.34	658,103.55
CFC - Series 2012B Refinance Note	860,340.66	887,786.27	883,396.11	851,247.15	878,693.44	847,039.50
CFC - Series 2012B Equity Note	155,362.20	155,362.20	155,362.21	153,480.68	153,480.68	153,480.69
Series 2010A P.C. Bonds	416,500.00	416,500.00	416,500.00	416,500.00	416,500.00	416,500.00
CFC - Series 2017B Refinance Note	43,818.75	43,818.75	41,512.50	41,512.50	41,512.50	41,512.50
RUS Guaranteed FFB Loan W8	64,752.61	61,559.75	61,559.75	59,573.95	61,559.75	59,573.95
RUS Guaranteed FFB Loan X8	46,905.88	44,782.07	44,782.07	43,337.49	44,782.07	43,337.49
<b>(a) Total Monthly Interest Expense on Long-Term Debt</b>	<b>\$ 3,102,286.02</b>	<b>\$ 3,179,394.96</b>	<b>\$ 3,172,698.56</b>	<b>\$ 3,084,327.57</b>	<b>\$ 3,170,258.01</b>	<b>\$ 3,084,408.23</b>
Total Outstanding Long-Term Debt (Beginning of Month)	\$ 774,481,510.38	\$ 774,700,228.64	\$ 774,700,228.64	\$ 770,410,527.81	\$ 770,666,837.78	\$ 770,666,837.78
Total Outstanding Long-Term Debt (End of Month)	774,700,228.64	774,700,228.64	770,410,527.81	770,666,837.78	770,666,837.78	767,092,264.16
<b>(b) Average Outstanding Long-Term Debt during Month</b>	<b>\$ 774,590,869.51</b>	<b>\$ 774,700,228.64</b>	<b>\$ 772,555,378.23</b>	<b>\$ 770,538,682.80</b>	<b>\$ 770,666,837.78</b>	<b>\$ 768,879,550.97</b>
<b>(c) Number of Days During Year</b>	<b>365</b>	<b>365</b>	<b>365</b>	<b>365</b>	<b>365</b>	<b>365</b>
<b>(d) Number of Days During Month</b>	<b>30</b>	<b>31</b>	<b>31</b>	<b>30</b>	<b>31</b>	<b>30</b>
<b>(e) Average Cost of Debt [(a) ÷ (b)] x [(c) ÷ (d)]</b>	<b>4.87%</b>	<b>4.83%</b>	<b>4.84%</b>	<b>4.87%</b>	<b>4.84%</b>	<b>4.88%</b>
<b>(f) Applicable TIER<sup>(1)</sup></b>	<b>1.24</b>	<b>1.24</b>	<b>1.24</b>	<b>1.24</b>	<b>1.24</b>	<b>1.24</b>
<b>(g) Rate of Return on Environmental Compliance Rate Base [(e) x (f)]</b>	<b>6.04%</b>	<b>5.99%</b>	<b>6.00%</b>	<b>6.04%</b>	<b>6.00%</b>	<b>6.05%</b>

**Notes:**

<sup>(1)</sup> Applicable Times Interest Earned Ratio ("TIER") for calculating the Rate of Return on Environmental Compliance Rate Base per Big Rivers' Environmental Surcharge Tariff approved by Order of the Cor October 1, 2012 (Case No. 2012-00063).

**Case No. 2019-00172**

**Attachment for Response to Staff's First Request Item 4**

**Witness: Nicholas R. Castlen**

**Page 1 of 1**