

# ORIGINAL

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

ELECTRONIC EXAMINATION BY THE )  
PUBLIC SERVICE COMMISSION OF THE )  
ENVIRONMENTAL SURCHARGE )  
MECHANISM OF BIG RIVERS ELECTRIC )  
CORPORATION FOR THE TWO-YEAR )  
BILLING PERIOD ENDING JULY 31, 2019, )  
AND THE PASS THROUGH MECHANISM )  
OF ITS THREE MEMBER DISTRIBUTION )  
COOPERATIVES )

Case No.  
2020-00144

DIRECT TESTIMONY

OF

NICHOLAS (NICK) R. CASTLEN

ON BEHALF OF

BIG RIVERS ELECTRIC CORPORATION,  
JACKSON PURCHASE ENERGY CORPORATION,  
KENERGY CORP., AND  
MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION

FILED: June 5, 2020

Case No. 2020-00144  
Witness: Nicholas R. Castlen  
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**DIRECT TESTIMONY  
OF  
NICHOLAS R. CASTLEN**

1  
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3  
4

5 **Q. Please state your name, business address, and position.**

6 A. My name is Nicholas R. Castlen, and my business address is Big Rivers  
7 Electric Corporation (“Big Rivers”), 201 Third Street, Henderson, Kentucky,  
8 42420. I am the Manager of Financial Planning & Analysis at Big Rivers.

9

10 **Q. Please summarize your education and professional experience.**

11 A. I received a Bachelor of Science in Accounting from the University of  
12 Kentucky in 2006, graduating Magna Cum Laude with Departmental  
13 Honors, and received a Master of Science in Accounting from the University  
14 of Kentucky in 2007. I became a Certified Public Accountant (CPA) in the  
15 state of Kentucky in 2009.

16 In February 2020, I assumed the position of Manager of Financial  
17 Planning & Analysis at Big Rivers. Prior to assuming my current position, I  
18 was the Manager of Finance at Big Rivers from July 2013 through January  
19 2020. As the Manager of Finance, I was responsible for overseeing certain  
20 corporate accounting and finance activities including financial reporting and  
21 analysis, debt administration, forecasting, cash management, and taxes.  
22 Additionally, I was responsible for Big Rivers’ Fuel Adjustment Clause (FAC)  
23 and Environmental Surcharge (ES) rate mechanisms and the related filings  
24 with the Kentucky Public Service Commission (the “Commission”).

1 Accordingly, I was responsible for Big Rivers' ES filings for the expense  
2 months covered by the billing periods under review.

3 Prior to joining Big Rivers, I was employed by LG&E and KU Energy  
4 LLC as a Revenue Accounting Analyst from 2009 to 2012, where I was  
5 responsible for various financial accounting, reporting, and analytical roles  
6 for retail and wholesale, electric and gas utility revenues. From 2006 to 2009,  
7 I was employed by PricewaterhouseCoopers LLP as an Audit and Assurance  
8 Associate.

9  
10 **Q. Please summarize your duties at Big Rivers.**

11 A. As the Manager of Financial Planning & Analysis, I am responsible for  
12 overseeing the development of Big Rivers' long-term financial forecasts,  
13 updating annual forecasts throughout the year based on actuals and changes  
14 to previous assumptions, and developing various ad hoc financial forecasts  
15 and analyses to assist senior management when evaluating alternative  
16 scenarios.

17  
18 **Q. Have you previously testified before the Commission?**

19 A. Yes. I have served as witness, providing testimony and responses to data  
20 requests, in Case Nos. 2012-00534, 2013-00139, 2013-00347, 2014-00097,  
21 2014-00323, 2015-00124, 2015-00320, 2016-00124, 2016-00368, 2017-00345,  
22 2018-00163, 2018-00338, and 2019-00172 (reviews of Big Rivers' ES

1 mechanism). I have also served as a witness, providing testimony and/or  
2 responses to data requests, in Case Nos. 2012-00555, 2013-00266, 2013-  
3 00449, 2014-00230, 2014-00455, 2015-00237, 2016-00006, 2016-00235, 2017-  
4 00006, 2017-00287, 2018-00023, 2018-00221, 2019-00007, and 2019-00231  
5 (reviews of Big Rivers' FAC mechanism).

