

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 JULY 31, 2018,)
AND THE PASSTHROUGH MECHANISM)
OF ITS THREE MEMBER DISTRIBUTION)
COOPERATIVES)**

**Case No.
2018-00338**

**Responses to Commission Staff's
First Request for Information
dated October 11, 2018**

FILED: November 6, 2018

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 JULY 31, 2018, AND
THE PASS THROUGH MECHANISM
OF ITS THREE MEMBER DISTRIBUTION COOPERATIVES
CASE NO. 2018-00338**

VERIFICATION

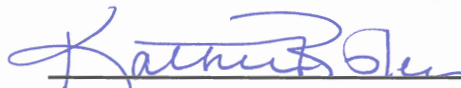
I, Nicholas R. (Nick) Castlen, verify, state, and affirm that the data request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.



Nicholas R. (Nick) Castlen

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Nicholas R. (Nick) Castlen on this the 5th day of November, 2018.



Notary Public, Kentucky State at Large

My Commission Expires

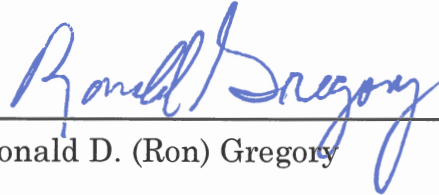
October 31, 2020

BIG RIVERS ELECTRIC CORPORATION

**AN ELECTRONIC EXAMINATION BY THE PUBLIC SERVICE
COMMISSION OF THE ENVIRONMENTAL SURCHARGE MECHANISM
OF BIG RIVERS ELECTRIC CORPORATION
FOR THE SIX-MONTH BILLING PERIOD ENDING JULY 31, 2018, AND
THE PASS THROUGH MECHANISM
OF ITS THREE MEMBER DISTRIBUTION COOPERATIVES
CASE NO. 2018-00338**

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 5th day of November, 2018.



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 FOR THE SIX- MONTH
BILLING PERIOD ENDING JULY 31, 2018, AND THE PASSTHROUGH
MECHANISM OF ITS THREE MEMBER DISTRIBUTION
COOPERATIVES
CASE NO. 2018-00338**

**Response to Commission Staff's
First Request for Information
dated October 11, 2018**

November 6, 2018

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 all supporting calculations and documentation in*
9 *Excel spreadsheet format with formulas intact and unprotected and all*
10 *rows and columns fully accessible.*

11

12 **Response)** Please see the attached schedule, in the format of Form 1.10, covering
13 each of the expense months from December 2017 through July 2018 (*i.e.*, the
14 expense months covered by the billing period under review plus the two expense
15 months subsequent to the billing period).

16 All supporting calculations and documentation are also provided in Excel
17 spreadsheet format, with formulas intact and unprotected and all rows and columns
18 fully accessible, in a separate Excel file as part of the electronic filing *and* on a CD
19 accompanying these responses in the paper copy provided pursuant to 807 KAR
20 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 JULY 31, 2018, AND THE PASSTHROUGH
MECHANISM OF ITS THREE MEMBER DISTRIBUTION
COOPERATIVES
CASE NO. 2018-00338**

