

**ORIGINAL**



**COMMONWEALTH OF KENTUCKY**

**BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**In the Matter of:**

**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**

**Responses to Commission Staff's  
First Request for Information  
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.



---

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.



---

Notary Public, Kentucky State at Large

Kentucky ID Number

04YNP16841

My Commission Expires

October 31, 2024



**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, 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 KVNP 16841  
My Commission Expires October 31, 2024



**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, 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**

**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, 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.



---

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.



---

Notary Public, Kentucky State at Large

Kentucky ID Number

KYNP 16841

My Commission Expires

October 31, 2024



**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, 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*

---

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*

---

Notary Public, Kentucky State at Large

Kentucky ID Number

KYNP16841

My Commission Expires

October 30, 2024

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 **Item 1)**      *Refer to the Direct Testimony of Michael T. Pullen (Pullen Direct*  
2 *Testimony), page 8, line 5, through page 9, line 2.*

3      *a.    Identify the specific regulation(s) and language that establish the*  
4                    *deadline of June 1, 2022, by which the Green Station ash pond must*  
5                    *cease receiving Coal Combustion Residuals (CCR) material.*

6      *b.    Identify the specific regulation(s) and language that establish the*  
7                    *deadline of October 31, 2023, by which the Green Station ash pond*  
8                    *closure must be completed.*

9      *c.    If the deadlines in the relevant regulations are contingent upon the*  
10                   *occurrence or nonoccurrence of some event, such as the requirement*  
11                   *in 40 C.F.R. § 257.103(a)(3) that closure be completed within five*  
12                   *years of an initial certification, identify the event that BREC*  
13                   *contends triggered the deadline, and when it occurred.*

14

15

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 **Response)**

- 2 a. Consistent with the *Disposal of Coal Combustion Residuals from Electric*  
3 *Utilities; A Holistic Approach to Closure Part A: Deadline To Initiate*  
4 *Closure* rule published in the Federal Register on August 28, 2020 (the  
5 “*August 28, 2020, CCR Rule*”), closure of the Green Ash Pond must be  
6 completed no later than October 17, 2023,<sup>1</sup> per 40 C.F.R. § 257.103(f)(2).  
7 There is no specific deadline in the August 28, 2020, CCR Rule requiring  
8 facilities to cease placing CCR material in surface impoundments when  
9 closing the surface impoundment under the provisions of 40 C.F.R. §  
10 257.103(f)(2). However, to adhere to the October 17, 2023, closure deadline,  
11 Big Rivers must begin physical closure of the pond by June 1, 2022.
- 12 b. Per 40 C.F.R. § 257.103(f)(2)(iv)(A), “The coal-fired boilers must cease  
13 operation and closure of the impoundment must be completed within the  
14 following time frames: (A) For a CCR surface impoundment that is 40 acres

---

<sup>1</sup> Big Rivers’ Application in this matter contained a clerical error, as the correct date is October 17, 2023.

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1           or smaller, the coal-fired boiler(s) must cease operation and the CCR  
2           surface impoundment must complete closure no later than October 17,  
3           2023.” The Green ash pond is approximately 26 acres in size; therefore, the  
4           closure deadline in subparagraph (A) referenced above applies to this  
5           particular disposal unit.

6           c. The provisions in 40 C.F.R. § 257.103(a)(3), referenced by the Commission  
7           Staff's request, apply to CCR landfills and not CCR surface impoundments  
8           (i.e., ash ponds). Closure requirements for surface impoundments begin at  
9           40 C.F.R. § 257.103(f) in the most recent version of the rule. Big Rivers  
10          submitted a Demonstration Package to the United States Environmental  
11          Protection Agency and the Kentucky Energy and Environment Cabinet in  
12          late November 2020 to close the Green ash pond, pursuant to 40 C.F.R. §  
13          257.103(f)(2). See “*Facilities that have submitted a demonstration for*  
14          *section 257.103(f)(2): Permanent cessation of a Coal-Fired Boiler(s) by a*  
15          *Date Certain*” at <https://www.epa.gov/coalash/coal-combustion-residuals->

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1           [ccr-part-implementation](#).   Big Rivers has not received comments from  
2           either agency as of the date of this response, but is moving forward with  
3           preparing the final closure plan for the Green ash pond in anticipation of  
4           beginning closure on June 1, 2022.