6  
7 **Q. On whose behalf are you filing this testimony?**

8 A. I am filing this testimony on behalf of Big Rivers and its three member  
9 distribution cooperatives, which are Jackson Purchase Energy Corporation  
10 ("Jackson Purchase"), Kenergy Corp. ("Kenergy"), and Meade County Rural  
11 Electric Cooperative Corporation ("Meade County") (collectively, the  
12 "Members").

13  
14 **Q. What is the purpose of your testimony in this proceeding?**

15 A. The purpose of my testimony is to describe the application of Big Rivers' ES  
16 mechanism as billed from August 1, 2017, through July 31, 2019, (which  
17 corresponds to Big Rivers' expense months of June 2017 through May 2019).  
18 Additionally, I have coordinated with Big Rivers' Members in the preparation  
19 of this testimony and prepared responses to the Commission Staff's First  
20 Request for Information in this case, dated May 5, 2020, ("Staff's First  
21 Requests") which accompany this testimony.

22 This testimony also includes information the Members have provided

1 me in support of their pass-through mechanisms which are also under review  
2 in this proceeding, and that the Members use to pass through, to their retail  
3 members, the costs Big Rivers charges to them under Big Rivers' ES  
4 mechanism. The review periods for the Members' pass-through mechanisms,  
5 which correspond to the August 2017 through July 2019 billing months for  
6 Big Rivers' ES mechanism, are the billing months of September 2017 through  
7 August 2019 for retail, non-dedicated delivery point, customers (*i.e.*, there is  
8 a one-month lag for non-dedicated delivery point customers) and August 2017  
9 through July 2019 for large commercial and industrial, dedicated delivery  
10 point, customers (*i.e.*, there is no billing lag for dedicated delivery point  
11 customers).

12  
13 **Q. Please provide a brief overview of Big Rivers' ES mechanism.**

14 A. Big Rivers' ES mechanism was approved by Order of the Commission dated  
15 June 25, 2008, in Case No. 2007-00460, which was part of the transaction  
16 that unwound Big Rivers' 1998 lease with E.ON U.S. LLC and its affiliates  
17 (the "Unwind Transaction") that was approved by Order of the Commission  
18 dated March 6, 2009, in Case No. 2007-00455. Big Rivers' ES went into effect  
19 immediately following the July 16, 2009, closing of the Unwind Transaction  
20 for service commencing July 17, 2009.

21 Big Rivers' environmental compliance plan, approved by the  
22 Commission in Case No. 2007-00460 (the "2007 Plan"), consists of programs

1 and the related costs for controlling sulfur dioxide (SO<sub>2</sub>), nitrogen oxide  
2 (NO<sub>x</sub>), and sulfur trioxide (SO<sub>3</sub>). The environmental compliance costs, which  
3 Big Rivers may recover under KRS 278.183 and its 2007 Plan, include the  
4 costs of reagents, sludge and ash disposal, and emission allowances.

5 For the SO<sub>2</sub> program, Big Rivers recovers through its ES mechanism  
6 the costs of reagents, the costs for the disposal of coal combustion byproducts  
7 (fly ash, bottom ash, and scrubber sludge), and the costs of SO<sub>2</sub> emission  
8 allowances used. For the NO<sub>x</sub> program, Big Rivers recovers the costs of  
9 reagents and the costs of NO<sub>x</sub> emission allowances used. For the SO<sub>3</sub>  
10 program, Big Rivers recovers reagent costs.