**Response to Commission Staff's
First Request for Information
dated October 11, 2018**

November 6, 2018

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. 2018-00338

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

For the Expense Months: December 2017 to July 2018

	Dec-2017	Jan-2018	Feb-2018	Mar-2018
Calculation of Total E(m)				
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	= \$ 2,158,740	\$ 2,594,076	\$ 2,227,350	\$ 2,347,351
BAS	= \$ -	\$ -	\$ -	\$ -
RORB	= \$ 146,030	\$ 145,857	\$ 148,600	\$ 145,824
E(m)	= \$ 2,304,770	\$ 2,739,933	\$ 2,375,950	\$ 2,493,175
Calculation of Jurisdictional Environmental Surcharge Billing Factor				
Jurisdictional Allocation Ratio for the Month	= 68.059737%	71.573300%	73.447352%	67.029119%
Jurisdictional E(m) = E(m) x Jurisdictional Allocation Ratio	= \$ 1,568,620	\$ 1,961,060	\$ 1,745,072	\$ 1,671,153
Adjustment for (Over)/Under Recovery	= \$ 87,603	\$ (237,713)	\$ (470,106)	\$ (5,151)
Prior Period Adjustment (if necessary)	= \$ -	\$ -	\$ (22,348)	\$ -
Net Jurisdictional E(m) = Jurisdictional E(m) plus (Over)/Under plus Prior Period Adjustment(s)	= \$ 1,656,223	\$ 1,723,347	\$ 1,252,618	\$ 1,666,002
R(m) = Average Monthly Member System Revenue for the 12 Months Ending with the Current Expense Month	= \$ 19,070,246	\$ 19,336,142	\$ 19,477,512	\$ 19,529,283
Jurisdictional Environmental Surcharge Billing Factor: CESF: E(m) / R(m); as a % of Revenue	= 8.684854%	8.912569%	6.431099%	8.530789%

Case No. 2018-00338

Attachment for Response to Staff's First Request Item 1

Witness: Nicholas R. Castlen

Page 1 of 2

Big Rivers Electric Corporation

Case No. 2018-00338

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

For the Expense Months: December 2017 to July 2018

	Apr-2018	May-2018	Jun-2018	Jul-2018
Calculation of Total E(m)				
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	= \$ 2,588,671	\$ 2,512,840	\$ 2,403,777	\$ 2,613,989
BAS	= \$ -	\$ 55	\$ -	\$ -
RORB	= \$ 156,343	\$ 139,960	\$ 141,156	\$ 139,913
E(m)	= \$ 2,745,014	\$ 2,652,745	\$ 2,544,933	\$ 2,753,902
Calculation of Jurisdictional Environmental Surcharge Billing Factor				
Jurisdictional Allocation Ratio for the Month	= 57.550201%	61.140634%	65.338420%	74.798009%
Jurisdictional E(m) = E(m) x Jurisdictional Allocation Ratio	= \$ 1,579,761	\$ 1,621,905	\$ 1,662,819	\$ 2,059,864
Adjustment for (Over)/Under Recovery	= \$ 19,104	\$ 243,026	\$ 42,297	\$ (126,147)
Prior Period Adjustment (if necessary)	= \$ -	\$ -	\$ -	\$ -
Net Jurisdictional E(m) = Jurisdictional E(m) plus (Over)/Under plus Prior Period Adjustment(s)	= \$ 1,598,865	\$ 1,864,931	\$ 1,705,116	\$ 1,933,717
R(m) = Average Monthly Member System Revenue for the 12 Months Ending with the Current Expense Month	= \$ 19,635,004	\$ 19,797,192	\$ 19,907,246	\$ 19,892,355
Jurisdictional Environmental Surcharge Billing Factor: CESF: E(m) / R(m); as a % of Revenue	= 8.142932%	9.420179%	8.565303%	9.720905%

Case No. 2018-00338

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 JULY 31, 2018, AND THE PASSTHROUGH
MECHANISM OF ITS THREE MEMBER DISTRIBUTION
COOPERATIVES
CASE NO. 2018-00338**

**Response to Commission Staff's
First Request for Information
dated October 11, 2018**

November 6, 2018

1 **Item 2)** *For each of the three 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 billing period under review. Provide all supporting*
8 *calculations and documentation in Excel spreadsheet format with*
9 *formulas intact and unprotected and all rows and columns fully accessible.*

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 December 2017 through July 2018, applied to Big Rivers' Members' invoices for
15 the service months of January 2018 through August 2018, which Big Rivers billed
16 to its Members during the months of February 2018 through September 2018 (*i.e.*,
17 the months corresponding with the six-month review plus the two subsequent
18 months).