5

6

7 **Witness)**   Michael T. Pullen

8

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

- 1 Item 2) *Refer to Pullen Direct Testimony, page 11, lines 5–12.*
- 2 a. *Describe in specific detail BREC's efforts to find partners for a 592*
- 3 *MW natural gas combined cycle (NGCC) unit and explain what lead*
- 4 *BREC to first conclude that a NGCC could be commercial by 2024.*
- 5 b. *Explain in specific detail the basis for BREC's conclusion "that*
- 6 *finding partners and constructing the NGCC unit will take several*
- 7 *years."*

8

9 **Response)**

- 10 a. Over the course of the summer of 2020, Big Rivers reached out to individual
- 11 potential partners to determine if they would be interested in participating
- 12 in discussions of the NGCC unit and held two or three conference calls with
- 13 entities that Big Rivers had identified as potential partners. What Big
- 14 Rivers found was that, for a variety of reasons, none of the parties were
- 15 willing to make a commitment at this time. Some had other approaches to

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 generation additions that they preferred, some preferred different  
2 locations, and some were not ready to commit to a partnership at that time,  
3 but potentially at a later date. Big Rivers plans to continue to explore the  
4 option of forming a coalition of partners to invest in a 592 MW NGCC unit  
5 located at either the Sebree or Coleman sites. During verbal discussion  
6 with an original equipment manufacturer (OEM), it was indicated to Big  
7 Rivers that a thirty-six (36) month timeframe from purchase order to  
8 commercial operation date is achievable. Therefore, a late 2024 commercial  
9 date seemed achievable when Big Rivers began discussions with potential  
10 partners in the summer of 2020.

11 b. Some entities see the capacity and energy markets as a better option for at  
12 least the next five (5) years, and others were not at a point in their resource  
13 planning process to be able to make a decision.

14

15 **Witness)** Michael T. Pullen

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 **Item 3)**      *Refer to Pullen Direct Testimony at page 12, line 5, through page*  
2 *13, line 6.*

3      *a. State whether and how BREC included the Owensboro Municipal*  
4 *Utilities (OMU) and Kentucky Municipal Energy Agency (KyMEA)*  
5 *load in the modeling for its 2020 Integrated Resources Plan (IRP)*  
6 *analysis in which BREC determined that the proposed conversion*  
7 *project was uneconomical.*

8      *b. State whether BREC now contends that the proposed conversion*  
9 *project is:*

10      *1. Economic in the short term (over the seven-year period from 2023*  
11 *to 2029) if the OMU and KyMEA load is excluded from modeling;*

12      *2. Economic in the long term (the period assessed by the IRP) if the*  
13 *OMU and KyMEA load is excluded from modeling;*

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1           ***3. Economic in the short term if the OMU and KyMEA load is***  
2                           ***included in the modeling, through the end of the current***  
3                           ***contracts; and***

4           ***4. Economic in the long term if the OMU and KyMEA load is***  
5                           ***included in the modeling, through the end of the current***  
6                           ***contracts.***

7           ***c. Explain each basis for each of BREC's responses to subpart b of this***  
8                           ***request.***

9

10 **Response)**

11           a. Big Rivers' non-member contracts with OMU and KYMEA were not  
12                           included in Big Rivers' 2020 IRP models which modeled the 20-year period  
13                           from 2024 to 2043.

14           b. Excluding or including the OMU or KYMEA load does not change the short-  
15                           term or long-term ST Plan model results. It just changes the amount of

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 market risk. In the Green Evaluation short-term ST Plan models, the  
2 economics of the Green Unit natural gas conversion were found to be  
3 comparable or nearly equal to the market without market risk. Thus, Big  
4 Rivers is recommending the conversion of the Green Units to natural gas.

5 If MISO requires firm gas supply for a unit to be eligible as a capacity  
6 resource, then the Green Unit natural gas conversion is uneconomic versus  
7 the market. If non-firm gas requirements remain, then the Green natural  
8 gas conversion is even more economic in the long-term than the short-term.

9 c. Please see response to b.

10

11

12 **Witness)** Michael T. Pullen

13

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1 **Item 4)**     *Refer to Pullen Direct Testimony, page 16, lines 2–4. Also refer to*  
2 *the Direct Testimony of Paul G. Smith (Smith Direct Testimony), page 12,*  
3 *lines 5–8. Explain the benefit derived from continued dynamic voltage*  
4 *support in the Sebree area transmission system if the Green Station*  
5 *conversion project is approved and what upgrades would be required to*  
6 *address reliability issues in the Sebree area if Green Station was idled*  
7 *without additional generation added to the Sebree complex.*

8

9 **Response)** The dynamic voltage support provided by generation allows desired  
10 system voltages to be maintained over a wide range of system conditions. As an  
11 alternative to the dynamic voltage support, static voltage support can be provided by  
12 shunt capacitors. The shunt capacitors are switched in and out of service in response  
13 to changing system conditions. While generation is able to provide a range of VARs,  
14 shunt capacitors provide a fixed amount. This results in less flexibility as compared

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 to dynamic generation support and can result in larger than ideal voltage shifts as  
2 the capacitors are switched in and out of service.

