

**ORIGINAL**



**COMMONWEALTH OF KENTUCKY**

**BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**In the Matter of:**

<b>ELECTRONIC APPLICATION OF</b>	)	
<b>BIG RIVERS ELECTRIC CORPORATION</b>	)	
<b>FOR A CERTIFICATE OF PUBLIC CONVENIENCE</b>	)	
<b>AND NECESSITY AUTHORIZING THE</b>	)	<b>Case No.</b>
<b>CONVERSION OF THE GREEN STATION UNITS TO</b>	)	<b>2021-00079</b>
<b>NATURAL GAS-FIRED UNITS AND AN ORDER</b>	)	
<b>APPROVING THE ESTABLISHMENT OF A</b>	)	
<b>REGULATORY ASSET</b>	)	

**Responses to the Office of the Attorney General's  
Initial Data Requests  
dated  
March 17, 2021**

**FILED: March 26, 2021**

**ORIGINAL**

**BIG RIVERS ELECTRIC CORPORATION**

**ELECTRONIC APPLICATION OF  
BIG RIVERS ELECTRIC CORPORATION  
FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY  
AUTHORIZING THE CONVERSION OF THE GREEN STATION UNITS TO  
NATURAL GAS-FIRED UNITS AND AN ORDER  
APPROVING THE ESTABLISHMENT OF A REGULATORY ASSET  
CASE NO. 2021-00079**

**VERIFICATION**

I, Nathaniel A. ("Nathan") Berry, 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.



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Nathaniel A. ("Nathan") Berry

COMMONWEALTH OF KENTUCKY )  
COUNTY OF HENDERSON )

SUBSCRIBED AND SWORN TO before me by Nathaniel A. ("Nathan") Berry on this the 26<sup>th</sup> day of March, 2021.



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Notary Public, Kentucky State at Large

Kentucky ID Number

04YNP16841

My Commission Expires

October 31, 2024

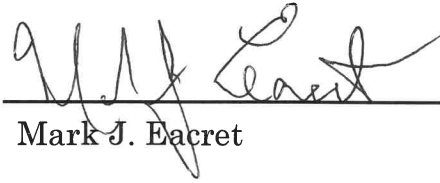


**BIG RIVERS ELECTRIC CORPORATION**

**ELECTRONIC APPLICATION OF  
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**VERIFICATION**

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

  
\_\_\_\_\_  
Mark J. Eacret

COMMONWEALTH OF KENTUCKY )  
COUNTY OF HENDERSON )

26<sup>th</sup> SUBSCRIBED AND SWORN TO before me by Mark J. Eacret on this the  
day of March, 2021.

  
\_\_\_\_\_  
Notary Public, Kentucky State at Large  
Kentucky ID Number KYNP 16841  
My Commission Expires October 31, 2024



**BIG RIVERS ELECTRIC CORPORATION**  
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**CASE NO. 2021-00079**


**VERIFICATION**

I, Michael S. ("Mike") Mizell, 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.

  
\_\_\_\_\_  
Michael S. ("Mike") Mizell

COMMONWEALTH OF KENTUCKY )  
COUNTY OF HENDERSON )

SUBSCRIBED AND SWORN TO before me by Michael S. ("Mike") Mizell on this the 26<sup>th</sup> day of March, 2021.

  
\_\_\_\_\_  
Notary Public, Kentucky State at Large  
Kentucky ID Number KYNP16841  
My Commission Expires October 30, 2024



**BIG RIVERS ELECTRIC CORPORATION**

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**VERIFICATION**

I, Michael T. ("Mike") Pullen, 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.



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Michael T. ("Mike") Pullen

COMMONWEALTH OF KENTUCKY )  
COUNTY OF HENDERSON )

SUBSCRIBED AND SWORN TO before me by Michael T. ("Mike") Pullen on this the 26<sup>th</sup> day of March, 2021.



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Kentucky ID Number

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**BIG RIVERS ELECTRIC CORPORATION**

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**VERIFICATION**

I, Paul G. Smith, 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.