19

BIG RIVERS ELECTRIC CORPORATION

**AN ELECTRONIC EXAMINATION BY THE PUBLIC SERVICE
COMMISSION OF THE ENVIRONMENTAL SURCHARGE MECHANISM
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BILLING PERIOD ENDING JULY 31, 2018, AND THE PASSTHROUGH
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COOPERATIVES
CASE NO. 2018-00338**

**Response to Commission Staff's
First Request for Information
dated October 11, 2018**

November 6, 2018

- 1 • Attachment 1 – Jackson Purchase Energy Corporation Non-Dedicated
2 Delivery Point Customers;
- 3 • Attachment 2 – Kenergy Corp. Non-Dedicated Delivery Point Customers;
- 4 • Attachment 3 – Meade County Rural Electric Cooperative Corporation Non-
5 Dedicated Delivery Point Customers;
- 6 • Attachment 4 – Jackson Purchase Energy Corporation Dedicated Delivery
7 Point Customers; and
- 8 • Attachment 5 – Kenergy Corp. Dedicated Delivery Point Customers.
- 9

10 Note: Meade County Rural Electric Cooperative Corporation has no dedicated
11 delivery point customers.

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

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

20

BIG RIVERS ELECTRIC CORPORATION

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CASE NO. 2018-00338**

**Response to Commission Staff's
First Request for Information
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November 6, 2018

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

6

7

8 **Witness)** Nicholas R. Castlen

9

**Big Rivers Electric Corporation
Six-Month Environmental Surcharge Review (Case No. 2018-00338)**

**JACKSON PURCHASE ENERGY CORPORATION (Jackson Purchase)
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 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]
Dec-17	8.684854%	Jan-18	Feb-18	\$ 464,677.15	Mar-18	\$ 440,509.00	\$ (45,466.48)	\$ 419,210.67	\$ (45,466.48)
Jan-18	8.912569%	Feb-18	Mar-18	\$ 362,494.38	Apr-18	\$ 535,576.57	\$ (187,041.41)	\$ 175,452.97	\$ (187,041.41)
Feb-18	6.431099%	Mar-18	Apr-18	\$ 242,231.37	May-18	\$ 451,786.60	\$ 9,570.78	\$ 251,802.15	\$ 9,570.78
Mar-18	8.530789%	Apr-18	May-18	\$ 278,445.89	Jun-18	\$ 293,705.95	\$ 125,504.72	\$ 403,950.61	\$ 125,504.72
Apr-18	8.142932%	May-18	Jun-18	\$ 336,732.70	Jul-18	\$ 162,863.39	\$ 12,589.58	\$ 349,322.28	\$ 12,589.58
May-18	9.420179%	Jun-18	Jul-18	\$ 446,625.86	Aug-18	\$ 233,566.62	\$ 18,235.53	\$ 464,861.39	\$ 18,235.53
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)

Case No. 2018-00338

Attachment (1 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. 2018-00338)

KENERGY CORP.									
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 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]
Dec-17	8.684854%	Jan-18	Feb-18	\$ 855,558.96	Mar-18	\$ 837,103.06	\$ (230,740.60)	\$ 624,818.36	\$ (230,740.60)
Jan-18	8.912569%	Feb-18	Mar-18	\$ 666,812.69	Apr-18	\$ 746,233.36	\$ 3,896.96	\$ 670,709.65	\$ 3,896.96
Feb-18	6.431099%	Mar-18	Apr-18	\$ 463,493.00	May-18	\$ 400,911.40	\$ 223,906.96	\$ 687,399.96	\$ 223,906.96
Mar-18	8.530789%	Apr-18	May-18	\$ 516,590.91	Jun-18	\$ 630,999.35	\$ 39,710.30	\$ 556,301.21	\$ 39,710.30
Apr-18	8.142932%	May-18	Jun-18	\$ 606,885.13	Jul-18	\$ 563,184.50	\$ 124,215.46	\$ 731,100.59	\$ 124,215.46
May-18	9.420179%	Jun-18	Jul-18	\$ 806,546.94	Aug-18	\$ 702,322.93	\$ (146,021.72)	\$ 660,525.22	\$ (146,021.72)
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)

