

ORIGINAL



COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

ELECTRONIC)	Case No.
2020 INTEGRATED RESOURCE PLAN OF)	2020-00299
BIG RIVERS ELECTRIC CORPORATION)	

**Responses to Ben Taylor and the Sierra Club's
Dcgh< YU]b[Requests for Information**

**dated
8YWa VYf%2021**

FILED: December 28, 2021

ORIGINAL

BIG RIVERS ELECTRIC CORPORATION
ELECTRONIC 2020 INTEGRATED RESOURCE PLAN
OF BIG RIVERS ELECTRIC CORPORATION

CASE NO. 2020-00299

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 22nd day of December, 2021.



Katherine R. King, KYNPI6891
Notary Public, Ky. State at Large
My Commission Expires October 31, 2024



BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

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)

22nd SUBSCRIBED AND SWORN TO before me by Paul G. Smith on this the
day of December, 2021.

Kath Risley

Notary Public, Kentucky State at Large

Kentucky ID Number

KYNP16841

My Commission Expires

October 31, 2024

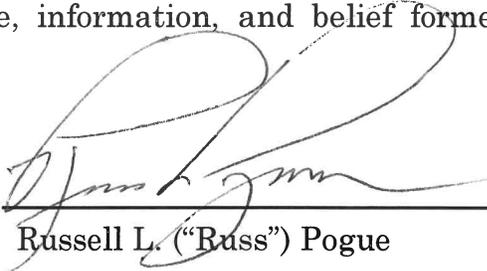


BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

VERIFICATION

I, Russell L. ("Russ") Pogue, 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.



Russell L. ("Russ") Pogue

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Russell L. ("Russ") Pogue on this the 22nd day of December, 2021.



Notary Public, Kentucky State at Large
Kentucky ID Number KYNP16841
My Commission Expires October 31, 2024



BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 **Item 1)** *Refer to Big Rivers' response to Sierra Club RFI 2-1, as well as*
2 *to the IRP's "optimal plan" to form a coalition of partners to invest in a 592*
3 *MW natural gas combined cycle ("NGCC") unit at Sebree or Coleman, see*
4 *IRP pp. 33, 137, 140. Please confirm whether Big Rivers has any update on*
5 *any new analysis, conversations (external or internal), proposals, efforts,*
6 *or developments related to the formation of a coalition occurring since the*
7 *Company's May 11, 2021, response to Sierra Club RFI 2-1.*

8 *a. To the extent there is an update since then, provide a detailed*
9 *narrative update on all such interceding analysis, conversations,*
10 *proposals, efforts, or other developments, as well as any documents*
11 *that embody or memorialize the same.*

12
13 **Response)** Big Rivers objects to this request as it is overly broad and seeks
14 information neither relevant nor likely to lead to the discovery of admissible
15 evidence. Any documentation of discussion with third parties or internal discussion
16 would not assist the Commission's or the Sierra Club's evaluation of Big Rivers 2020
17 Integrated Resource Plan. Subject to and without waiving this objection, since May

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 11, 2021, Big Rivers has continued to gather updated and more specific information
2 related to production and operational costs to assist its continuing evaluation of the
3 option of forming a coalition of partners to invest in a natural gas combined cycle
4 unit.

5

6

7 **Witness)** Nathaniel A. Berry

8

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 **Item 2)** *Please confirm that Big Rivers' forthcoming modeling and*
2 *assessment of the comparative economics of various future supply-side*
3 *portfolios to meet the Company's future needs, to be presented in the 2023*
4 *IRP, will not "hard code" in a restriction on how soon the Company's*
5 *remaining coal-fired power at the Wilson plant can be retired. Put another*
6 *way, confirm that the model will be allowed to optimize Wilson's retirement*
7 *date based on economics as well legitimate practical considerations such*
8 *how quickly any needed capacity and/or energy replacement could be*
9 *obtained, but free of any arbitrary or artificial restriction (e.g., not being*
10 *allowed to examine a retirement year prior to 2030).*

11 *a. If not confirmed, please identify, explain, and defend any such*
12 *hard-coded restriction on Wilson's retirement date.*

13

14 **Response)** Big Rivers has not yet determined the parameters for the modeling
15 that will be presented in its 2023 IRP. Big Rivers intends to prepare its 2023 IRP
16 utilizing robust analytic analysis that reflects then-current economic and
17 technological assumptions and constraints.