11 Due to generating unit design differences and Big Rivers' compliance  
12 plan, each of Big Rivers' generating units utilizes a different combination of  
13 reagents. Depending on the unit facilities, various reagents are used to treat  
14 the flue gas, thereby removing the three targeted emissions. The reagents  
15 used to control SO<sub>2</sub> include emulsified sulfur, lime, fixation lime, limestone,  
16 dibasic acid, and sodium bisulfite. The reagents used to control NO<sub>x</sub> include  
17 anhydrous ammonia and emulsified sulfur. The reagent used to control SO<sub>3</sub>  
18 is hydrated lime. Note that the 2007 Plan included only variable operations  
19 and maintenance (O&M) costs.

20 In its Order dated October 1, 2012, in Case No. 2012-00063, the  
21 Commission approved certain additions to Big Rivers' 2007 Plan relating to  
22 the Mercury and Air Toxics Standards (MATS) rule. The additions (the "2012

1 Plan”) included installing activated carbon injection and dry sorbent injection  
2 systems and emission control monitors at Big Rivers’ Coleman, Wilson, and  
3 Green generating stations. The 2012 Plan also included the installation of  
4 emission control monitors at Henderson Municipal Power & Light’s Station  
5 Two generating station, which Big Rivers previously operated and  
6 maintained under a series of contracts with the City of Henderson, Kentucky  
7 and the City of Henderson Utility Commission until January 2019, when the  
8 Station Two units were retired from service. The 2012 Plan includes both  
9 capital and O&M costs associated with the projects, as well as recovery of Big  
10 Rivers’ actual costs incurred in Case No. 2012-00063, which were amortized  
11 over three years.

12 Due to the terminations of retail power contracts with two aluminum  
13 smelters, Big Rivers idled its Coleman generating station in May 2014. As a  
14 result, Big Rivers did not complete the MATS projects for the Coleman  
15 station which were included in the 2012 Plan. Big Rivers does not plan to  
16 return the Coleman generating station to service in the future.

17 Big Rivers’ ES mechanism allows Big Rivers to recover costs related to  
18 its 2007 Plan (which includes only variable O&M costs) and its 2012 Plan  
19 (which includes both O&M and capital costs, as well as a rate of return on  
20 the unrecovered portion of its capital costs), less proceeds from by-product  
21 and emission allowance sales, plus or minus an ongoing cumulative under-  
22 or over-recovery, respectively.

1 **Q. Please provide a brief overview of the Members' pass-through**  
2 **mechanisms.**

3 A. The Members' pass-through mechanisms allow each Member to bill its retail  
4 customers for the portion of Big Rivers' environmental surcharge that it was  
5 billed. Jackson Purchase's pass-through mechanism was approved by the  
6 Commission in Case No. 2008-00010; Kenergy's pass-through mechanism  
7 was approved by the Commission in Case No. 2008-00009; and Meade  
8 County's pass-through mechanism was approved by the Commission in Case  
9 No. 2007-00470.

10

11 **Q. Have there been any changes to Big Rivers' ES mechanism since the**  
12 **prior review?**

13 A. No.

14

15 **Q. Has Big Rivers' ES mechanism been accurately compiled, and is it**  
16 **operating as intended?**

17 A. Yes.

18

19 **Q. Did Big Rivers sell any SO<sub>2</sub> or NO<sub>x</sub> emission allowances during the**  
20 **expense months corresponding to the billing periods under review**  
21 **in this case?**

22 A. No, Big Rivers did not sell any SO<sub>2</sub> or NO<sub>x</sub> emission allowances during the



1 expense months corresponding to the billing periods under review. However,  
2 Big Rivers did receive \$55.29 from the U.S. Environmental Protection Agency  
3 (EPA) in May 2018 for its allocated share of proceeds from the EPA's 2018  
4 allowance auctions and \$52.36 from the EPA for its allocated share of  
5 proceeds from the EPA's 2019 allowance auctions. Big Rivers included in  
6 these proceeds in its ES filings for those months as proceeds from "Allowance  
7 Sales" on ES Form 2.00.