Case No. 2018-00338

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. 2018-00338)

MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION (Meade County)
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]
Dec-17	8.684854%	Jan-18	Feb-18	\$ 408,742.59	Mar-18	\$ 345,056.56	\$ (50,977.07)	\$ 357,765.52	\$ (50,977.07)
Jan-18	8.912569%	Feb-18	Mar-18	\$ 300,816.32	Apr-18	\$ 256,702.39	\$ 101,063.13	\$ 401,879.45	\$ 101,063.13
Feb-18	6.431099%	Mar-18	Apr-18	\$ 210,450.74	May-18	\$ 393,950.59	\$ 7,928.86	\$ 218,379.60	\$ 7,928.86
Mar-18	8.530789%	Apr-18	May-18	\$ 227,526.64	Jun-18	\$ 182,788.46	\$ 35,591.14	\$ 263,117.78	\$ 35,591.14
Apr-18	8.142932%	May-18	Jun-18	\$ 226,317.65	Jul-18	\$ 268,616.95	\$ (5,499.17)	\$ 220,818.48	\$ (5,499.17)
May-18	9.420179%	Jun-18	Jul-18	\$ 295,025.74	Aug-18	\$ 258,813.54	\$ (37,995.06)	\$ 257,030.68	\$ (37,995.06)
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

Case No. 2018-00338

Attachment (3 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. 2018-00338)

JACKSON PURCHASE ENERGY CORPORATION (Jackson Purchase)							
DEDICATED DELIVERY POINT CUSTOMERS							
(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)]
Dec-17	8.684854%	Jan-18	Feb-18	\$ 1,820.86	Feb-18	\$ 1,820.86	\$ -
Jan-18	8.912569%	Feb-18	Mar-18	\$ 2,071.43	Mar-18	\$ 2,071.43	\$ -
Feb-18	6.431099%	Mar-18	Apr-18	\$ 2,020.66	Apr-18	\$ 2,020.66	\$ -
Mar-18	8.530789%	Apr-18	May-18	\$ 2,117.08	May-18	\$ 2,117.08	\$ -
Apr-18	8.142932%	May-18	Jun-18	\$ 1,842.23	Jun-18	\$ 1,842.23	\$ -
May-18	9.420179%	Jun-18	Jul-18	\$ 2,100.72	Jul-18	\$ 2,100.72	\$ -
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	\$ -

Big Rivers Electric Corporation
Six-Month Environmental Surcharge Review (Case No. 2018-00338)

KENERGY CORP.							
DEDICATED DELIVERY POINT CUSTOMERS							
(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)]
Dec-17	8.684854%	Jan-18	Feb-18	\$ 395,529.86	Feb-18	\$ 395,529.86	\$ -
Jan-18	8.912569%	Feb-18	Mar-18	\$ 396,303.25	Mar-18	\$ 396,303.25	\$ -
Feb-18	6.431099%	Mar-18	Apr-18	\$ 315,318.29	Apr-18	\$ 315,318.29	\$ -
Mar-18	8.530789%	Apr-18	May-18	\$ 398,295.69	May-18	\$ 398,295.69	\$ -
Apr-18	8.142932%	May-18	Jun-18	\$ 384,790.47	Jun-18	\$ 384,790.47	\$ -
May-18	9.420179%	Jun-18	Jul-18	\$ 440,778.64	Jul-18	\$ 440,778.64	\$ -
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	\$ -

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 JULY 31, 2018, AND THE PASSTHROUGH
MECHANISM OF ITS THREE MEMBER DISTRIBUTION
COOPERATIVES
CASE NO. 2018-00338**