3 

4 

5 

6 

7 

8 

9

10

11 **Witness)** Michael T. Pullen

12

---

<sup>1</sup> EHV = Extra High Voltage.

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 **Item 5)**     *Refer to Pullen Direct Testimony, page 19, lines 3-7. State*  
2 *whether the bids for construction will include decommissioning costs.*

3

4 **Response)** The bids for construction for this project may include some  
5 decommissioning costs. For example, some equipment within the flue gas  
6 desulfurizer absorber tower will need to be removed to allow for proper operation on  
7 gas. The equipment that is removed will be retired and decommissioned. Work on  
8 the flue gas desulfurizer absorber tower is included in the proposed estimated project  
9 cost and will be part of the construction bidding. To clarify, much of the equipment  
10 associated with the Green Station boilers, turbine, generator, and associated  
11 auxiliary equipment will remain useful and in service until such time as the Green  
12 Station units are retired at the end of their useful life.

13         On the other hand, the decommissioning costs related to the removal and  
14 disposal of the coal handling assets, ash system, and other equipment being retired  
15 are not in the proposed estimated project cost. As in the decommissioning of

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 Coleman, there will be a bid process for the decommissioning of the Green assets  
2 being retired.

3

4

5 **Witness)** Michael T. Pullen

6

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 **Item 6)**      *Refer to the Direct Testimony of Michael Eacret (Eacret Direct*  
2 *Testimony), page 9, lines 2-15.*

3      *a. Provide a copy of any request for proposal or any similar request for*  
4      *a bid for capacity sent to market participants, and identify the date*  
5      *on which such requests were first sent.*

6      *b. Provide a list of the market participants who made offers;*

7      *c. Identify the price offered by each participant, the capacity offered*  
8      *by the market participant, the term length of each offer, and the*  
9      *MISO zone of each market participant that made an offer; and*

10      *d. Identify and explain each credit or other counterparty risk, if any,*  
11      *on which BREC relied on to determine that a specific offer should*  
12      *not be accepted.*

13

14

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 **Response)**

2 a. No Request for Proposals was issued. Offers and price data were obtained  
3 through interactions with individual potential counterparties. Some of  
4 these interactions were between Big Rivers and the counterparty and some  
5 between ACES, on behalf of Big Rivers, and the counterparty. See the  
6 **CONFIDENTIAL** attachment to this response for a summary of these  
7 interactions.

8 b. See the confidential attachment provided in response to sub-part a.

9 c. See the confidential attachment provided in response to sub-part a.

10 d. There were no transactions which would have been accepted were it not for  
11 credit or other counterparty risk, but several counterparties would have  
12 presented challenges. [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**Witness)** Mark J. Eacret

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 **Item 7)**      *Refer to Smith Direct Testimony, page 9, lines 2-15.*

2      *a. Confirm that the proposed useful life for the converted Green units*  
3      *is not based on the period during which the units could remain*  
4      *operational if there was a need for capacity.*

5      *b. Assuming the generation capacity of the converted Green units is*  
6      *needed indefinitely, provide the expected useful life of the converted*  
7      *Green units.*

8

9 **Response)**

10      a. Confirmed.

11      b. If economical, the useful life of the Green units could be extended, likely to  
12      2043.