BIG RIVERS ELECTRIC CORPORATION
ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299

Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021

December 28, 2021

1

2 **Witness)** Paul G. Smith

3

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 **Item 3)** *Please identify all ongoing or planned proactive outreach,*
2 *education, and publicity efforts that Big Rivers or its member cooperatives*
3 *do or will conduct to promote DSM (including EE) programs, offerings, and*
4 *behaviors among their consumers — e.g., emails, postcards / letters /*
5 *pamphlets, social media posts, workshops, phone calls, etc. — that go out*
6 *without a consumer first needing to contact or inquire with Big Rivers or*
7 *the member cooperative. For each such effort, please specify how long it has*
8 *been implemented or when in the future it will be.*

9

10 **Response)** Big Rivers has one active DSM program, its DSM-15 Low-Income
11 Weatherization Support Program – Pilot. Big Rivers' staff maintains contact with
12 the Kentucky Housing Corp. ("KHC") staff to periodically discuss potential projects.
13 The KHC staff maintains communication with the Community Action Agencies

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 working in the counties with retail residential members of Big Rivers three
2 Member–Owners,¹ to monitor projects that may qualify for the program.²

3 Big Rivers does not participate in its Members–Owners' outreach to their
4 retail members and each is autonomous in their communication to their retail
5 membership. Big Rivers understands that each of the Member–Owners proactively
6 communicate with their retail members through a number of outlets on subjects
7 including energy efficiency, safety and other issues regarding the relationship
8 between the distribution cooperative and their end users. Further information on
9 those communication channels can be found at each of the Member- Owner's
10 websites at:

- 11 • <https://www.kenergycorp.com/>
- 12 • <https://www.mcrecc.com/>
- 13 • <https://www.jpenergy.com/>

¹ Big Rivers' Member–Owners are Jackson Purchase Energy Corporation, Kenergy Corp., and Meade County Rural Electric Cooperative Corporation.

² See *In the Matter of: Demand-Side Management Filing of Big Rivers Electric Corporation to Implement a Low-Income Weatherization Support Program*, P.S.C. Case No. 2019-00193.

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 In the event Big Rivers were to implement future DSM programs, including
2 retail energy efficiency programs, Big Rivers would assist the Member–Owners to
3 plan promotional budgets and provide any assistance the Member–Owners request
4 with the development of promotional materials.

5

6

7 **Witness)** Russell L. Pogue

8

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 **Item 4)** *Refer to IRP at page 89, Staff Report at 20-22, and Big Rivers'*
2 *oral exchanges with Chairman Chandler concerning DSM at the November*
3 *23, 2021, hearing, inter alia.*

4 *a. Please identify the metric/method that Big Rivers chooses to*
5 *measure or approximate the value of avoided capacity cost (e.g., a*
6 *particular market's value, PPA-informed estimates for a given*
7 *increment of capacity, other), for purposes of calculating the TRC*
8 *value in screening current and potential DSM measures.*

9 *i. Please identify all other alternative metrics that Big Rivers*
10 *considered or might have considered, and please explain and*
11 *justify Big Rivers' choice of its chosen metric over alternatives.*

12 *b. Please identify and explain in detail the criteria based on which,*
13 *and process through which, Big Rivers and/or its member*
14 *cooperatives choose to pursue, or decline to pursue, DSM measures*
15 *with a TRC value greater than 1.*

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 *i. In conjunction with your identification and explanation,*
2 *please provide all memoranda, manuals, policies, or other*
3 *documents, if any, reflecting those criteria and that process.*

4 *1. If none exist, please confirm that, and discuss the non-*
5 *written criteria and process for decision-making about*
6 *whether to pursue, or to decline to pursue, DSM measures.*

7 *ii. Without limitation, explain why and how measures with a*
8 *TRC value around 2, for instance, have been rejected.*

9

10 **Response)**

11 a. Refer to Big Rivers' response to Item 8 of the Commission Staff's Second
12 Request for Information.

13 i. Big Rivers has consistently used forecasts of energy and capacity
14 costs as future avoided costs to evaluate DSM potential. No
15 alternative metrics were used or considered in the DSM study that
16 was provided with Big Rivers' 2020 Integrated Resource Plan.

17

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

- 1 b. Measures identified in the DSM Potential Study with a Total Resource
2 Cost (“TRC”) above one are assessed further for applicability as part of a
3 combined measure or stand-alone program using the following questions:
- 4 • Width of Application: Does the measure have the potential to impact
5 a wide or large number of retail members?
 - 6 • Health and Safety Implications: Does the measure inherently
7 resolve a safety or health issue or is there a potential to exacerbate
8 an existing problem?
 - 9 • Significant Financial Impact on Retail Member: Are the savings
10 associated with implementing the measure significant for the retail
11 member?
 - 12 • Program Incentive Likely to Move Retail Member: Are the costs of
13 implementing a measure likely to discourage implementation
14 without incentive?
 - 15 • Incentive Delivery Feasible: How would the incentive be delivered?