**Response to Commission Staff's
First Request for Information
dated October 11, 2018**

November 6, 2018

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

6

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

10

11

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

14

Big Rivers Electric Corporation
Case No. 2018-00338
Form 2.50 - Operating and Maintenance Expense Analysis

NOx Plan:

Expense Month	Nov-17	Dec-17	Dec-17 vs. Nov-17 % Change	Jan-18	Jan-18 vs. Dec-17 % Change	Feb-18	Feb-18 vs. Jan-18 % Change	Mar-18	Mar-18 vs. Feb-18 % Change	Apr-18	Apr-18 vs. Mar-18 % Change	May-18	May-18 vs. Apr-18 % Change
NOx Plan													
Anhydrous Ammonia	\$ 40,291	\$ 41,348	3%	\$ 61,165	48%	\$ 64,038	5%	\$ 45,354	-29%	\$ 40,858	-10%	\$ 55,646	36%
Emulsified Sulphur for NOx	-	-	Note 1	-	Note 1	-	Note 1	-	Note 1	-	Note 1	-	Note 1
Total NOx Plan O&M Expenses	\$ 40,291	\$ 41,348	3%	\$ 61,165	48%	\$ 64,038	5%	\$ 45,354	-29%	\$ 40,858	-10%	\$ 55,646	36%

SO2 Plan:

Expense Month	Nov-17	Dec-17	Dec-17 vs. Nov-17 % Change	Jan-18	Jan-18 vs. Dec-17 % Change	Feb-18	Feb-18 vs. Jan-18 % Change	Mar-18	Mar-18 vs. Feb-18 % Change	Apr-18	Apr-18 vs. Mar-18 % Change	May-18	May-18 vs. Apr-18 % Change
SO2 Plan Expenses:													
(Note 2)	\$ 554,576	\$ 518,902	-6%	\$ 493,014	-5%	\$ 461,565	-6%	\$ 477,887	4%	\$ 478,543	0%	\$ 533,909	12%
Fixation Lime	159,494	138,597	-13%	108,493	-22%	111,881	3%	124,487	11%	97,131	-22%	109,755	13%
Reagent-Limestone	151,839	171,638	13%	206,936	21%	96,501	-53%	172,489	79%	153,387	-11%	173,369	13%
Reagent-Lime	757,196	510,687	-33%	782,573	53%	646,978	-17%	612,774	-5%	901,658	47%	802,765	-11%
Emulsified Sulphur for SO2	2,966	12,034	306%	5,931	-51%	11,556	95%	13,624	18%	12,207	-10%	5,815	-52%
Reagent-DiBasic Acid	115,714	102,708	-11%	128,077	25%	100,869	-21%	117,181	16%	116,013	-1%	102,335	-12%
Reagent-Sodium Bisulfite for SO2	26,261	31,311	19%	52,880	69%	50,228	-5%	132,067	163%	41,622	-68%	41,011	-1%
Total SO2 Plan O&M Expenses	\$ 1,768,046	\$ 1,485,877	-16%	\$ 1,777,904	20%	\$ 1,479,578	-17%	\$ 1,650,509	12%	\$ 1,800,561	9%	\$ 1,768,959	-2%

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SO3 Plan:

Expense Month	Nov-17	Dec-17	Dec-17 vs. Nov-17 % Change	Jan-18	Jan-18 vs. Dec-17 % Change	Feb-18	Feb-18 vs. Jan-18 % Change	Mar-18	Mar-18 vs. Feb-18 % Change	Apr-18	Apr-18 vs. Mar-18 % Change	May-18	May-18 vs. Apr-18 % Change
SO3 Plan Expenses:													
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