*Paul Smith*

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Paul G. Smith

COMMONWEALTH OF KENTUCKY )  
COUNTY OF HENDERSON )

26<sup>th</sup> SUBSCRIBED AND SWORN TO before me by Paul G. Smith on this the  
day of March, 2021.

*Kathleen Riley*

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Notary Public, Kentucky State at Large

Kentucky ID Number

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**Response to the Office of the Attorney General's**  
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**dated March 16, 2021**

**March 26, 2021**

1 **Item 1)**     *Provide the projected costs of complying with the CCR and ELG*

2 *Rules for the Green units.*

3

4 **Response)** The projected capital costs for complying with the CCR and ELG Rules

5 for the Green units operating on natural gas are: ELG: none and CCR: \$44.8 million

6 (Green Ash Pond Closure).<sup>1</sup>

7

8

9 **Witness)**   Nathaniel A. Berry

10

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<sup>1</sup> See *In the Matter of: Application of Big Rivers Electric Corporation for Approval of Its 2020 Environmental Compliance Plan, Authority to Recover Costs Through a Revised Environmental Surcharge and Tariff, the Issuance of a Certificate of Public Convenience and Necessity for Certain Projects, and Appropriate Accounting and Other Relief*, P.S.C. Case No. 2019-00435, Application Direct Testimony of Michael T. Pullen at Page 33.

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1 **Item 2)**      *Confirm that the reason for the retirement of the coal generation*  
2 *components at the Green units is the need to close the coal ash pond in*  
3 *compliance with federal regulations imposed by the Environmental*  
4 *Protection Agency.*

5        *a. Rank from the most onerous to the least onerous the regulatory cost*  
6                *burdens that affected the continued operation of the Green units as*  
7                *coal fired units.*

8  
9 **Response)** Consistent with the *Disposal of Coal Combustion Residuals from*  
10 *Electric Utilities; A Holistic Approach to Closure Part A: Deadline To Initiate Closure*  
11 rule published in the Federal Register on August 28, 2020, Big Rivers was required  
12 to cease placing CCR and non-CCR waste streams into the Green Ash Pond “as soon  
13 as technically feasible, but not later than April 11, 2021” and to initiate closure of the  
14 pond.<sup>1</sup> Pursuant to 40 C.F.R. § 257.103(f) Big Rivers could file a “demonstration” to

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<sup>1</sup> 40 C.F.R. § 257.101(b)(1)(i) (“Except as provided by paragraph (b)(4) of this section, the owner or operator of an existing CCR surface impoundment that has not demonstrated compliance with the



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1 continue to receive CCR and non-CCR waste streams, for a limited period of time,  
2 and an alternative deadline to initiate closure of the Green Ash Pond if certain,  
3 specific requirements were met. After a careful review of the available options and  
4 their applicability to the Green units, Big Rivers submitted a demonstration  
5 (explained below) to close the Green Ash Pond under 40 C.F.R. § 257.103(f)(2)<sup>2</sup> to the  
6 United States Environmental Protection Agency and the Kentucky Energy and  
7 Environment Cabinet in late November 2020. This section is only available to  
8 facilities that are permanently ceasing coal-fired operations of boilers by a date  
9 certain.

---

location standard specified in § 257.60(a) must cease placing CCR and non-CCR wastestreams into such CCR unit as soon as technically feasible, but no later than April 11, 2020, and close the CCR unit in accordance with the requirements of § 257.102”).

<sup>2</sup> 40 C.F.R. § 257.103(f) (“Notwithstanding the provisions of § 257.101(a) and (b)(1), a CCR surface impoundment may continue to receive the waste specified in paragraph (f)(1) or (2) of this section, provided the owner or operator submits a demonstration that the criteria in either paragraph (f)(1) or (2) of this section have been met. The demonstration must be submitted to the Administrator or the Participating State Director no later than the relevant deadline in paragraph (f)(3) of this section. The Administrator or the Participating State Director will act on the submission in accordance with the procedures in paragraph (f)(3) of this section”).