13

14

15 **Witness)**      Paul G. Smith

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1 **Item 8)** *Refer to the Smith Testimony, Exhibit Smith-2. For each*  
2 *category, explain the difference in assets to be retired and assets remaining*  
3 *in-service.*

4

5 **Response)** See the following table for the types of assets to be retired:

<b>Big Rivers Electric Corporation Case No. 2021-00079 Smith Direct Testimony, Exhibit Smith-2</b>	
<b>Description</b>	<b>Assets to be Retired</b>
Land and Land Rights	None
Structures & Improvements	Coal handling building; Barge unloader structure
Boiler Plant Equipment	Truck scale & unloading equipment, Ignitor controls, Pulverizer; Conveyor belt, Barge unloader equipment; Fuel burner; Coal silos; Precipitators; Ash handling; Piping; MATS equipment; FGD
Generator Units	Pump bleed system
Accessory Equipment	Barge unloader transformer
Miscellaneous	Rough terrain 50 ton Terex RT450 crane

6

7 Assets remaining in-service include turbine and generator systems,  
8 administration building, induced draft fans, primary air fans, forced draft fans, boiler

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 system (minus soot blowers), cooling towers, circulating water pumps, condenser,  
2 turbine auxiliary equipment, condensate pumps, boiler feed pumps, and feedwater  
3 heaters.

4

5

6 **Witness)** Nathaniel A. Berry

7

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1 **Item 9) Refer to BREC's Application in Case No. 2020-00183,<sup>2</sup> paragraphs**  
2 **11–12 in which it argued that the solar purchase power agreements (PPAs)**  
3 **would reduce the credit risk associated with its heavy reliance on coal**  
4 **generation by reducing the coal generation in its portfolio from 78 percent to**  
5 **63 percent, including 454 MW of coal generation at the Green station. Also**  
6 **refer to the Direct Testimony of Mark Eacret in Case No. 2020-00183<sup>3</sup> at page**  
7 **14, line 8, through page 15, line 14, in which BREC's forecasted capacity**  
8 **position is discussed based on the assumption that there would be "no**  
9 **retirement of either Wilson or the Green units." Finally, refer to BREC's**  
10 **response to Commission Staff's First Request for Information in Case No.**  
11 **2020-00183,<sup>4</sup> Item 16, in which BREC indicated that Green Units 1-2 had an**  
12 **expected remaining useful life to 2041. Explain why BREC would evaluate**

---

<sup>2</sup> Case No. 2020-00183, *Electronic Application of Big Rivers Electric Corporation for Approval of Solar Power Contracts* (filed June 24, 2020), Application.

<sup>3</sup> *Id.*

<sup>4</sup> Case No. 2020-00183, *Electronic Application of Big Rivers Electric Corporation for Approval of Solar Power Contracts* (filed Aug. 14, 2020), Response to Commission Staff's First Request for Information.

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1 *and support the solar PPAs based on the assumption that the Green station*  
2 *coal generation units would not be retired when it was aware of the CCR*  
3 *rules that it contends require the Green coal generation units to be retired by*  
4 *June 2022.*

5

6 **Response)** An assumption about the future of the Green units was necessary to  
7 calculate Big Rivers' capacity position with and without the solar contracts, but it  
8 was not central to the support of the economic argument for the solar contracts. Big  
9 Rivers was going to need additional capacity for a large, new customer and the value  
10 of the capacity, energy, and environmental attributes of the solar contracts were  
11 greater than their cost. As shown in Big Rivers' 2020 IRP, solar was the least cost  
12 solution for the additional capacity, whether or not Green continued to operate, and  
13 solar would be the least cost resource compared to constructing new or converting  
14 base load units.

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1           Additionally, at the time that Big Rivers filed its application and testimony in  
2 Case No. 2020-00183, the U.S. Environmental Protection Agency was still finalizing  
3 its revised rules regarding the deadline to initiate closure of certain unlined surface  
4 impoundments such as the Green ash pond. In July of 2020, Big Rivers became aware  
5 of certain changes that EPA was proposing to make to its final rule, but EPA did not  
6 issue its final rule, *Disposal of Coal Combustion Residuals from Electric Utilities; A*  
7 *Holistic Approach to Closure Part A: Deadline To Initiate Closure*, in the Federal  
8 Register until August 28, 2020. It was only after reviewing the final rule and its  
9 impacts on the Green units that Big Rivers made the determination that the Green  
10 units could no longer operate as coal-fired.

11           Once it became clear that coal-fired generation at Green had to cease by June  
12 of 2022, Big Rivers had to determine whether to retire the Green units or convert  
13 them to natural gas. At the same time, it was becoming clear that it was going to  
14 take additional time to find partners for the natural gas combined cycle unit  
15 (“NGCC”) recommended in Big Rivers’ 2020 IRP. As explained in Big Rivers’

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1 Application in this case, converting the Green units to natural gas or buying capacity  
2 in the MISO market were the next least cost options to solve Big Rivers' short-term  
3 capacity need (while Big Rivers continues to search for partners for the NGCC), and  
4 are essentially economically equivalent. However, the Green natural gas conversion  
5 avoids the market risk of the MISO option.