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

- 1 • Stand Alone Measure or Additional Requirements: Does the specific
2 measure require additional requirements (health or safety) or
3 upgrades of other systems in the home/business?
4 • Verifiability: Can and how would the measure implementation be
5 verified, *e.g.*, receipt, visual inspection, *etc.*?
6 • Common Installation: Are there competitive vendors for the
7 measure and/or installation?
8 • Competing Technologies: Are there competing options that would
9 provide legitimate alternatives.
10 • Utility Experience with Previous Program: Has Big Rivers or its
11 Member–Owners implemented this measure in the past?
12 • Prior Issues: Were there previous issues with this particular
13 measure?
14 i. Each of the measures exceeding the TRC value of 1 is evaluated
15 using the preceding questions to determine if the measure would be
16 useful and attract participation from retail members. Big Rivers and
17 its Member-Owners developed these questions through their

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 experiences in offering a wide range of programs in the last decade,
2 which the Kentucky Public Service Commission (“Commission”)
3 approved and Big Rivers implemented late in 2012. Big Rivers
4 withdrew these programs in 2018 with the approval of the
5 Commission. Please see Big Rivers’ applications in the footnoted
6 cases ^{1,2,3,4,5} and the information provided to sub-parts of this
7 information request. Additionally, Big Rivers values individual or

¹ See *In the Matter of: Tariff Filing of Big Rivers Electric Corporation to Implement Demand-Side Management Programs*, Case No. 2012-00142. Tariff Filing dated March 16, 2012, Final Commission Order dated August 22, 2012.

² See *In the Matter of: Tariff Filing of Big Rivers Electric Corporation to Revise and Implement Demand-Side Management Programs*, Case No. 2013-00099. Tariff Filing dated February 22, 2103, Final Commission Order dated June 6, 2013.

³ See *In the Matter of: The Tariff Filing of Big Rivers Electric Corporation to Revise and Implement Demand-Side Management Programs*, Case No. 2015-00118. Tariff Filing dated March 20, 2015, and Revised Tariff Filing dated April 7, 2015. Final Commission Order dated September 11, 2015.

⁴ See *In the Matter of: Tariff Filing Of Big Rivers Electric Corporation To Revise Certain Demand-Side Management Programs*, Case No. 2017-00278. Tariff Filing dated June 30, 2017, Final Commission Order dated December 21, 2017.

⁵ See *In the Matter of: Demand-Side Management Filing of Big Rivers Electric Corporation on Behalf of Itself, Jackson Purchase Energy Corporation, and Meade County R.E.C.C. and Request to Establish a Regulatory Liability*, Case No. 2018-00236. Application filed July 6, 2018. Final Commission Order dated December 12, 2108.

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 combined measures that are cost effective, provide substantial value
2 to retail members, and attract widespread retail member
3 participation. Any individual or combined measures should not
4 duplicate services available through state and federal programs or
5 subsidies, pose a health or safety issue from implementation,
6 subsidize the lowest cost option, or be overly burdensome to the
7 Member–Owners to administer.

8 1. Not applicable.

9
10 ii. See the response to part a above for the reasons why Big Rivers
11 would not pursue the development of a program designed around a
12 measure, or set of measures, that pass the TRC benefit–to–cost ratio.
13 These reasons primarily arise from Big Rivers' and its Member–
14 Owners' experiences offering a wide array of programs between 2012
15 and 2018.

16 Big Rivers would not pursue a very low–cost measure which is
17 easily and safely installed by a residential or a commercial occupant.

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 For example, water heater pipe wrap or a water heater blanket can
2 be easily installed by a residential or commercial occupant.

3 Big Rivers also would not pursue measures which pose a
4 potential health or safety issue for occupants. For example,
5 insulating the internal side wall of a crawl space or unfinished
6 basement can result in ongoing health issues for occupants due to
7 high moisture in those spaces. Previous weatherization contractors
8 have refused to perform this measure without moisture abatement
9 measures being performed to assure there would not be mold or
10 mildew issues.

11 Big Rivers also would not promote a specific measure with
12 documented lack of interest from retail members in past programs.
13 An example would be low-flow shower heads and faucets. In
14 hundreds of residential weatherizations performed in Big Rivers'
15 service area between 2012 and 2018, only two retail members elected
16 to install low-flow shower heads and faucets when given the choice
17 to do so.

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 If a measure has incremental costs which are insignificant to
2 the retail member's decision making process for adopting a measure,
3 then Big Rivers would not implement the measure. Big Rivers also
4 would not implement measures where the cost of program
5 administration is likely significantly larger than the incremental
6 cost of a specific measure.

7 Some measures will not be pursued because of the commercial
8 payback paradigm which Big Rivers has seen. Commercial measure
9 implementation generally involves an onsite energy-use audit of a
10 commercial retail member and cost justification internal to that
11 individual member. In more than one hundred (100) individual
12 energy-use audits over twenty (20) years, Big Rivers' experience
13 with large commercial and industrial (manufacturing) members is
14 that measure / program implementation requires a simple payback
15 of one (1) year or less to be competitive with the commercial retail
16 member's other internal capital projects. Big Rivers has found that

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC
2020 INTEGRATED RESOURCE PLAN OF
BIG RIVERS ELECTRIC CORPORATION
CASE NO. 2020-00299**

**Response to the Sierra Club's
Post-Hearing Request for Information
dated December 1, 2021**

December 28, 2021

1 the exception to this general rule is government facilities such as
2 schools and administrative facilities.

3 Big Rivers will continue to evaluate measures individually
4 and combined as potential programs as conditions and technology
5 change.

6

7

8 **Witness)** Russell L. Pogue

9