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1           In this demonstration, which justified the date by which the Green ash pond  
2 would cease receipt of waste in order to still meet the closure deadline, Big Rivers  
3 was required to provide detailed information about, among other things, why an  
4 extension to initiate closure was required. In this demonstration, Big Rivers provided  
5 evidence to support its request to cease receipt of waste and initiate closure activities  
6 for the Green ash pond by June 1, 2022. Big Rivers has not received comments from  
7 either agency as of the date of this response, but is moving forward with preparing  
8 the final closure plan for the Green ash pond in anticipation of beginning closure on  
9 June 1, 2022. Closure activities for the pond are required to be completed by October  
10 17, 2023.<sup>3</sup>

11           a. From most onerous to least onerous, the regulatory cost burdens that  
12           affected the continued operation of the Green units as coal fired units  
13           include:

---

<sup>3</sup> 40 C.F.R. § 257.103(f)(2)(iv)(A) (“The coal-fired boilers must cease operation and closure of the impoundment must be completed within the following timeframes: (A) For a CCR surface impoundment that is 40 acres or smaller, the coal-fired boiler(s) must cease operation and the CCR surface impoundment must complete closure no later than October 17, 2023”).

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- 1           1. Steam Electric Power Generating Effluent Guidelines and Standards  
2                   (40 CFR Part 423) and  
3           2. Standards for the Disposal of Coal Combustion Residuals in Landfills  
4                   and Surface Impoundments (40 CFR Part 257 Subpart D).

5

6

7 **Witness)**   Michael S. Mizell

8

**BIG RIVERS ELECTRIC CORPORATION**

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1 **Item 3)** *Provide the estimate of avoided cost for not having to undertake*  
2 *ELG and CCR compliance at Green Station. Provide also any available*  
3 *estimate of avoided costs for: (i) any additional environmental compliance;*  
4 *and (ii) O&M that would have been incurred during the next 7 years, but for*  
5 *the re-firing of the Green units.*

6

7 **Response)** The avoided estimated capital cost for not having to convert the bottom  
8 ash waste removal system to a temporary dry system design, as required by the ELG  
9 Rule, is \$8.04 million.

10 (i) The additional avoided environmental compliance cost for Green Station  
11 after switching to natural gas is \$81.89 million<sup>1</sup> over the next seven (7)  
12 years.

13

14 (ii) Big Rivers will avoid approximately \$138.89 million in production costs  
15 (on a net present value basis) over the seven years study period by  
16 converting Green to natural gas.<sup>2</sup>

17 **Witness)** Nathaniel A. Berry

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<sup>1</sup> Related to Mercury and Air Toxics Standard (“MATS”) and SO<sub>2</sub> compliance

<sup>2</sup> See Exhibit Pullen-2 attached to Big Rivers’ Application in the matter.

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1 **Item 4)**     *Explain why it is more economical for BREC to convert the plants*  
2 *from coal-firing to gas-firing as opposed to continuing the operation of the*  
3 *plants as coal units.*

4

5 **Response)** From a capacity outlook the total present value of fixed and capital costs  
6 of converting Green Station to natural gas is half of keeping Green Station on coal.  
7 See Exhibit Pullen-2 attached to the Application in this matter.

8

9

10 **Witness)**   Nathanial A. Berry

11

**BIG RIVERS ELECTRIC CORPORATION**  
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1 **Item 5)**     *Provide the approximate length of the gas supply pipeline that*  
2 *will connect Green Station to the nearest gas main capable of supplying the*  
3 *pressure and volume necessary for the proposed CPCN.*

4

5 **Response)** The approximate length of the gas supply pipeline that will connect  
6 Green Station to the nearest gas main capable of supplying the necessary pressure  
7 and volume is 2,000 feet.