6

7

8 **Witness)** Mark J. Eacret

9

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1 **Item 10)** *Provide the Zonal Resource Credits (ZRCs), separately for each*  
2 *facility, BREC will receive from MISO for the D.B. Wilson Plant (Wilson*  
3 *Station), the natural gas fired turbine at Reid Station (Reid CT), BREC's*  
4 *stake in hydroelectric capacity from the Southeastern Power Administration*  
5 *(SEPA), and each of the three solar PPAs in each year from 2022/2023 through*  
6 *2037/2038 using MISO's current Business Practice Manual, and separately*  
7 *under any proposed changes and projected changes to the manner in which*  
8 *MISO calculates ZRCs, if any, and explain any proposed changes and*  
9 *projected changes to the calculation of ZRCs.*

10

11 **Response)** See the tables in Attachment 1 and Attachment 2 to this response for  
12 the ZRCs by resource under the current MISO Business Practice Manual ("BPM")  
13 (Attachment 1) and under MISO's proposed ELCC<sup>1</sup> solar accreditation methodology  
14 (Attachment 2).

---

<sup>1</sup> ELCC = Effective Load Carrying Capability.

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 Under the current BPM methodology, MISO determines solar Unforced Capacity  
2 values based on the three-year historical average output of the resource for hours  
3 ending 15, 16, and 17 EST for the most recent Summer months (June, July, August).<sup>2</sup>  
4 At a MISO Resource Adequacy Subcommittee meeting September 12, 2018,<sup>3</sup> MISO  
5 indicated it would change the solar accreditation formula to the same method it uses  
6 for Wind, called the Effective Load Carrying Capability (“ELCC”) method. MISO  
7 indicated it will continue to use the current credit methodology for new solar units  
8 until more operational data is available to perform a solar capacity credit study. To  
9 avoid over-estimating the value of solar in future, despite MISO not yet announcing  
10 the actual timeframe for the change, Big Rivers estimates MISO’s change from the  
11 current BPM methodology for solar to ELCC method beginning with Planning Year  
12 2024/2025.

---

<sup>2</sup> See MISO Business Practices Manuals at <https://www.misoenergy.org/legal/business-practice-manuals/> to access or download a copy of the BPM-011-Resource Adequacy manual.

<sup>3</sup> See MISO “Solar Capacity Credit” (9/12/2018) at <https://cdn.misoenergy.org/20180912%20RASC%20Item%20003a%20Solar%20Capacity%20Credit273523.pdf>

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 The Wind ELCC Process was explained at MISO's July 10, 2019 Resource Adequacy

2 Subcommittee Meeting.<sup>4</sup>

3

4

5 **Witness)** Mark J. Eacret

6

---

<sup>4</sup> See MISO "Wind ELCC Process" (July 10, 2019) at [20190710 RASC Item 03f Wind ELCC Process360919.pdf \(misoenergy.org\)](https://www.misoenergy.org/20190710-RASC-Item-03f-Wind-ELCC-Process360919.pdf).

**Big Rivers Electric Corporation  
Case No. 2021-00079**

<b>Estimated ZRC's - Including BPM Calculation for Solar</b>							
<b>Planning Year</b>	<b>Wilson ZRC's</b>	<b>Reid CT ZRC's</b>	<b>SEPA Cumberland ZRC's</b>	<b>CES McCracken Co. Solar ZRC's</b>	<b>CES Meade Co. Solar ZRC's</b>	<b>National Grid Renewables Unbridled Solar ZRC's</b>	<b>Total ZRC's</b>
22/23	384	58	178				620
23/24	404	57	178	30	20		689
24/25	396	56	178	49	33	80	791
25/26	396	56	178	49	32	108	818
26/27	396	56	178	48	32	107	817
27/28	396	56	178	48	32	106	816
28/29	396	56	178	48	32	106	815
29/30	396	56	178	48	32	105	814
30/31	396	56	178	47	32	105	813
31/32	396	56	178	47	31	104	812
32/33	396	56	178	47	31	104	811
33/34	396	56	178	47	31	103	810
34/35	396	56	178	47	31	103	810
35/36	396	56	178	46	31	102	809
36/37	396	56	178	46	31	102	808
37/38	396	56	178	46	31	101	807