8  
9 **Q. Did Big Rivers recover any capital costs through its ES mechanism**  
10 **during the period under review?**

11 A. Yes. Pursuant to the Commission's October 1, 2012 Order, in Case No. 2012-  
12 00063, Big Rivers recovered capital costs through the monthly depreciation  
13 of its 2012 Plan projects included in the calculation of Total E(m) in its  
14 monthly ES filings during the period under review.

15  
16 **Q. Did Big Rivers earn a rate of return on any capital expenditures**  
17 **through its ES mechanism during the period under review?**

18 A. Yes. Pursuant to the Commission's October 1, 2012 Order, in Case No. 2012-  
19 00063, Big Rivers' earned a rate of return on its Environmental Compliance  
20 Rate Base (calculated on Form 2.00 of its monthly ES filing) equal to its  
21 monthly weighted average cost of debt plus the application of a Times  
22 Interest Earned Ratio (TIER) of 1.24. Detailed calculations of Big Rivers'

1 monthly Rates of Return on Environmental Compliance Rate Base for the  
2 last six expense months in the two-year review period in its response to Item  
3 4 of Staff's First Request.

4  
5 **Q. What Base Environmental Surcharge Factor (BESF) cost did Big  
6 Rivers use during the review period?**

7 A. Big Rivers had no environmental surcharge related costs included in its base  
8 rates during the review period (*i.e.*, Big Rivers' BESF during the period under  
9 review was 0.000000%).

10

11 **Q. Have the Members' pass-through mechanisms been accurately  
12 compiled, and are they operating as intended?**

13 A. The Members believe their pass-through mechanisms have been accurately  
14 compiled and are operating as intended.

15

16 **Q. Were the amounts charged under Big Rivers' ES mechanism during  
17 the review period fair, just, and reasonable?**

18 A. Yes.

19

20 **Q. Were the amounts charged under the Members' pass-through  
21 mechanisms during the review period fair, just, and reasonable?**

22 A. The Members believe the amounts charged under their pass-through

1 mechanisms are just and reasonable.

2

3 **Q. Do Big Rivers and its Members have additional over- or under-**  
4 **recovery amounts they believe need to be recognized?**

5 A. No. Big Rivers and its Members are not requesting any additional over- or  
6 under-recovery amounts. The normal over-/under-recovery carry-forward  
7 element of Big Rivers' ES mechanism is operating as intended.

8

9 **Q. Is Big Rivers proposing to incorporate an environmental surcharge**  
10 **amount into its existing base rates at this time?**

11 A. No. Big Rivers is not proposing to incorporate an environmental surcharge  
12 amount into its existing base rates at this time.

13

14 **Q. Does this conclude your testimony?**

15 A. Yes, it does.

**BIG RIVERS ELECTRIC CORPORATION**

**ELECTRONIC EXAMINATION BY THE PUBLIC SERVICE COMMISSION  
OF THE ENVIRONMENTAL SURCHARGE MECHANISM OF  
BIG RIVERS ELECTRIC CORPORATION  
FOR THE TWO-YEAR BILLING PERIOD ENDING JULY 31, 2019,  
AND THE PASS THROUGH MECHANISM OF ITS  
THREE MEMBER DISTRIBUTION COOPERATIVES  
CASE NO. 2020-00144**

**VERIFICATION**

I, Nicholas R. ("Nick") Castlen, verify, state, and affirm that I prepared or supervised the preparation of the Direct Testimony filed with this Verification, and that Direct Testimony is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

*Nick Castlen*

\_\_\_\_\_  
Nicholas R. ("Nick") Castlen

COMMONWEALTH OF KENTUCKY )  
COUNTY OF HENDERSON )

SUBSCRIBED AND SWORN TO before me by Nicholas R. ("Nick") Castlen on this the 5<sup>th</sup> day of June, 2020.

*Joy P. Parsley*

\_\_\_\_\_  
Notary Public, Kentucky State at Large

My Commission Expires \_\_\_\_\_

Notary Public, Kentucky State-At-Large  
My Commission Expires: July 10, 2022  
ID: 604480