8

9

10 **Witness)**   Nathanial A. Berry

11

**BIG RIVERS ELECTRIC CORPORATION**  
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1 **Item 6)**     *Explain the types of permits BREC will have to obtain to*  
2 *construct the gas supply pipeline to Green Station, and the projected cost of*  
3 *obtaining those permits.*

4

5 **Response)** The gas supply pipeline to Green Station will be owned and constructed  
6 by Texas Gas Transmission, LLC as a part of its overall gas system and will connect  
7 to the Big Rivers gas supply infrastructure on the Green Station property. As such,  
8 Big Rivers will not have to obtain any permits relating to the construction of the  
9 pipeline as that will be handled by Texas Gas Transmission, LLC.

10

11

12 **Witness)**   Michael S. Mizell

13

**BIG RIVERS ELECTRIC CORPORATION**  
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1 **Item 7)**     *Explain the types of permits BREC will have to obtain for the*  
2 *retrofit construction of the units from coal to gas, and the anticipated cost of*  
3 *obtaining or modifying the necessary permits.*

4

5 **Response)** Numerous permits will need to be modified or obtained to effectuate the  
6 construction process to convert the units from coal to gas, and Big Rivers is currently  
7 in the process of determining the full list of potentially impacted permits. Many of  
8 these non-environmental permit modifications or applications, depending on the  
9 subject matter, may be handled by the contractors Big Rivers engages during the  
10 construction process. At present Big Rivers is aware of the following environmental  
11 permit modifications that will be required: National Pollutant Discharge Elimination  
12 System (NPDES) permit and Clean Air Act Title V Operating permit. Big Rivers is  
13 currently in the process of determining the anticipated costs of modifying these  
14 permits but it is not expected that they will have a significant impact on the  
15 anticipated project budget.



**BIG RIVERS ELECTRIC CORPORATION**

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**March 26, 2021**

1

2

3 **Witness)** Michael S. Mizell

4

**BIG RIVERS ELECTRIC CORPORATION**  
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1 **Item 8)**     *In the event the Commission approves the CPCN, explain whether*  
2 *it might be possible to extend the projected 7-year lifespan of the re-fired*  
3 *Green Units.*

4     *a. Provide the projected useful lives of the Green units' steam turbines,*  
5     *electrical generators, and other equipment and plant that will*  
6     *remain once the requested gas re-firing has been completed.*

7     *b. For each such item of equipment and plant, explain how the*  
8     *projected remaining useful life was derived. If the remaining useful*  
9     *lives were determined by some means other than the most recent*  
10     *depreciation study, explain.*

11

12 **Response)** Assuming the Green units operate based upon the hours submitted  
13 within Big Rivers' models, and parts are available for continuous maintenance, an  
14 expected lifespan past the full planning period covered by Big Rivers' 2020 IRP is  
15 reasonable.

**BIG RIVERS ELECTRIC CORPORATION**

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1 a. and b.

2 Please the response above.

3

4

5 **Witness)** Paul G. Smith

6

**BIG RIVERS ELECTRIC CORPORATION**  
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1 **Item 9)**     *In the event the Commission approves the CPCN, explain whether*  
2 *there will be stranded costs at the end of the projected seven-year depreciable*  
3 *lifespan for the gas conversion assets. If so, provide the sum of those costs.*

4

5 **Response)** If the Commission approves Big Rivers' application in Case No. 2021-  
6 00079, there will be no stranded costs, as Big Rivers is asking to recover the  
7 remaining net book value of the assets that will be retired through its new TIER  
8 credit mechanism approved by the Commission in Case No. 2020-00064.<sup>1</sup> The  
9 remaining net book value of the assets that will no longer be utilized after the natural  
10 gas conversion are shown in Exhibit Smith-5 of the Direct Testimony of Paul G. Smith  
11 attached as exhibit C to the Application in this matter.

12

13 **Witness)**     Michael T. Pullen

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<sup>1</sup> See *In the Matter of: Electronic Application of Big Rivers Electric Corporation for Approval to Modify its MRSM Tariff, Cease Deferring Depreciation Expenses, Establish Regulatory Assets, Amortize Regulatory Assets, and Other Appropriate Relief*, P.S.C. Case No. 2020-00064, Order (June 25, 2020).