**Big Rivers Electric Corporation  
Case No. 2021-00079**

Estimated ZRC's - Including ELCC for Solar*							
Planning Year	Wilson ZRC's	Reid CT ZRC's	SEPA Cumberland ZRC's	CES McCracken Co. Solar ZRC's	CES Meade Co. Solar ZRC's	National Grid Renewables Unbridled Solar ZRC's	Total ZRC's
22/23	384	58	178				620
23/24	404	57	178	20	13		672
24/25	396	56	178	19	12	50	710
25/26	396	56	178	17	12	46	705
26/27	396	56	178	16	10	42	697
27/28	396	56	178	14	9	38	691
28/29	396	56	178	13	9	34	685
29/30	396	56	178	12	8	32	680
30/31	396	56	178	11	7	30	677
31/32	396	56	178	10	7	28	674
32/33	396	56	178	10	7	26	672
33/34	396	56	178	9	6	25	670
34/35	396	56	178	9	6	24	669
35/36	396	56	178	9	6	24	668
36/37	396	56	178	9	6	23	667
37/38	396	56	178	8	6	22	666

\* Solar ELCC Solar Capacity Accreditation Forecast utilizing IHS Market North American Power Market Outlook - November 2020

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1 **Item 11)** *State whether BREC has projected the likely effect of MISO's*  
2 *planned solar capacity credit study on the capacity credit it receives from*  
3 *MISO for the solar PPAs, regardless of whether BREC projected the effect to*  
4 *a specific value, and if so, explain and provide those projections.*

5

6 **Response)** See the table in the attachment to this response for Big Rivers'  
7 forecasted impact of MISO changing to the Effective Load Carrying Capability  
8 accreditation method beginning with Planning Year 2024/2025. Big Rivers' response  
9 to Item 10 of the Commission Staff's First Request for Information outlined the  
10 expected capacity values for Big Rivers' solar PPAs and the explanation of proposed  
11 changes to the calculation of capacity accreditation.

12

13

14 **Witness)** Mark J. Eacret

15

**Big Rivers Electric Corporation  
Case No. 2021-00079**

<b>Estimated ZRC's - Including ELCC for Solar* beginning PY 24/25</b>			
<b>Planning Year</b>	<b>CES McCracken Co. Solar ZRC's</b>	<b>CES Meade Co. Solar ZRC's</b>	<b>National Grid Renewables Unbridled Solar ZRC's</b>
22/23			
23/24**	30	20	
24/25	19	12	50
25/26	17	12	46
26/27	16	10	42
27/28	14	9	38
28/29	13	9	34
29/30	12	8	32
30/31	11	7	30
31/32	10	7	28
32/33	10	7	26
33/34	9	6	25
34/35	9	6	24
35/36	9	6	24
36/37	9	6	23
37/38	8	6	22

\* Solar ELCC Solar Capacity Accreditation Forecast utilizing IHS Market North American Power Market Outlook - November 2020

\*\* PY 23/34 Estimates using MISO BPM accreditation method for solar

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 **Item 12)** *Provide the ZRCs BREC will receive from MISO for its portion of*  
2 *the NGCC it intends to propose when it is placed in service using MISO's*  
3 *current Business Practice Manual, and separately under any proposed*  
4 *changes and projected changes to the manner in which MISO calculates*  
5 *ZRCs, if any, and explain any proposed changes and projected changes to the*  
6 *calculation of ZRCs.*

7

8 **Response)** Big Rivers' 2020 Integrated Resource Plan least-cost option included  
9 the ownership or purchase of 90 MW from a proposed 592 MW natural gas combined  
10 cycle unit, and assuming 5% equivalent forced outage rate, Big Rivers would receive  
11 85.5 ZRCs. MISO's capacity accreditation of Combined Cycle units is explained in  
12 BPM-011r24 Resource Adequacy Business Practice Manual.<sup>1</sup> Big Rivers is not aware  
13 of any anticipated changes to MISO's accreditation methodology for NGCC units.

14

---

<sup>1</sup> See MISO's Business Practices Manuals at <https://www.misoenergy.org/legal/business-practice-manuals/> to access or download a copy of BPM 011-Resource Adequacy.

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1

2 **Witness)** Mark J. Eacret

3

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 **Item 13)** *Provide BREC's projected Planning Reserve Margin*  
2 *Requirement (PRMR), as that term is defined by MISO, for MISO Zone 6 for*  
3 *each year from 2022/2023 through 2037/2038.*

4

5 **Response)** Please see the table in the attachment to this response.