2012 Plan:

Expense Month	Nov-17	Dec-17	Dec-17 vs. Nov-17 % Change	Jan-18	Jan-18 vs. Dec-17 % Change	Feb-18	Feb-18 vs. Jan-18 % Change	Mar-18	Mar-18 vs. Feb-18 % Change	Apr-18	Apr-18 vs. Mar-18 % Change	May-18	May-18 vs. Apr-18 % Change
2012 Plan Expenses:													
Project 9 - Wilson Hg	\$ 145,721	\$ 89,214	-39%	\$ 94,752	6%	\$ 77,450	-18%	\$ 86,943	12%	\$ 70,009	-19%	\$ 94,731	35%
Project 10 - Green Hg	340,107	479,134	41%	588,806	23%	541,532	-8%	493,685	-9%	611,323	24%	493,338	-19%
Project 11 - HMP&L Hg	20,249	148	-99%	8,045	5336%	1,547	-81%	7,593	391%	2,671	-65%	36,876	1281%
Total 2012 Plan	\$ 506,077	\$ 568,496	12%	\$ 691,603	22%	\$ 620,529	-10%	\$ 588,221	-5%	\$ 684,003	16%	\$ 624,945	-9%
Total	\$ 2,314,414	\$ 2,095,721		\$ 2,530,672		\$ 2,164,145		\$ 2,284,084		\$ 2,525,422		\$ 2,449,550	

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.

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Variance Explanations:

Anhydrous Ammonia:

Jan-18 vs. Dec-17	48%	The increase was due to timing of product delivery and invoicing at Wilson.
Mar-18 vs. Feb-18	-29%	The decrease was due to timing of product delivery and invoicing at HMP&L and Wilson.
May-18 vs. Apr-18	36%	The increase was due to increased generation at HMP&L and Wilson in May compare to April.

Disposal-Flyash/Bottom Ash/Sludge:

May-18 vs. Apr-18	12%	The increase was due to installing French Drains at landfill, reconditioning landfill product and dredging expenses at Green.
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Fixation Lime:

Dec-17 vs. Nov-17	-13%	The decrease was due to no generation at HMP&L in December and less fixation lime added at Wilson for operational needs at the landfill.
Jan-18 vs. Dec-17	-22%	The decrease was due to invoice timing at Green and less fixation lime added at Wilson for operational needs at the landfill.
Mar-18 vs. Feb-18	11%	The increase was due to increased generation at Wilson in March compared to February and due to variability in quantity of fixation lime added at Wilson.
Apr-18 vs. Mar-18	-22%	The decrease was due to decreased generation at Wilson in April compared to March and due to variability in quantity of fixation lime added at Wilson.
May-18 vs. Apr-18	13%	The increase was due to increased generation at HMP&L in May compared to April.

Reagent-Limestone:

Dec-17 vs. Nov-17	13%	The increase was due to increased generation at Wilson in December compared to November.
Jan-18 vs. Dec-17	21%	The increase was due to timing of product deliveries and invoicing at Wilson.
Feb-18 vs. Jan-18	-53%	The decrease was due to decreased generation at Wilson in February compared to January.
Mar-18 vs. Feb-18	79%	The increase was due to increased generation at Wilson in March compared to February and timing of product deliveries and invoicing at Wilson.
Apr-18 vs. Mar-18	-11%	The decrease was due to decreased generation at Wilson in April compared to March.
May-18 vs. Apr-18	13%	The increase was due to increased generation at Wilson in May compared to April.

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Reagent-Lime:

Dec-17 vs. Nov-17	-33%	The decrease was due to year ending inventory adjustment at Green and no generation at HMP&L in December.
Jan-18 vs. Dec-17	53%	The increase was due to year ending inventory adjustment at Green in December and increased generation at HMP&L in January compared to December.
Feb-18 vs. Jan-18	-17%	The decrease was due to decreased generation at Green and HMP&L in February compared to January.
Apr-18 vs. Mar-18	47%	The increase was due to increased generation at Green and HMP&L in April compared to March.
May-18 vs. Apr-18	-11%	The decrease was due to decreased generation at Green and HMP&L in May compared to April.