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1 **Item 10)** *Explain how BREC will obtain replacement power between the*  
2 *time frame that the existing coal-firing components of the Green units are*  
3 *removed and decommissioned, and the construction and installation of the*  
4 *gas-firing components.*

5

6 **Response)** Under the current schedule, Green Unit 1 will be out of service from  
7 [REDACTED]. Green Unit 2 will be on outage from [REDACTED]  
8 [REDACTED]. Those are [REDACTED]. Any energy  
9 shortfall will be purchased in the hourly MISO market. Big Rivers will hedge any  
10 projected purchases to protect Member-Owners from hourly price volatility.

11

12

13 **Witness)** Mark J. Eacret

14

**BIG RIVERS ELECTRIC CORPORATION**  
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1 **Item 11)**    *Explain whether BREC will have to obtain any sort of additional*  
2 *regulatory approvals for the decommissioning of the coal-firing components*  
3 *of the Green units, including from RUS.*

4

5 **Response)** Yes, the conversion of the Green Station from coal to natural gas  
6 requires RUS approval. Big Rivers received the attached correspondence from RUS  
7 signed March 19, 2021, confirming RUS has no objections to the proposed conversion  
8 of the Green Station from coal to natural gas fired.

9

10

11 **Witness)**    Paul G. Smith

12



**Rural Development**

Electric Programs  
Rural Utilities Service

1400 Independence Ave SW  
Room 4133 – STOP 1560  
Washington, DC 20250

Voice: 202.720.9545

Robert W. Berry  
President and Chief Executive Officer  
Big Rivers Electric Corporation  
P.O. Box 24  
Henderson, KY 42419-0024

Dear Robert Berry,

Rural Utilities Service (RUS) received Big Rivers Electric Corporation (Big Rivers) letter dated March 2, 2021, signed by Jennifer Stone, requesting RUS review pursuant to the First Amended and Restated Consolidated Loan Contract between Big Rivers and the United States of America dated as of January 2, 2018 (the “Loan Contract”), Sections 6.2(a) and 9.1 for the expenditure of \$45.3 million for the project to convert the generating units at Robert D. Green Generating Station (“Green Station”) from coal-fired to natural gas-fired units.

In order to meet the October 31, 2023 deadline for the closure of the Green Station ash pond under the federal Coal Combustion Residuals (“CCR”) rule, Big Rivers must cease coal-fired generation at the Green Station by June 1, 2022. The proposed project to convert Green Station’s two generating units to burn natural gas is the least cost option with the lowest risk to reliably address the projected capacity available to supply its members’ and customers’ power requirements. Without Green Station’s existing units, Big Rivers said they will not have the capacity necessary to meet the requirements of its native load (once the construction of the Nucor plant is complete) and the existing contracts with Owensboro Municipal Utilities and Kentucky Municipal Energy Agency.

Big Rivers estimates the total capital project cost is \$45.3 million which consists of \$18.5 million for gas burner design and supply, \$19.8 million for gas burner construction, and \$7.0 million for the installation of the gas pipeline infrastructure. Big Rivers indicated in the March 2, 2021 letter, they intend to fund the project with internal funds or funds available from sources other than loans made or guaranteed by RUS. Big Rivers estimates that the proposed project can be completed, and the Green Station’s two units can begin operation as gas-fired units by June of 2022.

RUS has reviewed the request and understands that Big Rivers has filed before the Kentucky Public Service Commission (KPSC) for a certificate of public convenience and necessity in Case No. 2021-00079.

**Case No. 2021-00079**

**Attachment to Response to AG 1-11**

**Witness: Paul G. Smith**

Per Section 6.2(a) and 9.1, RUS has no objections to the proposed conversion of the Green Station from coal to natural gas fired; however, this does not constitute RUS loan approval.

If you have any questions, please contact Art Gile or my staff at 202-819-2499.