6

7

8 **Witness)** Mark J. Eacret

9

**Big Rivers Electric Corporation  
Case No. 2021-00079**

<b>Big Rivers Planning Reserve Margin Requirement</b>					
<b>Year</b>	<b>BREC Annual Non-Coincident Peak</b>	<b>Estimated MISO Coincidence</b>	<b>Estimated Transmission Losses</b>	<b>Estimated MISO PRM</b>	<b>Total MISO PRMR MW*</b>
2022	812	-24	17	72	876
2023	814	-24	17	72	878
2024	815	-24	17	72	880
2025	817	-25	17	72	883
2026	819	-25	17	72	884
2027	819	-25	17	72	885
2028	820	-25	18	72	886
2029	821	-25	18	72	887
2030	822	-25	18	73	888
2031	823	-25	18	73	889
2032	825	-25	18	73	891
2033	826	-25	18	73	892
2034	827	-25	18	73	893
2035	828	-25	18	73	894
2036	829	-25	18	73	895
2037	829	-25	18	73	896

\*Planning Reserve Margin Requirement includes a MISO coincidence Factor, Transmission Losses, and Planning Reserve Margin (PRM)

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1 Item 14) *Confirm that BREC will have insufficient ZRCs to meet its PRMR*  
2 *for MISO Zone 6 if the converted Green units are taken out of service at the*  
3 *end of BREC's proposed useful life of seven years even if with Wilson Station,*  
4 *Reid CT, BREC's stake in the hydroelectric capacity from SEPA, the solar*  
5 *PPAs, and BREC's share in the NGCC it intends to propose. If BREC is not*  
6 *able to confirm, explain each basis why BREC is not able to confirm.*

7

8 **Response)** Big Rivers confirms that expected PRMR obligations in MISO Zone 6  
9 exceed the anticipated ZRCs from Wilson Station (396 ZRCs), Reid CT (56 ZRCs),  
10 SEPA capacity (178 ZRCs), plus solar PPAs and the NGCC ownership or purchase  
11 (85.5 ZRCs). Please see Big Rivers' response to Item 13 of the Commission Staff's  
12 First Request for Information. Therefore, Big Rivers will have insufficient ZRCs if  
13 the converted Green units are taken out of service at the end of seven years. Refer to  
14 the chart in Big River's response to PSC 1-13. For the 2029 Planning Year, Big Rivers  
15 will have a Planning Reserve Margin Requirement of 887 Zonal Resource Credits

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1 (ZRC's). Refer to the charts in Big River's response to PSC 1-11. For the 2029  
2 Planning Year, Big Rivers anticipates that its resources will provide 680 ZRC's,  
3 assuming that MISO has begun using the Expected Load Carrying Capability (ELCC)  
4 approach by that time and that the Green units have been retired. This represents a  
5 shortfall of 207 ZRC's. As described in PSC 1-12, it is estimated that Big River's  
6 proposed 90 MW ownership of a Natural Gas Combined Cycle (NGCC) plant would  
7 provide 85.5 ZRCs. The remaining shortfall of 121.5 ZRC's could be made up by  
8 increasing the size of the NGCC purchase, market purchases, or delaying the  
9 retirement of the Green units.

10

11

12 **Witness)** Mark J. Eacret

13

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 **Item 15)** *Provide an update based on the most recent available*  
2 *information regarding when BREC expects the solar generation facilities*  
3 *that are the subject of the solar PPAs to be placed in service..*

4

5 **Response)** The anticipated Commercial Operation Date (“COD”) for the  
6 Community Energy Solar (“CES”) sites located in Meade and McCracken Counties is  
7 [REDACTED]. The expected COD for the National Grid Renewables site located  
8 at the border of Henderson and Webster Counties is [REDACTED]. The COD  
9 for the CES projects is likely to be impacted by the MISO Generator Interconnection  
10 Process, which has seen a substantial increase in interconnection requests related to  
11 renewable development. See the latest interconnection planning phase schedule  
12 published by MISO at

13 <https://cdn.misoenergy.org/Definitive%20Planning%20Phase%20Schedule106547.pdf> .

14

15 **Witness)** Mark J. Eacret

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1 **Item 16)** *State whether BREC investigated the possibility of meeting its*  
2 *capacity requirement by continuing to operate Green Station's coal*  
3 *generation units through the period it intends to operate the converted units*  
4 *and transporting the CCRs to an offsite facility that complies with the CCR*  
5 *regulations, and explain why BREC did not pursue that option.*

6

7 **Response)** Big Rivers did not evaluate the possibility of meeting capacity  
8 requirements by continuing to operate Green Station's coal generation while  
9 transporting the CCR material to an offsite facility that complies with the CCR  
10 regulations because Green Station currently has a landfill that allows CCR material.  
11 However, under the ELG and CCR regulations, Green Station would have still been  
12 required to convert the bottom ash waste removal system to a dry system design  
13 which makes it an uneconomical option to meet capacity requirements.