Emulsified Sulfur for SO2:

Dec-17 vs. Nov-17	306%	The increase was due to timing of product delivery and invoicing at HMP&L and increased generation at Wilson in December compared to November.
Jan-18 vs. Dec-17	-51%	The decrease was due to timing of product deliveries and invoicing at HMP&L.
Feb-18 vs. Jan-18	95%	The increase was due to timing of product delivery and invoicing at HMP&L.
Mar-18 vs. Feb-18	18%	The increase was due to timing of product delivery and invoicing at Green.
May-18 vs. Apr-18	-52%	The decrease was due to timing of product deliveries and invoicing at HMP&L.

Reagent-Dibasic Acid:

Dec-17 vs. Nov-17	-11%	The decrease was due to timing of product deliveries and invoicing at Wilson.
Jan-18 vs. Dec-17	25%	The increase was due to timing of product deliveries and invoicing at Wilson.
Feb-18 vs. Jan-18	-21%	The decrease was due to decreased generation at Wilson in February compared to January.
Mar-18 vs. Feb-18	16%	The increase was due to increased generation at Wilson in March compared to February.
May-18 vs. Apr-18	-12%	The decrease was due to timing of product deliveries and invoicing at Wilson.

Reagent-Sodium BiSulfite for SO2:

Dec-17 vs. Nov-17	19%	The increase was due to increased generation at Wilson in December compared to November.
Jan-18 vs. Dec-17	69%	The increase was due to timing of product delivery and invoicing at Wilson.
Mar-18 vs. Feb-18	163%	The increase was due to increased generation at Wilson in March compared to February and timing of product delivery and invoicing at Green.
Apr-18 vs. Mar-18	-68%	The decrease was due to timing of product deliveries and invoicing at Green.

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Project 9 - Wilson Hg

Dec-17 vs. Nov-17	-39%	The decrease was due to charges associated with compliance testing that occurred in November.
Feb-18 vs. Jan-18	-18%	The decrease was due to decreased generation in February compared to January.
Mar-18 vs. Feb-18	12%	The increase was due to increased generation in March compared to February.
Apr-18 vs. Mar-18	-19%	The decrease was due to decreased generation in April compared to March.
May-18 vs. Apr-18	35%	The increase was due to increased generation in May compared to April.

Project 10 - Green Hg

Dec-17 vs. Nov-17	41%	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.
Jan-18 vs. Dec-17	23%	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.
Apr-18 vs. Mar-18	24%	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.
May-18 vs. Apr-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.

Project 11 - HMP&L Hg

Dec-17 vs. Nov-17	-99%	The decrease was due to variability in costs for trap analysis or stack testing, which are incurred on as needed basis for compliance monitoring and there was no generation at HMP&L in December.
Jan-18 vs. Dec-17	5336%	The increase was due to variability in costs for trap analysis or stack testing, which are incurred on as needed basis for compliance monitoring and there was no generation at HMP&L in December.
Feb-18 vs. Jan-18	-81%	The decrease was due to variability in costs for trap analysis or stack testing, which are incurred on as needed basis for compliance monitoring.
Mar-18 vs. Feb-18	391%	The increase was due to variability in costs for trap analysis or stack testing, which are incurred on as needed basis for compliance monitoring.
Apr-18 vs. Mar-18	-65%	The decrease was due to variability in costs for trap analysis or stack testing, which are incurred on as needed basis for compliance monitoring.
May-18 vs. Apr-18	1281%	The increase was due to variability in costs for trap analysis or stack testing, which are incurred on as needed basis for compliance monitoring.

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 JULY 31, 2018, AND THE PASSTHROUGH
MECHANISM OF ITS THREE MEMBER DISTRIBUTION
COOPERATIVES
CASE NO. 2018-00338**

**Response to Commission Staff's
First Request for Information
dated October 11, 2018**

November 6, 2018

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 fully 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 also
11 provided in Excel spreadsheet format, with formulas intact and unprotected and all
12 rows and columns accessible, in a separate Excel file as part of the electronic filing
13 *and* on a CD accompanying these responses in the paper copy provided pursuant to
14 807 KAR 5:001 §8(12)(a)2.