Sincerely,

**CHRISTOPHER MCLEAN** Digitally signed by CHRISTOPHER  
MCLEAN  
Date: 2021.03.19 16:32:04 -04'00'

**CHRISTOPHER A. MCLEAN**  
Assistant Administrator  
Electric Programs  
Rural Utilities Service

cc: Jennifer Stone



**BIG RIVERS ELECTRIC CORPORATION**  
**ELECTRONIC APPLICATION OF**  
**BIG RIVERS ELECTRIC CORPORATION**  
**FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY**  
**AUTHORIZING THE CONVERSION OF THE GREEN STATION UNITS TO**  
**NATURAL GAS-FIRED UNITS AND AN ORDER**  
**APPROVING THE ESTABLISHMENT OF A REGULATORY ASSET**  
**CASE NO. 2021-00079**

**Response to the Office of the Attorney General's**  
**Initial Data Requests**  
**dated March 16, 2021**

**March 26, 2021**

1 **Item 12)**     *Confirm that the \$67.3 million of remaining net book value of the*  
2 *coal-firing assets to be retired at the two Green units represents stranded*  
3 *costs.*

4

5 **Response)** Please see Big Rivers' response to Item 9 of the Attorney General's  
6 Initial Data Requests.

7

8

9 **Witness)**     Paul G. Smith

10

**BIG RIVERS ELECTRIC CORPORATION**

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1 **Item 13)** *In the event the Commission approves BREC's petition for a*  
2 *regulatory asset to recover the \$67.3 million in undepreciated value of the*  
3 *coal-firing assets the Company proposes to prematurely retire on an*  
4 *amortized basis through 2043, provide the monthly bill impact to the average*  
5 *retail residential customer.*

6

7 **Response)** Because Big Rivers is proposing to recover the proposed regulatory asset  
8 through existing rates utilizing the new TIER credit mechanism approved in Case  
9 No. 2020-00064,<sup>1</sup> there will be no monthly bill impact to the average retail residential  
10 customer, resulting from the Commission granting the relief Big Rivers seeks in this  
11 matter based on Big Rivers' timely decision to retire the coal-firing assets in  
12 compliance with federal regulations imposed by the Environmental Protection  
13 Agency.

---

<sup>1</sup> See *In the Matter of: Electronic Application of Big Rivers Electric Corporation for Approval to Modify its MRSM Tariff, Cease Deferring Depreciation Expenses, Establish Regulatory Assets, Amortize Regulatory Assets, and Other Appropriate Relief*, Case No. 2020-00064. Application filed February 28, 2020.

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1

2 **Witness)** Paul G. Smith

3

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1 **Item 14)** *Confirm that BREC is requesting that the Commission include*  
2 *the proposed regulatory asset in the list of “Smelter Loss Mitigation*  
3 *Regulatory Assets” that the Company is amortizing pursuant to the*  
4 *Commission’s final order in Case No. 2020-00064.*

5

6 **Response)** Confirmed.

7

8

9 **Witness)** Paul G. Smith

10

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1 **Item 15)** *Explain whether the premature retirement of the coal firing*  
2 *components of the Green units could allow BREC to utilize any pollution*  
3 *control credits to be applied for the Wilson generating unit. If so, provide the*  
4 *monetary value thereof, if determinable.*

5

6 **Response)** Pursuant to federal regulations, once the Green units become inactive,  
7 they will continue to receive annual SO<sub>2</sub> and annual NO<sub>x</sub> allowance credits for a  
8 period of five (5) years from the start of the unit's inactivity. Therefore, if the Green  
9 Units stop operating in June of 2022 as planned, Big Rivers will continue to receive  
10 allowances related those units until approximately 2027. Subject to United States  
11 Environmental Protection Agency regulations, these "banked" allowances are eligible  
12 for use at any Big Rivers facility. A precise calculation of any monetary value of those  
13 future allowances at this point is not feasible as the market pricing for such  
14 allowances fluctuates on a monthly basis.