14

15 **Witness)** Nathaniel A. Berry

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1 **Item 17)** *State whether BREC investigated the possibility of meeting its*  
2 *capacity requirement by continuing to operate some or all of the coal-fired*  
3 *generating units at Reid Station or Coleman Station through the period it*  
4 *intends to operate the converted units and constructing a landfill that*  
5 *complies with the CCR regulations at those sites or transporting the CCRs to*  
6 *an offsite facility that complies with the CCR regulations, and explain why*  
7 *BREC did not to pursue such an option. Provide the remaining useful life of*  
8 *each BREC's generating facilities based on the most recent information*  
9 *available to BREC.*

10

11 **Response)** Big Rivers did not investigate the possibility of meeting its capacity  
12 requirement by continuing to operate Reid Station or Coleman Station since both

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 stations would need to be upgraded to remain compliant with MATS,<sup>1</sup> CCR, and ELG<sup>2</sup>  
2 guidelines.

3       Assuming Wilson Station continues to operate nominally as it has for the past  
4 thirty-seven (37) years and parts are available for continued maintenance, its  
5 expected life span exceeds the full planning period covered by Big Rivers' 2020 IRP.

6       Assuming the Green converted units operate based upon the hours submitted  
7 within Big Rivers' model, and parts are available for continuous maintenance, its  
8 expected lifespan exceeds the full planning period covered by Big Rivers' 2020 IRP.

9       Assuming the Reid CT continues to operate nominally as it has for the past  
10 forty-two (42) years and parts are available for continued maintenance, an expected  
11 life span of sixty (60) years should be achievable for the Reid CT.

12

13

---

<sup>1</sup> MATs = Mercury Air Toxics Standards.

<sup>2</sup> ELG = Effluent Guidelines.

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1

2 **Witness)** Nathaniel A. Berry

3

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 **Item 18)** *State whether BREC has had any discussions with OMU or*  
2 *KyMEA regarding whether they intend to renew their contracts upon*  
3 *expiration or otherwise have an interest in continuing to obtain generation*  
4 *from BREC, and describe the current state of such discussions.*

5

6 **Response)** The OMU contract is in month ten (10) of [REDACTED]; Big Rivers  
7 has approached OMU about an extension and they have indicated that it is too early  
8 for any substantive extension discussions.

9 KYMEA issued a Request for Proposals in 2020, and Big Rivers responded with  
10 several different proposals, including an extension of the existing power purchase  
11 agreement. KYMEA chose other alternatives.

12

13

14 **Witness)** Mark J. Eacret

15

**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 Commission Staff's**  
**First Request for Information**  
**dated March 17, 2021**

**March 26, 2021**

1 **Item 19)**     *Refer to the Smith Direct Testimony, page 11, lines 3-7. Provide*  
2 *any documentation that was utilized in the preparation of this case that*  
3 *supports the statement that “Big Rivers anticipates such other costs will be*  
4 *minimal as a result of Big Rivers’ plans to mitigate the actual costs by*  
5 *offsetting those costs with amounts earned through sales and the marketable*  
6 *assets or the scrap value of assets that cannot be sold for reuse.”*

7

8 **Response)** While the exact cost for the retirement of the Green Station coal  
9 handling assets, such as the cost of removal and disposal of structures, will not be  
10 known until Big Rivers bids out the work, Big Rivers expects any decommissioning  
11 costs at Green Station to be similar to those at Coleman Station. Please see the Direct  
12 Testimony of Michael T. Pullen in Case No. 2021-00061 for a full discussion of the  
13 ongoing decommissioning of Coleman Station, including the awarded bid which  
14 allowed an offset for the value of scrap.<sup>1</sup>

---

<sup>1</sup> See *In the Matter of: Electronic Application of Big Rivers Electric Corporation for Annual Report on MRSB Credit*, P.S.C. Case No. 2021-00061, Application at Exhibit B (February 26, 2021).

**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 Commission Staff's  
First Request for Information  
dated March 17, 2021**

**March 26, 2021**

1

2

3 **Witness)** Paul G. Smith

4