15

16

17 **Witness)** Nicholas R. Castlen

18

**Big Rivers Electric Corporation
Case No. 2018-00338**

**Calculations of Rates of Return on Environmental Compliance Rate Base
For the Expense Months: December 2017 through May 2018**

Calculations of Monthly Rates of Return on Environmental Compliance Rate Base

Expense Month	<u>Dec-17</u>	<u>Jan-18</u>	<u>Feb-18</u>	<u>Mar-18</u>	<u>Apr-18</u>	<u>May-18</u>
<u>Month-to-Date Interest Expense on Long-Term Debt:</u>						
RUS - Series A Note ⁽¹⁾	\$ 324,729.32	\$ 324,782.61	\$ 293,355.35	\$ 324,786.29	\$ 393,693.28	\$ -
RUS - Series B Note	843,692.44	856,023.64	773,182.64	856,023.64	840,254.59	868,263.07
CoBank - Series 2012A Notes	714,082.27	705,924.55	637,609.27	705,109.11	674,901.42	697,398.13
CFC - Series 2012B Refinance Note	905,193.80	905,193.80	814,698.47	896,880.93	868,231.08	892,399.67
CFC - Series 2012B Equity Note	159,051.07	159,051.07	159,051.07	157,218.89	157,218.89	157,218.89
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	46,125.00	46,125.00	43,818.75	43,818.75	43,818.75	43,818.75
RUS Guaranteed FFB Loan W8 ⁽²⁾	-	-	-	-	53,144.68	58,838.76
RUS Guaranteed FFB Loan X8 ⁽²⁾	-	-	-	-	37,342.59	42,874.83
(a) Total Monthly Interest Expense on Long-Term Debt	\$ 3,409,373.90	\$ 3,413,600.67	\$ 3,138,215.55	\$ 3,400,337.61	\$ 3,485,105.28	\$ 3,177,312.10
Total Outstanding Long-Term Debt (Beginning of Month)	\$ 803,497,115.40	\$ 803,725,291.84	\$ 803,736,742.30	\$ 799,504,011.20	\$ 799,686,532.12	\$ 777,996,616.03
Total Outstanding Long-Term Debt (End of Month)	803,725,291.84	803,736,742.30	799,504,011.20	799,686,532.12	777,996,616.03	774,481,510.38
(b) Average Outstanding Long-Term Debt during Month	\$ 803,611,203.62	\$ 803,731,017.07	\$ 801,620,376.75	\$ 799,595,271.66	\$ 788,841,574.08	\$ 776,239,063.21
(c) Number of Days During Year	365	365	365	365	365	365
(d) Number of Days During Month	31	31	28	31	30	31
(e) Average Cost of Debt [(a) ÷ (b)] x [(c) ÷ (d)]	5.00%	5.00%	5.10%	5.01%	5.38%	4.82%
(f) Applicable TIER ⁽³⁾	1.24	1.24	1.24	1.24	1.24	1.24
(g) Rate of Return on Environmental Compliance Rate Base [(e) x (f)]	6.20%	6.20%	6.32%	6.21%	6.67%	5.98%

Notes:

⁽¹⁾ The RUS - Series A Note was prepaid in full in April 2018. Accordingly, no interest expense for the RUS - Series A Note was incurred in May 2018.

⁽²⁾ The proceeds of the RUS Guaranteed FFB Loans (W8 and X8) were received by Big Rivers in April 2018. Accordingly, no interest expense was incurred on these loans prior to April 2018.

⁽³⁾ 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 Commission dated October 1, 2012 (Case No. 2012-00063).

Case No. 2018-00338

Attachment for Response to Staff's First Request Item 4

Witness: Nicholas R. Castlen

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