15

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**March 26, 2021**

1

2 **Witness)** Michael S. Mizell

3

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1 **Item 16)** *In the event the Commission approves the CPCN, explain whether*  
2 *BREC will have to undertake any type of winterization of any of the gas and*  
3 *water supply components of the re-fired Green units. If so, provide the*  
4 *applicable cost projections.*

5

6 **Response)** Big Rivers will have to winterize some air and gas supply components  
7 with the conversion of the Green Units to natural gas. Specifically, Big Rivers will  
8 need to insulate and heat trace the gas regulator pilot sensing lines and safety relief  
9 valve pilot and drain lines on the high pressure control skid out in the gas fuel yard,  
10 insulate and heat trace the underground gas line low point drain, and insulate and  
11 heat trace the MATS<sup>1</sup> air compressors discharge and drain lines, MATS air dryers  
12 drain lines, and MATS air receiver drain lines. These are the only identified lines in  
13 the system that could have the potential to freeze. Additionally, there will be a  
14 weatherization hut for the gas fuel yard electrical/control components and a weather

---

<sup>1</sup> MATS = Mercury Air Toxics Standards

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**March 26, 2021**

1 enclosure for the gas odorizer skid control panel. Big Rivers estimates an  
2 approximate cost of \$30,000 to winterize these components, which is included in the  
3 \$45.3 million estimated total capital cost of the proposed project.

4

5

6 **Witness)** Nathaniel A. Berry

7



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1 **Item 17)**    *In the event the Commission approves the CPCN, explain whether*  
2 *BREC anticipates the re-fire Green units will continue to be dispatched as*  
3 *frequently as they are today.*

4

5 **Response)** Big Rivers anticipates that the re-fired Green units will not be  
6 dispatched as frequently as they are today.

7

8

9 **Witness)**    Nathaniel A. Berry

10

**BIG RIVERS ELECTRIC CORPORATION**

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**Response to the Office of the Attorney General's  
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1 **Item 18)** *Explain whether BREC conducted any analysis regarding the*  
2 *cost-effectiveness of constructing a smaller natural gas combined cycle unit*  
3 *than the one originally envisioned in BREC's IRP Case No. 2020-00299*  
4 *together with the permanent retirement of the Green units, in comparison to*  
5 *the cost-effectiveness of retrofitting the Green units for gas firing.*

6

7 **Response)** Big Rivers conducted an analysis of a smaller natural gas combine cycle  
8 unit, but the higher heat rate and construction cost proved that option uneconomical.  
9 Big Rivers used United States Energy Information Administration data sources to  
10 determine the cost to build a new natural gas combine cycle plant.

11

12

13 **Witness)** Nathaniel A. Berry

14

**BIG RIVERS ELECTRIC CORPORATION**

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1 **Item 19)** *Provide a discussion regarding any potential financial*  
2 *ramifications of the MISO Capacity Zonal Resource Credit being reduced*  
3 *from 432 MW (Green units being coal-fired) to 373 MW (Green units being gas-*  
4 *fired).*

5

6 **Response)** The reduction in expected capacity resource credit from converting  
7 Green units from coal-fired to gas-fired will reduce Big Rivers' portfolio ZRC balance.  
8 If the sum of ZRCs from Big Rivers' portfolio of resources falls short of MISO's  
9 Planning Reserve Margin Requirement ("PRMR"), Big Rivers must purchase ZRC  
10 either bilaterally or from the MISO Planning Reserve Auction at the market clearing  
11 price in order to meet the MISO PRMR.

12

13

14 **Witness)** Mark J. Eacret

15

**BIG RIVERS ELECTRIC CORPORATION**  
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1 **Item 20)** *Given the dwindling number of BREC's electric production*  
2 *assets, explain whether the Company has considered a financial hedge*  
3 *product for the proposed non-firm gas supply contract for the Green units.*

4

5 **Response)** Yes, a financial hedge product was considered but determined to be  
6 uneconomic.

7

8

9 **Witness)** Paul G. Smith

10